

Research Study Series
Number 51

Slum Improvement and Upgradation Project for Trivandrum, Cochin and Calicut

Vol. II

Preliminary Report

(Prepared for the Local Administration Department,
Government of Kerala)

National Institute of Urban Affairs
New Delhi
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CHAPTER I

SLUM FORMATION IN CALICUT, COCHIN AND TRIVANDRUM

1.1 Kerala still has a modest level of slum population as compared to some of the other states of the Indian Union. This is to a great extent due to a relatively lower level of urbanisation in the state which has only marginally increased from 16.24 per cent during 1961-71 to 18.74 per cent during 1971-81. The low level of urbanisation itself has been substantially influenced by a remarkable configuration of settlement pattern in the state which is based on rural-urban continuum. The low level of urbanisation apart, the rate of growth of urban population in the state has been lower than that of the total urban population of the country. To give an illustration, the urban population in Kerala increased at a compound rate of growth of 3.25 per cent (3.76% simple rate of growth) during 1971-81 as compared to 3.87 per cent (4.62% simple rate of growth) of India's total urban population. This sluggish trend of urbanisation in Kerala is explained to a great extent by a net outmigration from the urban settlements which was to the extent of 25.25 per cent during the last decade.

1.2 The trends in urbanisation especially in three major cities of Kerala viz. Trivandrum, Cochin and Calicut indicate a drastic fall in the rate of growth of population during the eighties. This is discernible from Table 1.1. The decennial rate of population growth of Trivandrum, for example, has declined

1. NIUA, State of Indian Urbanisation, National Institute of Urban Affairs, New Delhi, 1988, p.30.

from 56.17 per cent in 1971 to just about 27 per cent in 1981. The corresponding decline in the cities of Cochin and Calicut is from 73.13 per cent to 35.58 per cent and 46.42 per cent to 29.80 per cent respectively. As the formation of slums is ineluctably related to the pace of urbanisation, the proportion of urban population living in slums as well is found to be at a relatively lower level. Yet another factor towards a low level of slum population appears to be the high density obtaining in Kerala in general and in its towns and cities in particular. A relatively higher density hardly leaves enough open and vacant lands to be occupied and encroached upon by the squatters. The household pattern of human settlement and the rural-urban continuum as articulated in Kerala are other factors explaining the low level of slum population.

Slum Population

1.3 There are four sources of data on the proportion of urban population living in slums in the state of Kerala. These are (1) NSS data on the survey of slums; (2) The estimates of the TCPO of slum population; (3) The estimates of the Planning Commission Task Force on Housing and Urban Development and (4) Survey of slums conducted by the Town Planning Department (TPD), Government of Kerala. Though it appears from these various data bases that the proportion of total urban population living in slums is low, there is found to be a great deal of variation in the precise extent of slum population in Kerala. Thus the NSS data reveal that only 7.04 per cent of the population of towns in the size category of 1 to 3 lakhs is residing in slums. For the

towns in the size category of 3 lakh to 1 million it is to the extent of 8.62 per cent.²

1.4 The estimates of the TCPO for the year 1981 indicate that about 7.27 per cent of the total urban population is residing in slums (Table 1.2).³ The Planning Commission's Task Forces on Housing and Urban Development while reporting on Shelter for the Urban Poor and Slum Improvement have worked out a range of low and high estimates. Accordingly, about 8 per cent (low) to 10 per cent (high) of the urban population is estimated to be living in slums.⁴ These estimates notwithstanding, the most authentic source of information on slums happens to be the survey of slums conducted by the state governments' Town Planning Department in 1985. This is said to be authentic especially because it is based on a comprehensive survey of all the slums identified in the different towns and cities of Kerala.⁵ According to the findings of this survey, the proportion of urban population living in slums was only about 5 per cent in 1985 (Table 3). Thus Kerala is placed in the envious position of having the lowest slum population amongst all the states of Indian Union on the basis of all the aforesaid four sources of data on slums.

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2. National Sample Survey, Sarvekshana, Vol. III, No. 4, April 1980.
 3. India (Town and Country Planning Organisation), A Compendium on Indian Slums, New Delhi, 1985.
 4. India (Planning Commission), Task Forces on Housing and Urban Development: IV Shelter for the Urban Poor and Slum Improvement, New Delhi, 1983.
 5. Kerala (Town Planning Department), Urban Slums in Kerala, 1985, (mimeo), no date.

1.5 The proportion of population living in slums in the three cities selected for the World Bank Project (viz. Trivandrum, Cochin and Calicut), is also low except in the city of Calicut which has 19.61 per cent of its population residing in slums (Table 1.3).⁶ Variation in the actual proportion of people living in slums is, however, discernible in all the three cities on the basis of two different data bases (Table 1.4). It is worth noting that the 1985 TPD Survey provides the most reliable data base on slums in Kerala. However, a paper prepared by the Corporation of Cochin on Slum Upgradation makes a mention of yet another survey conducted by the corporation in 1987.⁷ It returned a slum population of about 76,000. Accordingly, only around 8.9 per cent of the city's population is residing in slums. Thus barring Calicut, the magnitude of slum population in the two cities is found to be relatively lower. This only conforms to the scenario existing at the state level.

Slum Formation : The Magnitude

1.6 Before analysing the degree of slum formation in the three cities, it would be relevant to have a brief overview of the existing modalities for monitoring the formation of slums in the towns and cities in Kerala.

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6. The 1985 TPD Survey was confined to the jurisdictional areas of the Municipal Corporation only. Hence the Table gives the percentage of population living in slum both in Urban Agglomerations and also within the jurisdictions of the Municipal Corporations.
 7. Slum Upgradation : Environmental and Dwelling Unit Improvement (mimeo), a report prepared by the Municipal Corporation of Cochin, no date.

1.7 An area is declared as slum by the local authority if it is satisfied that,

- (a) it is or it may become a source of danger to the health, safety or convenience of the residents of that area or of its neighbourhood, by reason of the area being low-lying, insanitary, squalid or otherwise, or
- (b) the buildings in any area, used or intended to be used for human habitation, are (i) in any respect, unfit for human habitation or (ii) are, by reason of delapidation, overcrowded, faulty arrangement or design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or any combinations of these factors, detrimental to safety or health, it may, in consultation with the Chief Town Planner, formulate suitable scheme for the clearance or improvement of that area.

1.8 A building is considered 'unfit for human habitation' on the basis of a number of factors like repairs, stability, freedom from dampness, natural light and air, water supply, drainage and sanitary convenience, facilities for storage, preparation and cooking food and for disposal of waste water. If a building is found wanting on any one or most of these factors, it is treated as unfit for occupation.

8. G.O. (Rt.) No. 4111/81/LA & SWD, dated 21st November 1981, Guidelines for the Execution of Slum Clearance/Improvement Scheme with State Government assistance.

1.9 Slum formation is monitored by the regional office of the TPD located in the three cities of Trivandrum, Cochin and Calicut. This is done in cooperation with the Municipal Corporations (MC). By and large, the regional office of the TPD identifies slums on the basis of a few key indicators of

Indicators of Deprivation and Backwardness and
the Weightage given to them

Indicators of backwardness	Minimum standard of adequacy of amenities	Maximum weightage when amenities are completely absent
A. Adequacy of basic amenities:		
1. Inadequacy of latrine facilities	One seated latrine for every 20 persons	10
2. Inadequacy of drainage system and exit for sullage and rain water	10
3. Inadequacy of access road	8
4. Inadequacy of water supply	One tap point for every 100 persons	5
5. Inadequacy of street light	One street light for every 30 metres	5
B. Density of population	100 persons/acre (250 persons/hectare) gets 5 point and one point each for every additional 20 persons.	20 maximum weightage when density reaches 300 persons per acre.
C. Scheduled Caste/ Scheduled Tribe population	30% above	10 maximum weightage
D. Structural conditions of dwelling units	50% or more huts or dilapidated structures	5 maximum weightage
Total		73 points

deprivation and backwardness. At times it is the MC which identifies a slum and brings it to the notice of the local TPD office. A cluster or the locality is finally identified as slum by assigning weightage to the following indicators.

1.10 Total absence of a particular facility gets a maximum weightage. The weightage is, however, reduced if the services are existing. The degree of reduction in the weightage depends on the levels of the above mentioned services and amenities. An area is identified as a slum if it gets a minimum weightage of 40. However, this elaborate system of assigning of weightage to the key indicators of deprivation notwithstanding, "the local bodies can declare an area as a slum in consultation with the Town Planning Department irrespective of the fact that whether they satisfy the above conditions or not, provided the environmental conditions are rather poor." ⁹ The existing procedure for formulation of slum improvement scheme as also an evaluation of the indicators of deprivation and the system of giving weight to them are reviewed subsequently in Chapter VI.

1.11 Although the level of slum population in Kerala and also the three cities of Trivandrum, Cochin and Calicut is low, the pace of slum formation has been quite rapid. The number of slums in the three cities taken together has increased from 200 in 1985 to 269 in 1990 indicating 34.5 per cent increase in five years which is fairly high particularly for a situation like Kerala. The slum population has increased even faster as it

9. Kerala (TPD), op.cit., Ch. II.

increased from about 1.53 lakhs in 1985 to about 2.11 lakhs in 1990 representing a growth of more than 38 per cent (Table 1.5). Of all the three cities, slums have grown at a more rapid rate in Cochin where the number has increased by more than 58 per cent and the slum population at a run-away rate of growth of 135 per cent between 1985-90. This is mainly due to relatively stronger economic base of Cochin which consists of the port and the growing trade and commerce over the years. Yet another reason is the physical decline of once good traditional housing areas especially in Fort Cochin and Mattancherry which have now been converted into slums. The pronounced economic base of Cochin has attracted migrants though at a modest scale, even from the neighbouring state of Tamil Nadu. On the basis of number of slums, Calicut with 86 slum settlements and about 94,000 slum population is next only to Cochin. However, the rate of growth in both the number of slums and slum population has been higher in Trivandrum (30.56% and 15.67% respectively) than in Calicut (14.67% and 11.14% respectively).

1.12 The total land area occupied by slums in Trivandrum, Cochin and Calicut comes to 385.9, 148.42 and 134.46 hectares respectively. A substantial proportion of slums in the three cities are small in terms of area occupied, number of households and population. Frequency distribution of slums in the three cities in terms of area, number of households and population is presented in Tables 1.6 to 1.8.

1.13 About half the number of slums in Trivandrum are tiny clusters as they occupy an area of less than one hectare (Table 1.6). If we include the next size category of slums occupying land upto 2 hectares their proportion comes to 55.30 per cent. Another 14.9 per cent of the slums are located in an area of 2.01 to 5 hectares. Only 8.5 per cent of the slums are located on the land area of 5.01 to 10 hectares. Trivandrum has only one slum viz. Poonthura - a fishermen's settlement - which is spread over an area of 61 hectares.

1.14 The largest number of tiny slums are to be found in Cochin. As many as 75 slums constituting 55 per cent of the total slums in Cochin are located on land area of less than one hectare. If the next size category is also included, as many as 101 slums constituting more than three fourth of the total slums occupy less than 2 hectares of land area. Only 9.6 per cent of total slums are located on land of 2.01 to 5 hectares. 2.2 per cent occupy areas between 5.01 to 10 hectares. Only a minimum proportion (0.7%) of the total slums in Cochin are located on land area measuring between 15.01 to 20 hectares. Only one slum namely D.L.B. colony, Pulluruthy has an area of 20 hectares.

1.15 In Calicut as well around 43 per cent of the slums are located on an area of less than 2 hectares. A little more than one fifth of the total slums occupy an area of over 2 to 5 hectares. Another 16.3 per cent of slums are located on a land area of 5.01 hectares to 10 hectares. Calicut, however, has three slums viz. Maruthamuliparamba, Koyavalappu and Chakkumkadvu which occupy an area of more than 20 hectares.

1.16 Frequency distribution of slums by the size of household is tabulated in Table 1.7. It again shows predominance of small size slums. Trivandrum has about 40.4 per cent of slums with less than 100 households. Another about 15 per cent of the slums have about 10 to 200 households. 10.7 per cent of the slums have households of 301 to 400. Of the remaining slums, 2.1 per cent each fall in the category of 401 to 500 and 601 to 700 households respectively. Only two slums, viz. Poonthura and Madhavapuram have more than 700 households. Whereas the former has 20102 households the latter have household of 1056. In Cochin, 61.8 per cent of the slums have less than 100 households. 14.7 per cent of total slums have households between 101-200 while only 3.0 per cent households have between 201-300. There is one slum each in the size classes of 301-400, 501-600, 601-700 and above 700.

1.17 In Calicut 46.5 per cent of the slums have less than 100 households (HHs). A little more than one-fifth, (20.9%) of the slums have households between 101 to 200. 11.6 per cent of the slums belong to the size category of 201-300. Only 5.8 per cent of the slums have 301-400 HHs. Another 2.30 per cent of slums have 501 to 600 HHs. Of the remaining slums, 1.20 per cent each have HHs of 601 to 700 and more than 700 HHs respectively. There is only one slum in Calicut which has more than 700 HHs. viz. Vellayil. The actual size of the HHs is 1173.

1.18 Distribution of slums in terms of population again shows the small size of majority of slum settlements. The total

number of households in Trivandrum, Cochin and Calicut comes to 8628, 9992 and 12902 respectively. In Trivandrum, 40.49 per cent of the slums have less than 500 population (Table 1.8). 17.0 per cent have a population of 501 to 1000. 19.2 per cent of slums fall in the population category of 1001 to 2000 and 6.4 per cent belong to the category of 2001 to 4000 population. Only one slum viz. the Poonthura has more than 4000 people living in it. To be precise, it has a population of 11831. In Cochin 67.7 per cent of the slums have less than 500 population. About 17% are having a population between 501-1000 while 5.8 per cent of the slums are having a population between 1001-2000. Only 4 slums have population above 2000.

1.19 Calicut as well conforms to the same pattern of size distribution. About 45.4 per cent of the slums in this city have population of less than 500 people. About 16 per cent of the slums have 501 to 1000 people and another about one fifth of slums belong to the category of 1001 to 2000. Another 10.4 per cent of the slums have populations varying from 2001 to 4000 and only 3 slums have more than 4000 population. Of them, Vellayil is the largest slum having a population of 8598. Next to it is Chakkumkadavu having a population of 5086. Vellayil South is the third largest slum with a population of 4473. All the slums identified in the three cities are marked on maps 1 to 3 in terms of land area, household and population. The total number of slums existing in the three cities are shown in Appendix I.

1.20 The analysis of slum formation in Kerala as also in the three cities of Trivandrum, Cochin and Calicut brings three things in sharp focus. First, the proportion of urban population living in slum in the state is still at a very modest level as compared to other states. Within the three cities as well, Trivandrum and Cochin again have a very low level of slum population which is quite in conformity with the situation obtaining at the state level. Only Calicut emerges as a city having a very high level of slum population. Second, a substantial proportion of total slum areas in the three cities of Calicut, Cochin and Trivandrum are small in size in terms of area occupied, household and population. A large number of small and tiny slums are scattered all over the city. It will therefore have important bearing on the policy intervention. Dealing with such a large number of small slums as are found scattered all over the three cities, will not enable to benefit from the economy scales. Third, though level of slum population is low, of late the rate of growth of slum population has picked up substantially. The slum population in the three cities has increased by about 38 per cent between 1985 and 1990. In Cochin in particular it has grown at a run-away rate of growth of 135 per cent during the same period.

Table 1.1
Urban Population of Calicut, Cochin and Trivandrum

	1961		Population 1971		1981		Growth Rate 1961-71		Growth Rate 1971-81	
	U.A.	C	U.A.	C	U.A.	C	U.A.	C	U.A.	C
	1. Calicut	287323	220943	420705	333979	546058	394447	+46.42	+51.16	+29.80
2. Cochin	292167	277723	505838	439066	685836	513249	+73.13	+58.09	+35.58	+16.90
3. Trivandrum	262303	239815	409627	409627	520125	483086	+56.17	+70.81	+26.98	+17.93
Kerala	2554141	-	3466449		4771275		+35.72	-	+37.64	
India*	-	-	107824755		157680171		+37.96		+46.24	

Source : Census of India, 1981.

* - Excluding Assam

C - Corporation

U.A. - Urban Agglomeration

Table 1.2

Percentage Slum Population in Selected States

(Population in '000)

State/UT	Sarvekshana estimate*						TCPO estimate**		Taskforce 1981 estimate	
	1-3 lakhs		3 lakhs - 1 million		1 million plus		1981 Census total urban	% living in slums	% living in slums	
	1971 Census total pop. of cities	% living in slums	1971 Census total pop. of cities	% living in slums	1971 Census total pop. of cities	% living in slums			Low	High
Andhra Pradesh	1536	20.96	672	49.70	1607	14.93	12458	34.77	28	33
Assam	146	3.42	-	-	-	-	1326	17.90	15	20
Bihar	989	5.56	832	8.64	-	-	8699	36.70	35	40
Gujarat	549	11.65	1240	17.98	1592	2.64	10556	16.20	16	21
Haryana	227	3.96	-	-	-	-	2822	14.69	13	18
Jammu & Kashmir	158	9.49	-	-	-	-	-	-	-	-
Karnataka	956	11.19	735	6.14	1541	10.84	10711	9.28	13	16
Kerala	284	7.04	1183	8.62	-	-	4771	7.27	8	10
Madhya Pradesh	941	14.34	1714	11.02	-	-	-	-	13	18
Maharashtra	2083	28.76	2121	31.30	5971	11.13	21967	29.70	30	35
Orissa	554	16.61	-	-	-	-	3106	30.45	15	22
Punjab	447	3.80	836	26.42	-	-	4620	27.80	22	27
Rajasthan	927	7.01	933	11.03	-	-	7140	23.50	12	16
Tamil Nadu	1469	10.62	1522	13.28	2469	40.09	15928	16.80#	15	22
Uttar Pradesh	2989	5.57	2422	10.44	1158	9.50	19973	32.76	11	20
West Bengal@	1974	18.37	738	45.93	3149	17.57	14433	37.04	29	34
Chandigarh	233	9.44	-	-	-	-	-	-	45	50
Delhi	-	-	302	0.66	3288	22.99	-	-	10	15

Source : Planning Commission (1983) : Task Forces on Housing and Urban Development, Vol IV, Shelter for the Urban Poor and Slum Improvement, pp. 31, 37, 38.

* Relate to declared and undeclared slums in Class I cities.

** Relate to slum population of towns where slum population has been identified under EIS scheme.

Percentage relate to total population.

@ Relate to slum population of town within CMD.

Table 1.3

Population Living in Slums

State/City	Urban Population in 1985*	Slum Population in 1985	% of Population living in slums
1. Kerala	5668274	278674	4.92
2. Trivandrum UA	590341	-	6.07
C	526322	35859	6.81
3. Cochin UA	807914	-	4.00
C	556618	32337	5.81
4. Calicut UA	627420	84336	13.44
C	430144	-	19.61

Source : TPD (Kerala), 1985, Urban Slums in Kerala, 1985.

UA : Urban Agglomeration
C : Municipal Corporation
* estimated population

Table 1.4

Percentage Slum Population

State/City	Percentage of Slum Population to total urban population as per			
	T.P.D. (1985)	T.C.P. (1981)	P.C. (1981)	
			Low	High
<u>Kerala</u>	4.92	8.59		
1. Trivandrum UA	6.07	8.65		-
C	6.81	-		-
2. Cochin UA	4.00	24.8		-
C	5.81	-		-
3. Calicut UA	13.44	11.00		-
C	19.61	-		-

Source :

1. T.P.D. Kerala : Urban Slums in Kerala 1985.
2. TCPO, Delhi (1985) : A Compendium of Indian Slums
3. Planning Commission (1983) : Task Forces on Urban Housing and Urban Development : Shelter for the Urban Poor and Slum Improvement.

Table 1.5

Growth of Slums in Terms of Number, Household and Population

Particulars	Trivandrum			Cochin			Calicut		
	1985	1990	% Growth	1985	1990	% Growth	1985	1990	% Growth
1. No. of Slums	36	47	30.56	89	136	38.20	75	86	14.67
2. No. of Households	7034	8628	22.66	5431	8840	62.77	12212	12902	5.65
3. Population	35859	41478	15.67	32337	76000 ^a	135.02	84336	93730	11.14

Source : TPD Kerala

1. Urban Slums in Kerala, 1985
2. NIUA Survey, 1990

a = estimated population by the Cochin Corporation for the year 1987. See Slum Upgradation : Environmental and Dwelling Unit Improvements (mimeo) Corporation of Cochin, no date.

Table 1.6
Distribution of Slums by Area

Area (ha)	Trivandrum		Cochin		Calicut	
	No.	%	No.	%	No.	%
< 1.00	19	40.4	75	55.1	14	16.3
1.00 - 2.00	7	14.9	26	19.1	23	26.7
2.01 - 5.00	7	14.9	13	9.6	18	20.9
5.01 - 10.00	4	8.5	3	2.2	14	16.3
10.01 - 15.00	-	-	-	-	8	9.3
15.01 - 20.00	-	-	1	0.7	-	-
Above 20.00	1	2.1	-	-	3	3.5
N.A.	9	19.2	18	13.3	6	7.0
Total	47	100.0	136	100.0	86	100.0

Source : 1. TPD (Kerala), Urban Slums in Kerala, 1985.
2. NIUA survey 1990.

NA : Not available.

Table 1.7
Distribution of Slums by Households

Households	Trivandrum		Cochin		Calicut	
	No.	%	No.	%	No.	%
< 100	19	40.0	84	61.8	40	46.5
101 - 200	7	14.9	20	14.7	18	20.9
201 - 300	5	10.7	4	3.0	10	11.6
301 - 400	4	8.5	1	0.7	5	5.8
401 - 500	1	2.1	1	-	3	3.5
501 - 600	1	2.1	1	0.7	2	2.3
601 - 700	-	-	-	0.7	1	1.2
> 700	2	4.3	1	0.7	1	1.2
N.A.	8	17.0	24	17.7	6	7.0
Total	47	100.0	136	100.0	86	100.0

Source : 1. TPD Kerala, Urban Slum in Kerala, 1985.
2. NIUA Survey, 1990.

Table 1.8

Distribution of Slums by Population Size Class

Population	Trivandrum		Cochin		Calicut	
	No.	%	No.	%	No.	%
< 100	9	19.1	22	16.2	4	4.7
101 - 500	10	21.3	70	51.5	35	40.7
501 - 1000	8	17.0	23	16.9	14	16.2
1001 - 2000	9	19.2	8	5.8	17	19.8
2001 - 4000	3	6.4	2	1.5	9	10.4
4000+	1	2.1	-	-	3	3.5
N.A.	7	14.9	11	8.1	4	4.7
Total	47	100.0	136	100.0	86	100.0

Source : 1. TPD Kerala, Urban Slums in Kerala, 1985.
2. NIUA Survey, 1990.

CHAPTER II

SITUATIONAL ANALYSIS OF SLUMS

2.1 The 1985 survey of slums conducted by the Town Planning Department (TPD), Government of Kerala is the only source of information on the slum situation. Hence the analysis of the prevailing slum conditions in the cities of Trivandrum, Cochin and Calicut is based on the data processed from the 1985 survey sheets. The survey categorised the slums then existing in Kerala into two categories viz. (i) Slums and (ii) Special Slums. The latter is distinguished on the basis of criticality of locations. Thus all the slums having critical locations like the river banks, sides of drains, railway lines etc. constitute special slums. The two types of slums as identified by the TPD survey in the three cities are given below.

Table

Number and Type of Slums in Trivandrum, Cochin and Calicut

City	Slums	Special Slums	Total
Trivandrum	18	18	36
Cochin	75	14	89
Calicut	65	10	75
Total	158	42	200

2.2 The situational analysis of slums, however, does not pertain to all the slums mentioned in the above Table. This is so especially because of the fact that the survey sheets for some of the slums are not traceable. Thus out of the total number of

36 slums of both the types in Trivandrum, survey sheets for one Special Slum viz. UFI' Colony, Muttathara is not available in the records of the TPD. In Cochin, the survey sheets for as many as seven Non-Special Slums are missing. These are Puthiyakavu, Kannankulangara, Karingachira, Valiathara H.C. and Kunhara H.C. One lakh colony near the market and another one lakh colony. In Calicut, the sheets for two Non-Special Slums viz. Pattar Colony and Valappilthodika are not to be traced. Hence the analysis is confined to only 35 slums in Trivandrum (in place of 36), 82 in Cochin (instead of 89) and 73 in Calicut (in place of 75). The situational analysis thus pertains to a total number of only 190 slums in the three cities (in place of 200). With this preface, we now turn to an analysis of 190 slums as identified by the 1985 survey. The number and type of slums for which data are available are shown in Table 2.1.

2.3 A slum has certain basic attributes which include its illegality as it is by and large an encroachment on land, lack of basic services, sub-standard shelter, prevalence of predominantly weaker socio-economic groups etc. It would be therefore relevant to analyse the situations pertaining to slums in the three cities on these counts.

Ownership of Land

2.4 An analysis of locations of slums in the three cities reveals that a substantial proportion of total slums is located on private land. Thus of the total number of 190 slums in the three cities, as much as 64.7 per cent of the slums are on

private land (Table 2.2), only about 29 per cent are located on public land and the remaining about 6 per cent of the slums are located partially on public and partially on private land. It is worth mentioning that all the Special Slums in Calicut and Cochin are located exclusively on public land. In Trivandrum as well, as many as about 82 per cent of the Special Slums are located on public land only.

2.5 Amongst the three cities, Calicut has the maximum number of slums on private land. Out of 63 slums, as many as 56 are located on private land. Only 4 slums are located on public land and the remaining 3 are located on land which are partially public and private both. Cochin with 58 slums (out of 68) on private land comes next to Calicut. There are only 7 slums located on public land in this city and the remaining 3 on the mixed land i.e., both public and private. In Trivandrum the location of slums on public and private land are evenly divided. Out of 18 Non-Special Slums, 6 are located on public land and 7 on private land. The remaining 5 slums are located on the mixed land (public and private).

2.6 The analysis of locations of slums thus presents an interesting situation. Majority of the slums are located on private land. The 1985 survey, however, does not make any explicit mention as to whether the private lands on which the slums are located are owned by the slum dwellers or are encroached upon. This is one of the major gaps in the 1985 TPD survey data. If, the lands are not owned by the slum dwellers,

then it is very unusual that a substantial proportion of total slum are located on private land.

Type of Structures

2.7 It is generally hypothesised that the structural conditions in a slum is dependant on the ownership right. Larger the extent of ownership, the better it is supposed to be the structural conditions within a slum area, for ownership provides an incentive to bring about improvement in the structures of shelter. Table 2.3 gives an account of structural conditions of shelters used for dwelling purposes in the slums of three cities by the ownership of land. It can be seen from this Table that there exist a total number of 18,378 structures used exclusively as dwelling units. Of these, a little over two-third are on private land and the remaining one-third are almost equally located on public and the mixed type of land comprising both public and private. A very large number of structures located on private land are pucca structures. This comes to about 42 per cent of the total structures located on private land. Another 37.5 per cent of structures located on private land are kutcha structures and the remaining 20.7 of the structures are semi-pucca. Thus about 62 per cent of the structures on private land are either pucca or semi-pucca constructions. Amongst the three cities, Cochin has the highest proportion of pucca structures (70%). In Calicut, only 41 per cent of the structures on private land are pucca construction. Trivandrum has the lowest proportion of slums on private land as pucca structures (8.6%). Thus it does not give any evidence of a relationship between the

ownership and the type of construction except in the city of Cochin. It is worth mentioning that a very large proportion of dwelling units on public land are found to be kutcha in construction. Thus in Calicut, of 400 dwelling units in the Non-Special Slums, as much as 341 are kutcha. This in the case of Special Slums is 470 out of a total of 535 dwelling units. In Cochin, almost all the dwelling units located on public land are kutcha structures. This in the case of Trivandrum is 97.3 per cent. Even in the Non-Special Slums of slums, about 65 per cent of structures on public land are kutcha. In Trivandrum, about 98 per cent of such structures are kutcha. Thus all the dwellings on public land are found to be overwhelmingly kutcha structures. The structural type of units used as dwelling units and also for pursuing certain types of economic activities is presented in Tables 2.4 and 2.5. Here as well, no relationship emerges between the ownership of land and the type of structures.

Social Groups

2.8 The analysis of households in terms of Scheduled Tribe (ST) and Scheduled Caste (SC) and other social groups does not indicate concentration of any particular social group. Out of a total of 24,072 households living in slums in the three cities, as many as about 92 per cent of them are other than ST and SC. A miniscule proportion of 8.3 per cent belong to the SC. The number of ST household is negligible (Table 2.6). Almost the same pattern of distribution of various social groups is discernible in the three cities individually. Only in Trivandrum a little more than one-third of the households living in Non-

Special Slums belong to SC. As there does not exist concentration of any particular social group in the slums of the three cities, the differentiation of public intervention in a particular city on the basis of social groups does not seem to be relevant.

2.9 The existence of services in the slums of the three cities is analysed in terms of (1) Approach road, (2) Road within the slums, (3) Electricity, (4) Drinking water, (5) Sanitation facilities and (6) Drainage.

(1) Approach Road :

2.10 The existence of approach road is tabulated in Table 2.7. It needs to be mentioned that out of a total number of 190 slums in the three cities for which data could be culled from the 1985 survey sheets, the information on the existence of approach road is not available for 5 slums. Hence the data are given only for 185 slums. The 5 slums for which the information is not available belong to Cochin.

2.11 It is seen from the Table that out of 185 slums in the three cities, the approach road is available in 156 slums. Only 29 slums constituting about 15 per cent of the total slums do not have approach roads. It is interesting to note that all the Special Slums in Calicut which are located on critical locations, are connected with approach road. So are all the 18 Non-Special Slums in Trivandrum. The proportion of slums with approach road is found to be below the average for the three cities (82%). In Cochin taking both the categories of slums together, only 72 per

cent of them are connected with approach road. This is so particularly due to the fact that out of 14 special slums, only 4 are connected to an approach road.

2.12 As Kerala gets heavy downpour during the monsoon, the extent of water logging of the approach roads is reported in the same Table (Table 2.6). As many as 140 slums do not get water logging on the approach roads during and after the rains. Only 16 slums reported instances of water logging on the approach roads. Only 6 slums in Calicut, 9 in Cochin and one in Trivandrum gets water logged during the rains.

(2) Roads within the Slum :

2.13 Out of 184 slums in the three cities for which information on the availability of internal roads are reported (Table 2.8), as many as 120 slums do not have the internal roads. Roads within the slums are available only in about one third (64) of the total slums. The situation seems to be most acute in Calicut where about 80 per cent of slums (48 slums) do not have internal roads. This comes to about 63 per cent (22 slums) in Trivandrum and about 49 per cent (40 slums) in Cochin. All the Special Slums in Calicut and Cochin and 14 Special Slums (out of 17) in Trivandrum do not have internal roads at all.

2.14 Out of the total slums in the three cities as many as 126 are found to have water logging during the monsoon. About three-fourth of slums in Calicut, two-third in Cochin and nearly half the total slums in Trivandrum get water logging on internal roads during the monsoon. Thus much is desired to provide for

internal roads within about two-third of the total slums in the three cities and upgrade about two-third of the existing roads for preventing water logging during the monsoon.

(3) Drinking Water

2.15 The 1985 survey of slums reveals that a little less than one-third (30%) of the total slums in the three cities do not have an access to treated and filtered water supply (Table 2.9) as only 133 slums (70%) have been provided with public standposts. Individual water connection is found to exist only in about 25 per cent of slums. The situation is grim especially in Cochin where 58 Non-Special Slums are not provided with public standposts and not a single slum is found to have private water connections. In Calicut, as many as 54 slums (out of 65 Non-Special Slums) do not have access to filtered water through public standposts. However, 41 slums are found to have private connections. Deficiencies in the data collection for 1985 survey does not enable to say definitely if some of these are included in the category of slums which do not have public standposts. In Trivandrum, 13 Non-Special Slums (out of a total number of 17) do not have public standposts. Private connections are found only in about one-third of the total number of Non-Special Slums. The situation of potable water supply appears to be very grim in Special Slums particularly in the cities of Calicut and Cochin where filtered water supply is not available either through public standposts or by way of private connections. In Trivandrum as well, only 4 Special Slums have access to public standposts while 3 Special Slums have private connections.

2.16 Number of slums depending on wells, ponds and other sources for water is also reported in Table 2.9. It is seen from this Table that a miniscule segment of slums depends on these for water except in Trivandrum where dependence of slums on these sources is to the extent of 40 per cent.

2.17 It is worth mentioning that as many as 43 slums (out of total number of 190) do not have access to any source of water whether filtered or unfiltered. Out of these, 19 belong to the Non-Special and 24 to the Special Slum category. In Trivandrum, about one-third (11 out of 37 slums) do not have any source of water. In Cochin a little more than one-fifth (22 out of 82) are found to be deprived of this basic service. In the city of Calicut the number of such slums is ten (out of 73).

2.18 As potable water is not accessible in a very large number of slums, the slum dwellers have to draw water from outside. Table 2.10 shows that about one-fourth (46 slums out of 190) have to draw water from outside. Of these, 26 are Special Slums and 20 Non-Special Slums. Trivandrum has the largest number of slums amongst the three cities (13 out of 37) drawing water from outside. In addition to 11 slums which do not have access to water supply from any source, another 2 slums out of those which have already been provided with public standposts do not have accessibility to sufficient quantity of water so that they are compelled to satisfy their need for water by fetching it from outside (Table 2.9). In Cochin, more than one-fourth (23) of total number of slums are depending for water on other localities. The number of such slums in Calicut is 10.

2.19 The analysis of accessibility to water thus suggests that more than one-fifth of total slums do not have accessibility to water from any source within the slums. The dependence of slums on outside localities for water as depicted in Table 2.9, however, suggests that about one-fourth of total slums in the three cities have to fetch water from outside their slums. This suggests that some of the slums which have already been provided with public standposts, are not satisfied with it and have to fetch it from outside localities.

(4) Sanitation Facilities

2.20 The nature of data does not enable to have a definite idea of availability of sanitation facilities in the slum areas. This is so chiefly because the information available only pertains to availability or non-availability of sanitation facilities in the slums. It is not ascertainable from this if the two groups of slums are exclusive or not. Thus Table 2.11 indicates that out of total number of 189 slums reported in it, 156 are not provided with public sanitation facilities. But it also shows that 138 slums have private facilities of sanitation. However, it is not obvious from this if the 51 slums which do not have private sanitation facilities are also included in the other category of 156 slums which do not have public sanitation facilities. Moreover, it could be deduced from this type of information that even though all the slums having private latrines (138) are included in the category of slums which do not have public Sanitation facilities in the three cities, as many as 18 slums do not have either the public or private sanitation

facilities. Following this reasoning, it seems that 8 slums in Trivandrum, 7 in Cochin and 3 in Calicut do not have private or public sanitation facilities.

2.21 Table 2.11 also depicts the availability of underground sewerage system in the various slums. It is seen from this Table that not a single city has this facility in the three cities.

(5) Drainage

2.22 The drainage system is virtually non-existent in the slums in the three cities. It is found to exist only in 11 out of 190 slums (Table 2.12). Thus about 94 per cent of the total slums of both the categories do not have a drainage system. The same is the status of drainage system in the three cities individually as well. In Calicut, 71 slums, (out of 73) do not have drainage system. The extent of such slums in Cochin and Trivandrum is 96 per cent and 82 per cent respectively. There is found to be no difference in the Non-Special and Special Slums so far as the provision of drains is concerned. Kerala being a state having excessive rains during the monsoon, the provision of drainage is all the more important.

(6) Street Lighting

2.23 Street lighting is available only in about 54 per cent of the total slums in the three cities. The situation is grim especially in the Special Slums as only 7 out of 41 such slums in the three cities are found to have street lighting (Table 2.13). Amongst the Non-Special Slums, about two-third of the total slums have the facility of street lighting. The Non-Special Slums in

the cities of Calicut and Trivandrum are better placed so far as the provision of street lighting is concerned as 48 Non-Special Slums in Calicut (out of 63) and 13 in Trivandrum (out of 18) are found to have street lighting. Not a single Special Slum in Cochin is found to have street lighting. In the cities of Calicut and Trivandrum as well, the situation of street lighting is not bright. It needs to be mentioned that street lighting is a critical service in Kerala slums especially due to thick vegetation which does not permit the percolation of natural light at night.

2.24 The situation does not appear to be bad especially in Non-Special Slums so far as the domestic connection of electricity is concerned. As many as 120 (out of 149) are found to have domestic connections in the three cities taken together (Table 2.12).

2.25 The Special Slums, however, do not have domestic connections except in Trivandrum and Calicut where hardly one-third of them have access to electricity.

2.26 The situational analysis of slums presents a gloomy picture of availability of even basic services which are essential for healthy living. The deficiencies in the data base has, however, not permitted to look into the extent of deprivation of the basic services. It throws light only on the availability or non-availability of services. An account of distributional aspect of services to the slum dwellers would have substantially helped in comprehending the degree of deprivation

as also the intensity of it. The status of various slums, in terms of services available in the three cities is discussed in greater detail in Chapter III where the data to evolve a typology of slum is analysed.

Table 2.1
Type of Slums

City	Type of slums					
	Slums		Special Slums		Total	
	No.	%	No.	%	No.	%
Calicut	63	86.3	10	13.7	73	100.0
Cochin	68	82.9	14	17.1	82	100.0
Trivandrum	18	51.4	17	48.6	35	100.0
Total	149	78.4	41	21.6	190	100.0

Source : TPD (Kerala) Survey, 1985.

Table 2.2
Ownership of the Slums

City	Type of slum	Public land		Private land		Public & Private land		Total		
		No.	%	No.	%	No.	%	No.	%	
Calicut	S	4	6.3	56	88.9	3	4.8	63	100.0	
	SS	10	100.0	-	-	-	-	10	100.0	
Total		14	19.2	56	76.7	3	4.1	73	100.0	
Cochin	S	7	10.3	58	85.3	3	4.4	68	100.0	
	SS	14	100.0	-	-	-	-	14	100.0	
Total		21	25.6	58	70.7	3	3.7	82	100.0	
Trivandrum	S	6	33.3	7	38.9	5	27.8	18	100.0	
	SS	14	82.4	2	11.8	1	5.8	17	100.0	
Total		20	57.1	9	25.7	6	17.1	35	100.0	
		S	17	11.4	121	81.2	11	7.4	149	100.0
		SS	38	92.7	2	4.9	1	2.4	41	100.0
Grand total		55	28.9	123	64.7	12	6.3	190	100.0	

Source : TPD (Kerala) Survey, 1985.

S - Slum
SS - Special Slum

Table 2.3
Types of Houses by Ownership of Land
(Dwelling Purpose)

City/types of slum	Kuchcha						Semi-pucca						Pucca						Total		
	Public		Private		Public & private		Public		Private		Public & private		Public		Private		Public & private		Public	Private	Public & private
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.	No.
Calicut S	341	85.3	1977	30.0	678	52.9	50	12.5	1900	28.7	361	28.1	9	2.2	2731	41.3	243	19.0	400	6608	1282
SS	470	87.9	-	-	-	-	60	11.2	-	-	-	-	5	0.9	-	-	-	-	535	-	-
Total	811	86.7	1977	30.0	678	52.9	110	11.8	1900	28.7	361	28.1	14	1.5	2731	41.3	243	19.0	935	6608	1282
Cochin S	231	64.9	976	28.1	51	54.3	7	2.0	65	1.9	1	1.0	118	33.1	2428	70.0	42	44.7	356	3469	94
SS	338	99.4	-	-	-	-	2	0.6	-	-	-	-	-	-	-	-	-	-	340	-	-
Total	569	81.7	976	28.1	51	54.3	9	1.3	65	1.9	1	1.0	118	17.0	2428	70.0	42	44.7	696	3469	94
Trivan- drum S	415	97.9	639	80.8	660	81.2	9	2.1	84	10.6	126	15.5	-	-	68	8.6	27	3.3	424	791	813
SS	999	97.3	1135	65.5	450	88.8	17	1.7	557	32.2	53	10.4	11	1.0	40	2.3	4	0.8	1027	1732	507
Total	1414	97.4	1774	70.3	1110	84.1	26	1.8	641	25.4	179	13.6	11	0.8	108	4.3	31	2.3	1451	2523	1320
S	987	83.6	3592	33.1	1389	63.5	66	5.6	2049	18.9	488	22.3	127	10.8	5227	48.0	312	14.2	1180	10868	2189
SS	1807	95.0	1135	65.5	450	88.7	79	4.2	557	32.2	53	10.5	16	0.8	40	2.3	4	0.8	1902	1732	507
Grand total	2794	90.7	4727	37.5	1839	68.2	145	4.7	2606	20.7	541	20.1	143	4.6	5267	41.8	316	11.7	3082	12600	2696

Source : TPD (Kerala) Survey, 1985.

Table 2.4

Types of Houses by Ownership of Land
(Dwelling and Enterprise Purpose)

City/types of slum	Kuchcha				Semi-pucca				Pucca				Total								
	Public		Private		Public & private		Public		Private		Public & private		Public		Private		Public & private				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
Calicut S	2	40.0	21	29.2	11	55.0	3	60.0	26	36.1	5	25.0	-	-	25	34.7	4	20.0	5	72	20
SS	2	66.6	-	-	-	-	-	-	-	-	-	-	1	33.3	-	-	-	-	3	-	-
Total	4	50.0	21	29.2	11	55.0	3	37.5	26	36.1	5	25.0	1	12.5	25	34.7	4	20.0	8	72	20
Cochin S	-	-	3	9.4	1	100.0	-	-	-	-	-	-	-	-	29	90.6	-	-	-	32	1
SS	2	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
Total	2	100.0	3	9.4	1	100.0	-	-	-	-	-	-	-	-	29	90.6	-	-	2	32	1
Trivan- drum S	23	100.0	23	100.0	20	80.0	-	-	-	-	5	20.0	-	-	-	-	-	-	23	23	25
SS	19	100.0	15	40.5	1	50.0	-	-	10	27.0	1	50.0	-	-	12	32.4	-	-	19	37	2
Total	42	100.0	38	63.3	21	77.8	-	-	10	16.7	6	22.2	-	-	12	20.0	-	-	42	60	27
S	25	89.3	47	37.0	32	69.6	3	10.7	26	20.5	10	21.7	-	-	54	42.5	4	8.7	28	127	46
SS	23	95.8	15	40.6	1	50.0	-	-	10	27.0	1	50.0	1	4.2	12	32.4	-	-	24	37	2
Grand total	48	92.3	62	37.8	33	68.8	3	5.8	36	22.0	11	22.9	1	1.9	66	40.4	4	8.3	52	164	48

Source : TPD (Kerala) Survey, 1985.

Table 2.5

Types of Houses by Ownership of Land
(Enterprise and Other Purposes)

City/types of slum	Katchcha				Semi-pucca				Pucca				Total								
	Public		Private		Public & private		Public		Private		Public & private		Public		Private		Public & private				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.			
Calicut S	6	75.0	120	15.1	21	10.3	1	12.5	211	26.5	32	15.8	1	12.5	464	58.4	150	73.9	8	795	203
SS	31	70.5	-	-	-	-	11	25.0	-	-	-	-	2	4.5	-	-	-	-	44	-	-
Total	37	71.1	120	15.1	21	10.3	12	23.1	211	26.5	32	15.8	3	5.8	464	58.4	150	73.9	52	795	203
Cochin S	-	-	25	31.6	-	-	-	-	-	-	-	-	4	100.0	54	68.4	-	-	4	79	-
SS	36	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-
Total	36	90.0	25	31.6	-	-	-	-	-	-	-	-	4	10.0	54	68.4	-	-	40	79	-
Trivan- drum S	18	85.7	51	82.2	29	82.9	-	-	5	8.1	4	11.4	3	14.3	6	9.7	2	5.7	21	62	35
SS	36	94.7	40	66.7	36	90.0	-	-	11	18.3	3	7.5	2	5.3	9	15.0	1	2.5	38	60	40
Total	54	91.5	91	74.6	65	86.7	-	-	16	13.1	7	9.3	5	8.5	15	12.3	3	4.0	59	122	75
S	24	72.7	196	20.9	50	21.0	1	3.0	216	23.1	36	15.1	8	24.3	524	56.0	152	63.9	33	936	238
SS	103	87.3	40	66.7	36	90.0	11	9.3	11	18.3	3	7.5	4	3.4	9	15.0	1	2.5	118	60	40
Grand total	127	84.1	236	23.7	86	30.9	12	7.9	227	22.8	39	14.0	12	7.9	533	53.5	153	55.0	151	996	278

Source : TPD (Kerala) Survey, 1985.

Table 2.6

Households and Population by Social Groups

City/types of slum	Households								Population								
	SC		ST		Others		Total		SC		ST		Others		Total		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Calicut	S	305	2.7	-	-	10917	97.3	11222	100.0	1776	2.3	-	-	76200	97.7	77976	100.0
	SS	90	14.7	-	-	523	85.3	613	100.0	434	11.5	-	-	3329	88.5	3763	100.0
Total		395	3.3	-	-	11440	96.7	11835	100.0	2210	2.7	-	-	79529	97.3	81739	100.0
Cochin	S	276	5.6	-	-	4611	94.4	4887	100.0	1551	5.1	-	-	28889	94.9	30440	100.0
	SS	83	22.7	-	-	282	77.3	365	100.0	358	22.1	-	-	1261	77.9	1619	100.0
Total		359	6.8	-	-	4893	93.2	5252	100.0	1909	6.0	-	-	30150	94.0	32059	100.0
Trivandrum	S	998	34.2	1	neg.	1923	65.8	2922	100.0	4743	33.9	8	neg.	9244	66.1	13995	100.0
	SS	249	6.1	1	neg.	3813	93.9	4063	100.0	1006	4.7	5	neg.	20602	95.3	21613	100.0
Total		1247	17.9	2	neg.	5736	82.1	6985	100.0	5749	16.2	13	neg.	29846	83.8	35608	100.0
	S	1579	8.3	1	neg.	17451	91.7	19031	100.0	8070	6.6	8	neg.	114333	93.4	122411	100.0
	SS	422	8.4	1	neg.	4618	91.6	5041	100.0	1798	6.7	5	neg.	25192	93.3	26995	100.0
Grand total		2001	8.3	2	neg.	22069	91.7	24072	100.0	9868	6.6	13	neg.	139525	93.4	149406	100.0

Source : TPD (Kerala) Survey, 1985.

Table 2.7
Approach Road to the Slums

City/types of slum	Approach road									
	Exists				Water logged in monsoon					
	Yes		No		Yes		No			
	No.	%	No.	%	No.	%	No.	%		
Calicut	S	53	84.1	10	15.9	6	11.3	47	88.7	
	SS	10	100.0	-	-	-	-	10	100.0	
Total		63	86.3	10	13.7	6	9.5	57	90.5	
Cochin	S	55	80.9	8*	11.8	8	14.5	47	85.5	
	SS	4	28.6	10	71.4	1	25.0	3	75.0	
Total		59	72.0	18*	22.0	9	15.3	50	84.7	
Trivandrum	S	18	100.0	-	-	1	5.6	17	94.4	
	SS	16	94.1	1	5.9	-	-	16	100.0	
Total		34	97.1	1	2.9	1	2.9	33	97.1	
		S	126	84.6	18*	12.1	15	11.9	111	88.1
		SS	30	73.2	11	26.8	1	3.3	29	96.7
Grand total		156	82.1	29*	15.3	16	10.3	140	89.7	

Source : TPD (Kerala) Survey, 1985.

* 5 N.A.

Table 2.8

Road within the Slum

City/types of slum	Road within the slum								Slum water logged in monsoon				
	Exists				Water logged in monsoon				Yes		No		
	Yes		No		Yes		No		No.	%	No.	%	
	No.	%	No.	%	No.	%	No.	%					
Calicut	S	13	20.6	48*	76.2	3	23.1	8*	61.5	52	82.5	11	17.5
	SS	-	-	10	100.0	-	-	-	-	1	10.0	9	90.0
Total		13	17.8	58*	79.5	3	23.1	8*	61.5	53	72.6	20	27.4
Cochin	S	38	55.9	26**	38.2	11	28.9	27	71.1	46	67.6	22	32.4
	SS	-	-	14	100.0	-	-	-	-	10	71.4	4	28.6
Total		38	46.3	40**	48.7	11	28.9	27	71.1	56	68.3	26	31.7
Trivandrum	S	10	55.6	8	44.4	1	10.0	9	90.0	8	44.4	10	55.6
	SS	3	17.6	14	82.4	-	-	3	100.0	9	52.9	8	47.1
Total		13	37.1	22	62.9	1	7.7	12	92.3	17	48.6	18	51.4
	S	61	40.9	82*,**	55.0	15	24.6	44*	72.1	106	71.1	43	28.9
	SS	3	7.3	38	92.7	-	-	3	100.0	20	48.8	21	51.2
Grand total		64	33.7	120	63.2	15	23.4	47*	73.4	126	66.3	64	33.7

Source : TPD (Kerala) Survey, 1985.

* N.A - 2

** N.A. - 4

Table 2.9

Sources of Drinking Water within the Slums

City/types of slum	Slums having sources of drinking water as								No source		Not available		
	Public taps		Private taps		Well/Borewell		Pond/Stream		No.	%	No.	%	
	No.	%	No.	%	No.	%	No.	%					
Calicut	S	54	85.7	41	65.1	4	6.3	-	-	5	7.9	-	-
	SS	2	20.0	-	-	3	30.0	-	-	5	50.0	-	-
Total		56	76.7	41	56.2	7	9.6	-	-	10	13.7	-	-
Cochin	S	58	85.3	-	-	6	8.8	-	-	10	14.7	-	-
	SS	2	14.3	-	-	-	-	-	-	12	85.7	-	-
Total		60	73.2	-	-	6	7.3	-	-	22	26.8	-	-
Trivandrum	S	13	72.2	6	33.3	8	44.4	1	5.6	4	22.2	-	-
	SS	4	23.5	3	17.6	6	35.3	2	11.8	7	41.2	1	5.9
Total		17	48.6	9	25.7	14	40.0	3	8.6	11	31.4	1	2.9
	S	125	83.9	47	31.5	18	12.1	1	0.7	19	12.8	-	-
	SS	8	19.5	3	7.3	9	18.4	2	4.9	24	58.5	1	2.4
Grand total		133	70.0	50	26.3	27	14.2	3	1.6	43	22.6	1	0.5

Source : TPD (Kerala) Survey, 1985.

Table 2.10
Sources of Drinking Water Outside the Slums

City/types of slum	Slums using outside source for drinking water				
	Using tap		Using both (outside & inside)		
	No.	%	No.	%	
Calicut	S	5	7.9	2	3.1
	SS	5	50.0	3	30.0
Total		10	13.7	5	6.8
Cochin	S	10	14.7	-	-
	SS	13	92.9	1	7.1
Total		23	28.0	1	1.2
Trivandrum	S	5	27.8	1	5.6
	SS	8	47.1	-	-
Total		13	37.1	1	2.9
	S	20	13.4	3	2.0
	SS	26	63.4	4	23.5
Grand total		46	24.2	7	3.7

Source : TPD (Kerala) Survey, 1985.

Table 2.11

Sanitation Facilities in the Slums

City/type of slum	Sanitary public				Sanitary** private				Underground sewerage				
	Yes		No		Yes		No		Yes		No		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Calicut	S	9	14.3	54*	85.7	58	92.1	5	7.9	-	-	63	100.0
	SS	1	10.0	9	90.0	2	20.0	8	80.0	-	-	10	100.0
Total		10	13.7	63*	86.3	60	82.2	13	17.8	-	-	73	100.0
Cochin	S	17	25.0	50	73.5	56	82.4	12	17.6	-	-	68	100.0
	SS	-	-	14	100.0	1	7.1	13	92.9	-	-	14	100.0
Total		17	20.7	64	78.0	57	69.5	25	30.5	-	-	82	100.0
Trivandrum	S	5	27.8	13	72.2	14	77.8	4	22.2	-	-	18	100.0
	SS	1	5.9	16	94.1	7	41.2	10	58.8	-	-	17	100.0
Total		6	17.1	29	82.9	21	60.0	14	40.0	-	-	35	100.0
	S	31	20.8	117*	78.5	128	85.9	21	14.1	-	-	149	100.0
	SS	2	4.9	39	95.1	10	24.4	31	75.6	-	-	41	100.0
Grand total		33	17.4	156*	82.1	138	72.6	52	27.4	-	-	190	100.0

Source : TPD (Kerala) Survey, 1985.

* N.A. - 1

** Sanitary Private + Others.

Table 2.12
Drainage System in the Slums

City/types of slum	Slums having drainage system						
	Yes		No		Total		
	No.	%	No.	%	No.	%	
Calicut	S	2	3.2	61	96.8	63	100.0
	SS	-	-	10	100.0	10	100.0
Total		2	2.7	71	97.3	73	100.0
Cochin	S	3	4.4	65	95.6	68	100.0
	SS	-	-	14	100.0	14	100.0
Total		3	3.7	79	96.3	82	100.0
Trivandrum	S	4	22.2	14	77.8	18	100.0
	SS	2	11.8	15	88.2	17	100.0
Total		6	17.1	29	82.9	35	100.0
	S	9	6.0	140	94.0	149	100.0
	SS	2	4.9	39	95.1	41	100.0
Grand total		11	5.8	179	94.2	190	100.0

Source : TPD (Kerala) Survey, 1985.

Table 2.13
Accessibility to Electricity

City/type of slum	Slums having												
	Electricity				Street lights				Domestic connection				
	Yes		No		Yes		No		Yes		No		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Calicut	S	58	92.1	5	7.9	48	76.2	15	23.8	57	90.5	6	9.5
	SS	3	30.0	7	70.0	2	20.0	8	80.0	3	30.0	7	70.0
Total		61	83.6	12	16.4	50	68.5	23	31.5	60	82.2	13	17.8
Cochin	S	52	76.5	16	23.5	36	52.9	32	47.1	48	70.6	19*	27.9
	SS	-	-	14	100.0	-	-	14	100.0	-	-	14	100.0
Total		52	63.4	30	36.6	36	43.9	46	56.1	48	58.5	33*	40.2
Trivandrum	S	16	88.9	2	11.1	13	72.2	5	27.8	15	83.3	3	16.7
	SS	7	41.2	10	58.8	5	29.4	12	70.6	6	35.3	11	64.7
Total		23	65.7	12	34.3	18	51.4	17	48.6	21	60.0	14	40.0
	S	126	84.6	23	15.4	97	65.1	52	34.9	120	80.5	28*	18.8
	SS	10	24.4	31	75.6	7	17.1	34	82.9	9	22.0	32	78.0
Grand total		136	71.6	54	28.4	104	54.7	86	45.3	129	67.9	60*	31.6

Source : TPD (Kerala) Survey, 1985.

* N.A. - 1.

CHAPTER III

TYOLOGY OF SLUM

3.1 Slum is viewed differently by different segments of society. To the conservatives and radicals, it appears as "plague spots", "areas of insanitation, crime and vice"¹. The liberals, however, look at it as "a formidable content of creative energy, leadership and organisation, an unequivocal desire to rise above the past"². The economists look at it as "Locus of Poverty" and Oscar Lewis even branded it as a "Culture of Poverty"³. According to the sociologists a slum is an integral part of the social system itself. It is said to be a by-product of a complex interplay of cultural, political, socio-economic and historical factors.⁴ Laquian infact believes them to be an index of "socio-economic dislocation arising from the nature of growth process in the developing countries"⁵.

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1. DDA, Work Studies Relating to the Preparation of the Master Plan for Delhi, Vol. I (no date), p.223.
 2. T.K. Majumdar, "The Problem of Squatter Settlements: A Sociological Perspective", Social Scientists Association, TCPO, New Delhi, April 1974.
 3. Oscar Lewis, "The Culture of Poverty" in Daniel P. Moynihan (ed.), On Understanding Poverty, Basic Books Inc., New York, 1968, PP. 187-199
 4. See R.N. Thakur and M.S. Dhadave, Slum and Social System, Archives Publishers. New Delhi, 1987, Ch.2.
 5. Aprodicio Laquian, Slum are for People, The Barrio Magsaysay Pilot Project in Philippines Urban Community Development, East-West Centre Press, Honolulu, 1971, p.6.

3.2 It should be thus obvious from these diverse views that slums are extremely complicated entities and perhaps it would not be an easy exercise to group such a complex social sub-system into distant types. In order to do this one will be required to take due note of a host of variables like caste groups, religious groups, incomes, services, physical locations, structural conditions, the extent of deprivation and so on. The list becomes so large that it would be difficult to keep the type of typology within limited number. If, on the other hand, the types become too large and unwieldy, it will lose its relevance for public policy.

3.3 The diversities and complexities of slums as a social sub-system apart, at the policy plane a typology of slum is said to be necessary for evolving a perspective of policy so that the living conditions could be at least minimised if not removed and the deprivation of the slum dwellers could be at least minimised if not removed altogether. It is perhaps with this end in view that the Terms of Reference (TOR) for the consultancy study of slum improvement and upgradation under the World Bank Kerala Urban Development Project requires the consultant to evolve a typology of slums in the three cities.

3.4 In view of the complexities of slums as mentioned above, there could be several alternative ways of looking at

6. Kerala Urban Development Project: Terms of Reference for Slum Upgrading Studies, Para 3.2.1.

be to look at slums on the basis of their locations. All the slum clusters located on critical locations like the river beds, sea beach, by the sides of drains, railway lines, under the high tension electricity wires, hillocks and undulated rocky terrains could constitute one type. This type of slums have inevitably to be relocated on alternative site. In fact the 1985 TPD survey has already identified such slums and it is given a name of "Special Slums"⁷. All the other slums having normal locations could constitute the second type in this scheme of typology.

3.5 Yet another way of evolving a typology could be to group the various slum settlements as legal and illegal slums. All the squatters' settlements under this scheme of typology would constitute the illegal slums and the others will belong to the second type that is the legal slums. Legal slums could again be grouped to form another two sub-groups on the basis of physical deterioration and lack of services and community facilities. Thus the localities which were once very good traditional housing areas but have now derelicted due to physical dilapidation and overcrowding could constitute one sub-group. A large proportion of slums in Mattancherry locality in Cochin in fact belongs to this category.

3.6 Its problems and physical conditions very much resemble the slums of the Walled City of Shahjahanabad in Delhi, the Walled City of Ahmedabad and the old city of Hyderabad. The rest

7. Such slums are marked with SS in parentheses in the Appendix C-1.

of the slums located legally but deficient in services and community facilities could constitute the second sub-group. Yet another way of evolving a typology could be based on multiple variables which reflect the crucial characteristics of slums. These include encroachment on public/private land, rudimentary shelter, locational incompatibility (as per the zonal regulations), critical locations, inadequate and deficient services etc. A typology could as well be evolved based on these conspicuous characteristics of slums. Taking account of these features, one could evolve four distinct types of slums which are of direct relevance for public intervention. These types could be as follows:

- (1) Slums to be improved
- (2) Slums to be upgraded
- (3) Slums to be reconstructed, and
- (4) Slums to be relocated

The criteria determining this typology could be as under:

- (1) Improved Slums:
 - (a) Encroachment on public land
 - (b) Lack of basic services
 - (c) Rudimentary shelter
 - (d) Locational compatibility
 - (e) Not located on critical locations.

(2) Upgradation Slums:

- (a) Inadequate and deficient basic services
- (b) Rudimentary shelter
- (c) Legal status (ownership right not yet awarded)
- (d) Affordability to absorb loan for upgradation of services and improvement of shelter
- (e) Compatible locations (as per zoning regulations)
- (f) Locations not critical

(3) Reconstruction Slums:

- (a) Locational compatibility
- (b) Non-critical locations
- (c) Enough land in the cluster for reconstruction open spaces, circulation pattern etc.
- (d) Affordability for tenements and services.

(4) Relocation Slums

- (a) Locational incompatibility
- (b) Critical Locations
- (c) Affordability for serviced sites.

3.7 Such a scheme of typology seemingly could inform public policy on a sustained basis. However, a closer look at the criteria of each type would reveal that first there are many common variables under each type so that it would be again difficult to allocate a particular slum under a particular distinct type. Second, as slums are complicated socio-physical settlements, one could come across a situation where all the types are found within a single settlement. Hence this scheme of typology is also fraught with complications. Nevertheless it

does provide a rational framework for planned public intervention. Wherever such distinct features on the basis of mutual exclusiveness are found, it could be of immense practical value.

3.8 It must be mentioned that evolving of a typology requires a great deal of data on socio-economic and physical attributes of slums. This would call for a comprehensive data collection system which is time consuming. It is probably because of this that the TOR has suggested to "record and process TPD slum survey 1985 data to be used in preparing a typology of slums".⁸

3.9 It has been mentioned earlier in this chapter that one of the ways to develop a typology is to keep the status of services in the slums as the single most important consideration. Therefore the best which could be made out of the TPD survey data is to evolve a typology based on the extent of services available in the various slums. In taking the services into account for developing a typology of slums, the existence of core basic services as suggested to be provided in the human settlement of any type by the Rural-Urban Relationship Committee (RURC) way back in the late sixties has been the major guiding consideration. It is worth mentioning that RURC suggested the provision of five basic services as the bare necessity for any type of human settlements.⁹ These are :

8. Ibid, para 3.2.8

9. India (Ministry of Health), Report of the Rural-Urban Relationship Committee, Vol. 1, 1966, P.26

- (1) Potable water
- (2) Street lighting
- (3) Drainage, at least pucca surface drains
- (4) Surfaced roads and streets
- (5) Sanitation, conservancy and arrangement for the disposal of town refuse and prevention of epidemics.

3.10 Later on the same services were incorporated in the programme of EIUS as well (Ch. IV Table 1), with addition of norms and standards for these very services. The typology is therefore based on the existence of these services. Prevalence of all the five services mentioned above thus constitutes the first distinct type of slum. Slums having only four services constitute the second group and thus the type goes on increasing till there does not exist any service in the slum. The slums not having any of these services constitute the sixth category.

3.11 Having taken note of existence of these five services the next step was to cross classify the six categories based on services with the type of structures prevalent in the various slums. The type of structures have been again grouped into three distinct types viz. (i) predominantly pucca structure (ii) predominantly semi-pucca structure and (iii) predominantly kuchcha structure. If a slum has more than fifty per cent of the total structures as pucca, the slum has been treated as predominantly pucca slum. If in a slum pucca and semi-pucca structures taken together constitute more than fifty per cent of the total tenements or it has only semi-pucca structures to the

extent of more than fifty per cent, the slum is designated as semi-pucca. Likewise, if the kuchcha structures constitute more than fifty per cent of the total dwellings, the slum has been designated as predominantly kuchcha. The structures are treated as pucca, semi-pucca and kuchcha according to the definition of the TPD survey.¹⁰

3.12 Thus the six categories of services cross classified by the three types of structures prevailing in the slums has yielded 18 types of slums in each city. The frequency distribution of slums according to type is presented in Table 3.1. It needs to be mentioned that the typology pertains only to those slums which have normal locations. Thus all the slums situated on critical locations and designated as Special Slums by the TPD survey have been excluded from the purview of this typology. The rationale behind this is that by dint of their critical locations, they need to be relocated on normal locations after developing the sites and services. Improvement in situation is not at all relevant for such slums. Second, the typology pertains only to the pre-1985 slums i.e., all the slums having normal locations (Non-Special Slums) and covered by the TPD survey. The slums identified subsequent to this survey will be allocated to their relevant types after the household survey and survey of settlements are over in August 1990 and the data collected are finally processed.

10. Government of Kerala (Town Planning Department), Urban Slums in Kerala 1985, PP. 15-16

3.13 It could be seen from Table 3.1 that altogether there are 149 Non-Special Slums in the three cities for which data are available from the 1985 TPD survey. Of these, 18 are in Trivandrum, 68 in Cochin and 63 in Calicut. For all the three cities, the number of slums belonging to the three structural categories are mentioned in the last column of the Table. In Calicut, going by the 18 categories of slums on the basis of structure and existence of services, there is found to be no slum belonging to predominantly pucca category and having 4 and more services. (Types A¹ and B¹). There are 8 slums which have three services only but are of predominantly pucca type (Type C¹). The number of slums the types E¹ and F¹ are 6 and 2 respectively. Thus there are two slums in Calicut which though belong to predominantly pucca type, but do not have any of the five services. There is one slum which is predominantly semi-pucca but has all the five services (Type A²). The maximum number of slums in the predominantly semi-pucca type belong to Type C² (having three services). The number of such slums is 10. Again amongst the predominantly kuchcha slums, there is only one slum which has all the five services (Type A³).

3.14 It should be obvious from this Table that the number of slums having all the five basic services are only 6 of which 2 each are to be found in Calicut, Cochin and Trivandrum. There are 8 slums in the three cities which do not have any of the five basic services. Of these, 3 each are in Trivandrum and Cochin and 2 in Calicut.

3.15 A bird's eye view of various types of slums prevailing in the three cities is thus discernible from Table 3.1. This Table has been further blown over for each city and then for each slum individually in Tables 3.2 to 3.4. It needs to be mentioned that in these detailed Tables denoting the type of each slum, the number of services available in them is denoted by the alphabets (A to F) and the subscripts indicate the type of structures. Thus A indicates existence of five services; B four services and so on. F indicates complete absence of any of the five services. Likewise subscript 1 represents predominantly pucca structures, 2 predominantly semi-pucca structures and 3 pre-dominantly kuchcha structures.

3.16 Table 3.2 gives an account of all the pre-1985 Non-Special Slums in Trivandrum according to type. The typology of such slums in Cochin is presented in Table 3.3 and that of Calicut in Table 3.4. These Tables, as may be seen from them, only give the serial number of slums belonging to each type. They could be identified by their names from the list of slums given in Statement I after Table 3.4.

Table 3.1

Typewise Distribution of Slums by Facilities and Structures								
City	Types of Structures	Types of Slums						Total
		A	B	C	D	E	F	
Calicut	(1)	-	-	8	5	6	2	21
	(2)	1	6	10	-	1	-	18
	(3)	1	3	16	1	-	-	21
Total		2	*10	**36	6	7	2 *	**63
Cochin	(1)	-	3	5	7	6	3	24
	(2)	-	-	-	-	-	-	-
	(3)	2	20	15	6	1	-	44
Total		2	23	20	13	7	3	68
Trivandrum	(1)	2	10	2	-	1	3	18
	(2)	-	-	-	-	-	-	-
	(3)	-	-	-	-	-	-	-
Total		2	10	2	-	1	3	18
Grand Total		6	43	58	19	15	8	149

Source : TPD (Kerala) Survey, 1985.

* N.A.-1 **N.A.-2

Note 1 : Types of Slums (according to the availability of core facilities)

Type A denotes the availability of all the 5 core facilities.

Type B denotes the availability of any 4 core facilities.

Type C denotes the availability of any 3 core facilities.

Type D denotes the availability of any 2 core facilities.

Type E denotes the availability of any 1 core facility.

Type F denotes the nonavailability of any core facilities.

Five core facilities are 1) Road within the slum, 2) Street lights, 3) Protected water, 4) Sanitation, 5) Drainage.

Note 2 : Types of structures

Type (1) - Slums in this category have 50% or more kuchcha structure.

Type (2) - Slums in this category have either 50% or more a pucca structures or 50% or more semi-pucca and pucca structures.

Type (3) - Slums in this category have 50% or more pucca structures.

Table 3.2

Typewise Distribution of the Core Facilities and Structures in Calicut

Category	No. of facilities available	Sl. No.	Facilities					
			Road Within	Street light	Protected water	Sanitation	Drainage	
A1	5				Nil			
	Sub Total	0						
A2	5	26	P	Y	Y	Y	Y	Y
	Sub Total	1						
A3	5	24	P	Y	Y	Y	Y	Y
	Sub Total	1						
A	Total	2						
B1	4				Nil			
	Sub Total	0						
B2	4	13	P	Y	Y	Y	Y	N
		49	P	Y	Y	Y	Y	N
		51	P	Y	Y	Y	Y	N
		62	P	Y	Y	Y	Y	N
		59	K	Y	Y	Y	Y	N
		65	K	Y	Y	Y	Y	N
	Sub total	6						
B3	4	19	P	Y	Y	Y	Y	N
		58	P	Y	Y	Y	Y	N
		11	K	Y	Y	Y	Y	N
	Sub Total	3						
		*33	P	Y	Y	Y	Y	N
B	Total	10						
C1	3	1	N.A.	Y	Y	Y	Y	N
		7	N	Y	Y	Y	Y	N
		17	N	Y	Y	Y	Y	N
		31	N.A.	Y	Y	Y	Y	N
		50	N	Y	Y	Y	Y	N
		54	N	Y	Y	Y	Y	N
		66	K	N	Y	Y	Y	N
		70	N	Y	Y	Y	Y	N

* Type of structure is not available.

Contd.....

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
C2	3	5	N	Y	Y	Y	N
		6	N	Y	Y	Y	N
		10	N	Y	Y	Y	N
		14	N	Y	Y	Y	N
		15	N	Y	Y	Y	N
		25	N	Y	Y	Y	N
		47	N	Y	Y	Y	N
		48	N	Y	Y	Y	N
		55	N	Y	Y	Y	N
		61	N	Y	Y	Y	N
			Sub Total	10			
C3	3	3	N	Y	Y	Y	N
		8	N	Y	Y	Y	N
		9	N	Y	Y	Y	N
		12	N	Y	Y	Y	N
		16	N	Y	Y	Y	N
		18	N	Y	Y	Y	N
		20	N	Y	Y	Y	N
		21	N	Y	Y	Y	N
		22	N	Y	Y	Y	N
		23	N	Y	Y	Y	N
		27	N	Y	Y	Y	N
		34	N	Y	Y	Y	N
		35	N	Y	Y	Y	N
		56	N	Y	Y	Y	N
		57	N	Y	Y	Y	N
			Sub Total	16			
		*29	N	Y	Y	Y	N
		*36	N	Y	Y	Y	N
C	Total	36					
D1	2	28	N	N	Y	Y	N
		30	N	N	Y	Y	N
		60	N	N	Y	Y	N
		72	N	N	Y	Y	N
		73	N	N	Y	Y	N
	Sub Total	5					
D2	2			Nil			
	Sub Total	0					
D3	2	4	N	N	Y	Y	N
	Sub Total	1					
D	Total	6					

* Type of structure is not available.

Contd.....

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
E1	1	2	N	N	Y	N	N
		53	N	N	N	Y	N
		68	N	N	Y	N	N
		69	N	N	N	Y	N
		71	N	N	N	Y	N
		63	N	Y	N	N	N
	Sub Total	6					
E2	1	67	N	N	N	Y	N
		Sub Total	1				
E3	1				Nil		
		Sub Total	0				
E	Total	7					
F1	0	32	N	N	N	N	N
		52	N	N	N	N	N
		Sub Total	2				
F2	0				Nil		
		Sub Total	0				
F3	0				Nil		
		Sub Total	0				
	F Total	2					
	Grand Total	63					

Source : TPD (Kerala) Survey, 1985.

Table 3.3

Typewise Distribution of the Core Facilities and Structures in Cochin

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
A1	5				Nil		
	Sub Total	0					
A2	5				Nil		
	Sub Total	0					
A3	5	18	P	Y	Y	Y	Y
		28	P	Y	Y	Y	Y
	Sub Total	2					
A	Total	2					
B1	4	19	P	Y	Y	Y	N
		20	P	Y	Y	Y	N
		42	P	Y	Y	Y	N
	Sub Total	3					
B2	4				Nil		
	Sub Total	0					
B3	4	15	P	Y	Y	Y	N
		16	P	Y	Y	Y	N
		17	P	Y	Y	Y	N
		21	P	Y	Y	Y	N
		22	P	Y	Y	Y	N
		25	P	Y	Y	Y	N
		29	P	Y	Y	Y	N
		36	P	Y	Y	Y	N
		53	P	Y	Y	Y	N
		59	P	Y	Y	Y	N
		62	P	Y	Y	Y	N
		66	P	Y	Y	Y	N
		74	P	N	Y	Y	Y
		34	K	Y	Y	Y	N
		49	K	Y	Y	Y	N
		52	K	Y	Y	Y	N
		44	K	Y	Y	Y	N
		64	K	Y	Y	Y	N
		78	K	Y	Y	Y	N
		80	K	Y	Y	Y	N
	Sub Total	20					
B	Total	23					

Contd.....

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
C1	3	32	N	Y	Y	Y	N
		35	K	N	Y	Y	N
		40	K	N	Y	Y	N
		56	K	N	Y	Y	N
		82	N	Y	Y	Y	N
	Sub Total	5					
C2	3				Nil		
	Sub Total	0					
C3	3	23	N.A.	Y	Y	Y	N
		24	N.A.	Y	Y	Y	N
		26	N.A.	Y	Y	Y	N
		31	N	Y	Y	Y	N
		41	N	Y	Y	Y	N
		43	N	Y	Y	Y	N
		45	K	Y	Y	N	N
		46	K	N	Y	Y	N
		55	N	Y	Y	Y	N
		63	K	N	Y	Y	N
		65	P	N	Y	Y	N
		68	N	Y	Y	Y	N
		69	K	N	Y	Y	N
		70	N	N	Y	Y	Y
		75	N	Y	Y	Y	N
	Sub Total	15					
C	Total	20					
D1	2	39	N	N	Y	Y	N
		47	K	N	N	Y	N
		48	N	N	Y	Y	N
		67	N	N	Y	Y	N
		71	N	N	Y	Y	N
		76	K	N	Y	N	N
		81	N	N	Y	Y	N
	Sub Total	7					
D2	2				Nil		
	Sub Total	0					
D3	2	30	N	N	Y	Y	N
		50	N	N	Y	Y	N
		58	N	N	Y	Y	N
		60	N	N	Y	Y	N
		61	N	N	Y	Y	N
		73	K	N	N	Y	N
	Sub Total	6					
D	Total	13					

Contd.....

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
E1	1	37	P	N	N	N	N
		51	N	N	N	Y	N
		57	N	N	Y	N	N
		72	N	N	N	Y	N
		77	N	N	Y	N	N
		79	P	N	N	N	N
	Sub total	6					
E2	1	38	N	N	N	Y	N
	Sub Total	1					
E	Total	7					
F1	0	27	N.A.	N	N	N	N
		33	N	N	N	N	N
		54	N	N	N	N	N
	Sub Total	3					
F2	0				Nil		
	Sub Total	0					
F3	Sub Total	0					
F	Total	3					
	Grand Total	68					

Source : TPD (Kerala) Survey, 1985.

Table 3.4

Typewise Distribution of the Core Facilities and Structures in Trivandrum

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
A1	5	23	P	Y	Y	Y	Y
		26	P	Y	Y	Y	Y
	Sub Total	2					
A2	5				Nil		
	Sub Total	0					
A3	5				Nil		
	Sub Total	0					
A	Total	2					
B1	4	20	P	Y	Y	Y	N
		21	P	Y	Y	Y	N
		22	P	Y	Y	Y	N
		30	P	Y	Y	Y	N
		18	*PP	Y	Y	Y	N
		32	*PP	Y	Y	Y	N
		35	K	Y	Y	Y	N
		27	K	N	Y	Y	Y
		33	K	Y	Y	Y	N
		28	N	Y	Y	Y	Y
	Sub Total	10					
B2	4				Nil		
	Sub Total	0					
B3	4				Nil		
	Sub Total	0					
B	Total	10					
C1	3	25	N	Y	Y	Y	N
		29	N	Y	N	Y	N
	Sub Total	2					
C2	3				Nil		
	Sub Total	0					
C3	3				Nil		
	Sub Total	0					
C	C Total	2					

* Partially Pucca.

Contd.....

Category	No. of facilities available	Sl. No.	Facilities				
			Road Within	Street light	Protected water	Sanitation	Drainage
D1	2				Nil		
	Sub Total	0					
D2	2				Nil		
	Sub Total	0					
D3	2				Nil		
	Sub Total	0					
D	Total	0					
E1	1	17	N	N	N	Y	N
	Sub Total	1					
E2	1				Nil		
	Sub Total	0					
E3	1				Nil		
	Sub Total	0					
E	Total	1					
F1	0	16	N	N	N	N	N
		19	N	N	N	N	N
		24	N	N	N	N	N
	Sub Total	3					
F2	0				Nil		
	Sub Total	0					
F3	0				Nil		
	Sub Total	0					
F	Total	3					
	Grand Total	18					

Source : TPD (Kerala) Survey, 1985.

Note : Category -Alphabets denote the type of slums by the availability of facilities while the subscripts denote the type of structures. Thus the slums in A1 Category have 5 facilities while the type of structures are predominantly kuchcha (50% or more). Types of structures and types of facilities have already been defined.

Statement 1

CALICUT

Name of the Slums

1. Nadinagar
2. Thoppyil
3. Kizhurmadam and Thirunilamparamba
4. Thiruthuparamba
5. Chirakuzhi Padanna
6. Veliyancheri
7. Perukuzhipadam
8. Chettiar House Nilam
9. Kaloorthazham
10. Kottaparamba
11. Illathayi
12. Acharathoppu
13. Chandunni Nair Padanna
14. Kannaparamba
15. Vattakundu
16. Chapayil
17. Kothi
18. Padannayil
19. Nainavalappu Pallikkandi
20. Mukadar
21. Puthiyathoppudhoda
22. Thattulipalam
23. Poovalappu
24. Vellayil South
25. Thalayalt Paramba
26. Vellayil
27. Thiruthivayal
28. Kannurthodil
29. Veneer Vayal
30. Ayyapan Kavil Thazham
31. Chalikkara
32. West Hill
33. Kambram
34. Cherottuvayal
35. Vellarithodu
36. Puthiyakdappuram SS
37. Puthiyakadavaru SS
38. Sastram Compound SS
39. Thalapppanar Tholuka SS
40. Kallutharkadavu SS
41. Thakoolam Beach SS
42. Perumal Kandy SS
43. Pallikandy West SS
44. Palliyarathazhath SS
45. Palliyarakkal

Note : SS - Special Slums.

46. Puthiyappa
47. Thiruthivalappu
48. Maruthamoliparamba
49. Chakkumkadavu
50. Kayavalappu
51. Kappaval
52. Chamundi Valappe
53. Pandarathil Valappu
54. Milloth Colony
55. Mailaripadam
56. Thadamilam
57. Maneripadam
58. Thirumumbunilam
59. Kalathilparamba
60. Thaivalappu
61. Kavithazham and Kunnathazham
62. Valakandathazhamvayal and Mumbadi Vayal
63. Pandaranilam Vayal
64. Kattutanada
65. Puthiyara Padanna
66. Kudithodu and Chitadithazham
67. Puthiyangadi Pallikandy (East)
68. Thottilpudika
69. Chevarambalam
70. Malurkunnu
71. Kalathilthazham Nilam
72. Karuthazham
73. Mundadithazham Vayal

Note : SS - Special Slums.

COCHIN

Name of the Slums

1.	Kortharathodu Slum	SS
2.	Chiruthodathu colony	SS
3.	Ambothuchira	SS
4.	Chilavannur	SS
5.	Kariathala colony	SS
6.	Padathukulam	SS
7.	Sakuparimbu Power House Road	SS
8.	E.R.G. Road	SS
9.	Vannara Temple	SS
10.	E.S.I. colony	SS
11.	Venalappara	SS
12.	Padivattam	SS
13.	Elmakkara Temple	SS
14.	Velloparambu	SS
15.	Thuruthy	
16.	Cherulaikadavu	
17.	Eraveli	
18.	Malikal Paramba	
19.	Thundi Paramba	
20.	Kalathil Paramba	
21.	Chelaparamba	
22.	Adhikari Valappu	
23.	M.K.S. Parambu	
24.	Kochuparambu and Valaiparambu	
25.	Jwthan Parambu	
26.	Rehmanya Parambu	
27.	Pandaraparamnu	
28.	Chakkamadam	
29.	Murickathara Parambu	
30.	Manthara Pulaya colony	
31.	Kanpiri colony	
32.	Kudumbi colony	
33.	East of St. Agnes Church	
34.	St. John's Pattam colony	
35.	Mini colony	
36.	Pulimootil Parambu	
37.	Kochangady	
38.	Chandanapally colony	
39.	Puthiyavittil Parambu	
40.	Aripakku Parambu	
41.	Panayapilly Pandika Kundy	
42.	Srampikkal Parambu	
43.	North of Varma colony	
44.	Chulizath Parambu	
45.	Soudhi	
46.	Chirakkal colony	
47.	Vadayar colony	

Note : SS - Special Slums.

48. S.D.P.Y. colony
49. S.V. Puram colony
50. Perupadappu
51. Kadathanattu colony
52. Thevara Canal colony
53. Fishermen colony Thiverkad
54. Peruvaram Railway Puramboke
55. Slum near Anglo _ Indian School
56. Kothara Rehabilitation colony
57. Chilavannur H.C.
58. Pannoth Slum
59. Fishermen colony
60. Military Paramba
61. Kovilampally Padam
62. Panakka Parambur
63. Kissan colony
64. Vettuva colony Thammanam
65. Thammanam Labour colony
66. Kudumbi colony
67. South Padiyath colony
68. Velluparambu colony
69. Moopa colony
70. East of St. Francis Cathedral
71. Kannakathara Parambu
72. Panachesseri Parambu
73. Ettirkettu
74. Manapputti Parambu
75. Scavenger's colony, SRM Road
76. Chelut Railway colony
77. Thanthonnithuruth
78. Fishermen's colony
79. Panambally Nagar (East)
80. Kayapilly colony
81. Perandoor Bridge Slum
82. Perambally Nagar colony (West)

Note : SS - Special Slums.

TRIVANDRUM

Name of the Slums

1.	Kollur Bund colony	SS
2.	Uppidamodu II	SS
3.	Thikkummodu Bund colony	SS
4.	Uppidamodu I	SS
5.	Korakulam near M.G. College	SS
6.	Kodukurkonam Kulathinkara	SS
7.	Kannamthura	SS
8.	Fishermen Settlement from Veli to Sanmugham	SS
9.	L.S. Road Sanmugham	SS
10.	Slum near Kuriathy	SS
11.	Paruthikuzhy Attuvarambu	SS
12.	Valigathura Fishermen colony	SS
13.	Fishermen Settlement Poonthura	SS
14.	New Block colony Poonthura	SS
15.	Chullayi Padinjarethekkumbhagom	
16.	Tagore garden	
17.	Charivilakathu Slum near M.G. College	
18.	Anchamada H. colony	
19.	Kunnuvila colony	
20.	Thirichatrapuram colony	
21.	R.C. Street Kunnukuzhy	
22.	Barton Hill	
23.	Oorkulam	
24.	Alamthara Vazhivilakulam	
25.	Poundkulam	
26.	Chirakulam	
27.	Slum near Titanium	
28.	Karimadom colony	
29.	Puthuncotta Burial ground	
30.	Slum near severage farm	
31.	Plamoodu Thottu Varambu	SS
32.	Krishna Pillai Nagar	
33.	Vadavathu colony at Muttathara	
34.	Murinjalapalam Bund colony	SS
35.	Krishna Pillai Nagar East	

Note : SS - Special Slums.

CHAPTER IV

IMPROVEMENT OF SLUMS: A REVIEW

4.1 Despite a modest level of slum population in the state, the Government of Kerala has not been oblivious of the problems of slums. The slum improvement programme on a sustained basis in the state owes its genesis to the centrally sponsored programme known as the Environmental Improvement of Urban Slum (EIUS) launched by the Central Government in 1972. The EIUS itself came into being out of the Bustee Improvement Programme in Calcutta for which the Central Government had offered 100 per cent financial assistance to the Government of West Bengal in the form of grant in 1971-72¹. Replicating the same pattern of financial assistance, the EIUS envisaged improvement of slums on the basis of 100 per cent financial assistance by the Central Government. To begin with, the scheme was confined to the then existing 11 metropolitan cities. Later on it was extended to 9 more cities in 1973-74 and Cochin was one of them for inclusion in the scheme for funding. Subsequently in the wake of the National Development Council's decision, the scheme was transferred to the state sector for implementation as part of the Minimum Needs Programme. In April 1979, the scheme was extended to all the urban areas irrespective of size². The scheme was devised with ostensible objective of improving the environmental

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1. Dev Raj, "Slums and the Urban Community", IIPA (ed), Slum Clearance and Improvement, Centre for Urban Studies, IIPA, New Delhi, 1979, pp. 1 - 14.
 2. India (Planning Commission), Task Forces on Housing and Urban Development IV: Shelter for the Urban Poor and Slum Improvement, Planning Commission, New Delhi, 1983, pp. 44-45.

hygiene of slums and provision of certain basic services and amenities like drinking water, sewers and drainage, community latrines and baths, street lighting, and widening and paving of lanes. However, the improvement schemes were envisaged to be undertaken only in such slums which are not supposed to be cleared in the next ten years. Thus, the programme was visualised as the holding-on operation till a lasting solution is devised to the problems of slums.

4.2 Improvement of slums in Kerala has been pursued under this very programme. After the programme was transferred to the state sector, the Government of Kerala formulated detailed Guidelines for avoiding any ambiguity and facilitating a smooth implementation of the programme. The Guidelines envisage two types of scheme under this programme. These are : Slum Clearance and (ii) Slum Improvements.

4.3 Slum clearance involves clearance of the area by razing the structures to the ground and construction of dwelling units for rehabilitation of the occupants. While constructing the dwelling units, the cost for various types of dwelling units is required to be determined by the Chief Town Planner and approval by the Government. The cost thus worked out is supposed to be strictly adhered to.

4.4 Slum improvement involves improvement of environmental conditions in slums as also the "improvement of pucca built slum dwellings, so as to make them habitable for at least 15 years".

4.5 The central EIUS programme, while envisaging the improvement of environmental conditions of slums suggested certain norms and standards of improvement. The Guidelines of the Government of Kerala do not specify any such norms and standards. It enumerates the kind of services and amenities to be provided in the various slums. An account of the norms as suggested by the EIUS and the services to be provided as per the Guidelines is given in Table 1.

4.6 It should be obvious from this comparative account of the components of improvement in the Table above that the Guidelines do not make a mention of any norm. This is because the norms prescribed by the EIUSP seem to be the guiding force for the slum improvement programme in every state including Kerala. It is interesting to come across some additional facilities finding place in the framework of development as envisaged by the Guidelines. These are construction of roads, filling and landscaping, horticulture, providing land for non-remunerative purposes like parks, playgrounds, welfare and community centres, fire station, hospitals and dispensaries on non-profit basis. Though providing for horticulture fits into the socio-cultural milieu of Kerala, other items of development especially the playground, landscaping, fire fighting within a slum and hospitals ground is a bit utopian and normative in approach.

Table 1

Norms and Standards of Services to be provided in Slums according to the EIUSP and the Guidelines of Kerala Govt.

EIUSP		Guidelines	
Services	Norms	Services	Norms
1. Drinking Water	one tap for 150 persons	Yes	-
2. Sewers	open drains with normal outflow avoiding accumulation of stagnant waste water	Yes	-
3. Storm water drains	quick drain out of storm water	Yes	-
4. Community latrine	one for 20-25 persons	Yes	-
bathroom	one bathroom for 20-25 persons		
5. Street lighting	one pole for 30 mts.	Yes	-
6. Widening of paved lanes	To make room for easy flow of pedestrians, bicycles and hand carts on paved paths to avoid mud and slash	Yes and also construction of new roads	
		Cutting, filling and landscaping the area including horticultural operation	
		Partial redevelopment allowing land for non-remunerative purposes as playgrounds, welfare and community centres fire station, hospitals, dispensaries on non-profit basis	

4.7 As mentioned earlier, slum improvement provides for "Improvement of Pucca built slum dwelling" as well. This involves providing bathrooms and latrines inside or near the dwelling units, electrification of dwelling units, conversion of the privies into the water borne system and connecting them to the main drainage, providings for the smokeless chulhas, enlargement of the size of the room or the dwellings to the adequate standards, increasing the area of window for adequate ventilation, providing adequate open space for light and air and release of smoke, paving of courtyard, drainage system within the premises, removing structural deficiencies like inadequate ceiling height and steep staircase, dampness dilapidation etc.

4.7 The Guidelines further stipulates that the areas in which the structures are to be improved into pucca dwellings, the Municipal Corporation has also to bring about environmental improvement. Moreover, it should also undertake programmes of social upliftment in the improved slums so that it does not degenerate into slums again.

4.9 The programmatic content of the slum improvement schemes thus includes a wide range of activities which appears to be utopian and normative in view of the constraints on the resources. A wide gamut of activities apart, one also comes across a series of schemes impinging on improvement of conditions in slums. Thus, in addition to the EIUS, another couple of schemes were also pushed through by the state government. These were (i) Structural Environmental Improvement Scheme launched in

February, 1981⁴ and revised in June 1981 and (ii) the Chief Minister's Fund for Slum Clearance/Improvement in the urban areas introduced in May 1981.⁵

4.10 The Structural Environmental Improvement Schemes was introduced with the financial support of the Kerala State Housing Board. The Director of Municipal Administration was made responsible for implementing the Scheme by granting loans to the civic authorities. Though the scheme was not conceived for slums per se, yet the financial assistance (in the form of loan) was envisaged to be given to the economically weaker sections "residing in corporation areas in the state to improve the structural and environmental conditions of their existing sub-standard houses".

4.11 The second scheme viz; the Chief Minister's Fund envisaged to give financial assistance (in the form of grant) to the local bodies again for a very wide range of activities. This included (i) eradication of slums and rehabilitation of slum dwellers; (ii) improvement of living conditions of slum areas; (iii) overall improvement of slum areas; (iv) prevention of the growth of slums and (v) any purpose incidental to the aforesaid objectives.

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4. G.O. (Ms.) No. 18/81/Housing dated 11th February, 1981 - Housing - Structural Improvement Scheme; G.O. (Ms.) No. 48/81/Housing dated 2nd June 1981 - Housing - Structural Environmental Improvement Scheme - Revised Scheme.
 5. G.O. (Ms.) No. 84/81/LA & SWD, dated 11th May, 1981, - Chief Minister's Fund for Slum Clearance/Improvements in the Urban Areas - Rules for the administration of funds.

4.12 Thus though the range of activities was very wide, the way this "fund" was to be constituted reflects the casual manner in which the scheme was introduced. The fund was to consist of (i) contributions by the local bodies; (ii) contribution from the public, voluntary organisations, public sector undertakings etc.

4.13 With this brief survey of policy on slum improvement, let us now look into the way the programme has been implemented.

Implementation of Improvement Programme

4.14 Over a period of time the slum improvement scheme has been carried out by diverse type of organisations. In Cochin, for instance, it was undertaken initially by the erstwhile Municipal Committee and later on by the Greater Cochin Development Authority as well. The Kerala Housing Board also implemented schemes in Trivandrum. The scheme implemented by the Municipal Committee in Mattancherry area of Cochin was based on the concept of incremental housing. The Greater Cochin Development Authority (GCDA) also implemented schemes of slum improvement in Mattancherry and Ernakulam areas as well. But the schemes implemented by the Housing Board, GCDA and the Municipal Committee (in Cochin) were basically based on rehabilitation of slum dwellers in the constructed tenements. Even the Municipal Corporation constructed the tenements (Karimadam in Trivandrum for rehabilitation of slum dwellers). These were abandoned in the early eighties and it was entrusted to the Municipal Authorities for bringing about improvement in the slums within the framework of EIUSP.

Selection of Slums for Improvement

4.15 With the financial assistance by the state government and matching contribution by the municipal authorities, the scheme for improvement of slum is proposed by the Council of the Municipal Corporation. Thus the selection of slums for improvement is basically a political process. The layout plan for slum improvement is prepared by the Town Planning Department (TPD) by identifying the works to be done like roads, footpaths, drains, provision of streetlighting, water supply through public standposts, latrines and so on. It is then forwarded to the Municipal Corporation (MC) for preparation of estimates. Having prepared the estimates, the MC forwards it to the Chief Town Planner (CTP) for scrutiny of costs. The CTP finally approves the costs. In doing so he keeps in view the per capita amount of Rs.400 as fixed by the government. After the costs are approved by CTP, the MC puts up a request to the government for allocation of funds. This is done through the Director of Municipal Administration (DMA). If the estimated cost is less than Rs.3.00 lakhs the approval is given by the DMA himself. All the schemes costing more than Rs.3.00 lakhs go to the state government for approval. However, the DMA enjoys financial control and performs the watch dog functions for ensuring the fulfillment of physical and financial targets. He receives the monthly progress report on implementation of the scheme. Apart from this, there does not exist any mechanism for monitoring and evaluation of improvement programme. Monitoring and evaluation needs to be strengthened by constituting a review committee in the DMA's office having

representation of CTP, officials from service departments like health education, social welfare, Mayors and Commissioners of concerned civic authorities. The Committee should meet once in three months and suggest corrective action in case of major lapse in implementation and try to coordinate implementation.

Information System

4.16 The role of information hardly needs to be stressed in any scheme of planning and development. Information on socio-economic status of the slum dwellers, the level of obtaining services, nature and dimension of problems afflicting the local community goes as valuable input to the formulation of plans and programmes. Again when the programme is launched, information on the status of its implementation provides the much needed feedback for evaluation and necessary readjustments to be introduced for effectuation of objectives and goals. Viewed in this context, much is desired to have such an information system for slum improvement in the three cities. Even though a survey was conducted by the TPD in 1985, much thought was not given to the type of information needed for improvement programme. The TPD survey only gives an account of availability of services. The dispersal and distribution of services are not available so that the level of services and the extent of deprivation of basic services are not known. Basic information like ownership of land occupied by slums, awarding of number of pattas to the slum dwellers, total number of slums existing and improved in the three cities are not readily available. In fact the listing of slums existing in the three cities with area, household

population and number of slums improved in the three cities with details of services provided, total estimated cost, actual allocation and the funds actually utilised took more than three months to be compiled. Despite this many of these details could not be gathered. Likewise the data on the various facets of municipal finance like the rate of taxes, demand and collection, number of holdings assessed for property taxes, rateable value over the last five years were hard to come by.

4.17 It is therefore felt that a cell needs to be created preferably in the municipal authorities which should deal exclusively with slums. Collection of information on the above mentioned variables as also on the status of socio-economic situations obtaining in the various slums should be the basic concern of this cell. The cell could also have a group of motivated social workers which could work in the slums for comprehending the problems of slum dwellers, and collect the base line data on the various aspects as mentioned above. It could organise the slum dwellers for participating in the improvement programme and act as a vital link between the slum dwellers, the public agencies and also the voluntary organisations.

4.18 The progress so far made in improvement of slums in the three cities is presented in the Table given below. A list of improved slums in the three cities is given in Appendix II. .pa

Table 2

Number of Slums Improved and being Improved
in the three cities

City	No. of slums	No. of slums improved	No. of slums being improved	Total slums improved and being improved
1. Calicut	86	16	7	23 (26.74)
2. Cochin	136	55	4	59 (33.38)
3. Trivandrum	49	17	5	22 (44.90)
Total	271	88	16	104 (38.38)

Note : Figures in parentheses indicate percentage of improved slums to the total number of slums.

4.19 It should be obvious from the Table given above that the progress made in the improvement of slums does not appear to be satisfactory. So far only 38 per cent of the total slums identified in the three cities have been either improved or are in the process of being improved. In Calicut only about one-fourth of the total slums have been improved so far. In Cochin only one-third of the total slums have so far been improved and being improved. In Trivandrum the percentage of slums improved and being improved is about 45%. The slow progress in quantitative terms apart, the improvement programme does not seem to be conforming to the qualitative aspects of slum improvement. This is reflected by the deviation from the norms as suggested by the EIUSP. .pa

4.20 With a view to gather information on the qualitative aspect of programme implementation, a sample survey of 25 per cent of the improved slums was conducted in the three cities. The sample slums were selected on random basis. The selected slums in Trivandrum were 4 in number viz. Anchmada, Karimadam, Chirakulam and slum near R.C. Church, Poonthura. 13 slums were selected in Cochin. These are Thuruthy, Chakkamadom, Nellukadave, Konchuparambu and Valliaparambu, Mahajanvadi, M.K.S. Parambu, Nettaparambu and Kaniyamthrutho, Kissan colony, S.P. Puram colony, Kadavanthra Pulaya colony, Kovilampally Padam, Moopa colony and Pandarachisa colony. In Calicut, the 5 selected slums are Puthiyathoppuduta, Vellayel, Melairpadam, Nadinagar and Vattakundu. The survey of slum settlements was conducted on the basis of a structured questionnaire. The information to be elicited pertained to the type and levels of services provided, as also the satisfaction of slum dwellers with respect to the improvements brought about in the improved slums.

4.21 Since the survey pertained to the settlements and not to the households, factual information on the existence of services like internal roads, streets and pavements and their types, street lighting, drainage, sanitation public standposts etc. were collected from the official records of the MC in the three cities. These were verified on the site in the sample slums. The perception of the slum dwellers on the quality of improvement and the problems of maintenance of services was obtained on the basis of group discussion with the slum dwellers. In addition to canvassing of questionnaire, structural

discussions were also held with the planners and the officials associated with the planning and implementation of slum improvement programme in the three cities. These officials belong to the Directorate of Municipal Administration, GCDA, TPD and the Municipal Corporations of the three cities. The survey of settlements and structured discussion with officials and functionaries yielded a wealth of information on the qualitative aspects of improvement. This is presented in the following paragraphs.

Locational Features

4.22 The sample survey re-establishes the findings of the TPD survey that majority of the slums are small and tiny in size. Of the 22 sample slums in the three cities, as many as 13 are located on less than five acres of land. Five slums have less than one acre of land. The ownership of land also is found to be predominantly private which is again in conformity with the findings of the 1985 slums. 12 sample slums (out of 22) in the three cities are found to be located on private land. These include 2 slums in Cochin (Mahajan Vadi and Kochuparambu and VALiaparanbu) which are located on Trust properties. The location of slums on Trust properties is a common feature only in Mattancherry and Fort areas of Cochin. 8 slums are located on public land. Of the remaining 2 slums, 1 is located on the property owned by the Woqf land; the ownership of the other is

6. The Trusts were created by the erstwhile traders who settled in Cochin at the advent of maritime trade in the early decades of this century. Subsequently, after the decline of the harbour in the Fort Cochin areas due to the establishment of modern harbour they abandoned the trading activity and created Trusts for the management of land.

not ascertained. In Trivandrum all the 4 sample slums are found to be located on public land. Location of slums on private land is a common feature in Cochin and Calicut (Table 3.1).

4.23 Table 3.1 also presents the locational attributes of sample slums. Of the 22 sample slums, 4 are located near the beach which get affected by the high tide. As many as 12 sample slums in the three cities are reported to be located on low lying land which gets water logged during the monsoon.

4.24 A look at column 5 of the Table 4.1 reveals that only two sample slums are found to be free from environmental disadvantages. These are Anchmada in Trivandrum and Kadavanthura Pulaya colony in Cochin. All the remaining slums (20 in number) are suffering from different types of environmental disadvantages like stagnating water, smell and smoke. As many as 18 slums are found to be suffering from smell and/or smoke. The improvement programme has thus not been able to provide solution to the locational disadvantages like low lying and the resulting water logging and environmental disadvantages like existence of smell and smoke.

Type of Structure

4.25 Type of structure and the use of dwelling units in the sample slums is presented in Table 4.2. All the slums are found to have predominantly residential dwelling units. It is heartening to note that majority of slums have either predominantly pucca or semi-pucca dwelling units. Pucca and semi-pucca structures are abounding in 10 sample slums. Thus

more than 45 per cent of the slums (10 slums) have predominantly pucca or semi-pucca dwelling units. Three slums viz. Kissan colony and S.P. Puram colony in Cochin and Melairpadam in Calicut have only pucca structures. Another three slums viz. Pandarachisa colony in Cochin and Puthiyathoppuduta and Vellayel in Calicut also have almost the entire dwelling units as pucca structures. Predominantly semi-pucca structures are found to exist only in three slums, all of them located in Cochin. Amongst the remaining slums (12), 8 have predominantly kuchcha structures. Of these, 3 are located in Trivandrum, 4 in Cochin and one in Calicut.

4.26 With a view to know the extent of improvement brought in the structures the slum dwellers of the sample slums were asked to indicate the number of dwellings recently (in the last one year) improved. The information collected is reported in Table 4.3. Of the 22 sample slums, the dwelling units were reported to have been improved only in 7 slums. Of these, 2 are in Trivandrum (Anchmada and Karimadam), 4 in Cochin (Kochiparambu & Valiaparambu, M.K.S. Parambu and Kadavanthra Pulaya colony and Moopa colony) and only one slum in Calicut (Nadinagar which visually does not look to be a slum at all). In all, 269 dwellings were improved upon in these slum clusters. The maximum number of structures improved was 100 in Nadinagar in Calicut. Next to it is Karimadam (72 structures). In other slum clusters, the number of dwellings improved is found to be small.

4.27 The survey also revealed that the transaction in slum dwellings is a common prevailing practice, though at a very small scale. In all, only 26 slum dwellings in the last one year were found to have been sold or purchased. The maximum number of dwellings purchased/sold was in Nadinagar in Calicut.

Occupational Structure

4.28 The various occupational groups living in the sample slum are tabulated in Table 4.4. It is seen from this Table that the slum dwellers are predominantly employed as casual labour working as coolies, construction workers, fishermen etc. An insignificant proportion of them are self employed as petty traders and milk vendors. The distance travelled by them to attend to their work is tabulated in Table 4.5. The Table depicts that the majority of workers in the various sample slums in the three cities travel to the nearby places only to attend to their work except in Karimadam in Trivandrum and Kissan colony in Cochin. The workers in the remaining slums commute a distance of less than 5 kms. As the distance travelled is small, the majority of commuters travel to their work places on foot. For those who take recourse to transport, bus and bi-cycles seem to be the popular modes of travel.

Services Available in Slums

4.29 Approach Road: A look at Table 4.6 reveals that almost all the sample slums in the three cities have metalled approach roads. As many as 15 slums are located on the metalled road itself. Only one slum viz. Mailairpadam in Calicut is found to be located at a distance of one Km. from the approach road. Thus,

barriers, obstacles or difficulties of any kind in reaching the slum clusters does not appear to be a problem in any of the improved slums.

Internal Roads and Streets

4.30 Of the 22 sample slums, only 2 slums viz. Chirakulam in Trivandrum and Nettaparambu and Kaniyamthrutho in Cochin do not have internal roads (Table 4.7). Of the remaining 20 slums, 10 have been provided with paved roads, 4 have metalled roads and another 4 have only the earthen roads. The remaining slums have cemented and concrete roads. The condition of internal roads is found to be unsatisfactory in Calicut. Three out of 5 sample slums have only the earthen roads which during the monsoon become muddy and hence difficult to move around.

4.31 As regards streets, 14 of the 22 sample slums have the paved streets. However, it has not been provided fully in all the slums. Four slums have paved streets to the extent of 50-75 per cent of the total street length. Of this, one is in Trivandrum (Anchamada) 2 in Cochin (Kochiparambu & Bangalaparambu Valiaparambu and Kadavanthra Pulaya colony) and one in Calicut (Melairpadam). Five slums are provided with paved streets to the extent of 25-50 per cent. All of these slums are located in Cochin and 4 slums have paved streets only to the extent of 25 per cent. One of them is located in Trivandrum and the remaining 3 in Cochin (Table 3.7). The condition of internal roads as well as streets is thus found to be most unsatisfactory in Calicut. In the slums of Trivandrum and Cochin as well, much is desired to provide paved streets and internal roads.

Drainage and Water Supply

4.32 Supply of drinking water in the sample slums is reported in Table 4.8. On the face of it, the Table gives an impression that water is available for drinking in all the sample slums. However, a closer look at the Table suggests that much is desired to improve the water supply situation in the slums. This is obvious from the ratio of households to the public standposts as also from the duration of water supply.

4.33 As mentioned earlier, the norm of the EIUSP for water supply is one standpost for every 150 persons. This converted into households (HHs) comes to one standpost for every 30 HHs, assuming the household size of five. It is worth mentioning that in the three cities, the average household size comes to about 6. This notwithstanding, it is obvious from Table 4.8 that in as many as 8 slums, water supply has not been provided according to the norms of the EIUSP. In Trivandrum, only one slum viz. the slum near R.C. Charch Poonthure has been provided with water according to the norm. In the remaining 3 sample slums the slum dwellers have to face a crowd on the public standposts. In Cochin as well, 3 slums viz. Kochiparambu and Bangalaparambu Valiaparambu and S.P. Puram colony do not have access to water supply according to the norm. Calicut has 2 such slums viz. Nadinagar and Vattakandu.

4.34 The accessibility of the residents of slums (22 sample slums) to water supply according to the EIUSP norm seemingly presents a happy situation. However, it needs to be noted that the accessibility to drinking water is to be judged on the basis

of duration of water supply and potability of the water supplied. On both these counts, the situation of water supply in the sample slums does not seem to be adequate and satisfactory. A look at Table 4.8 reveals that all the 14 slums having water supply according to the norms get water for a very short duration. In Trivandrum and Cochin, the duration of water supply is only for two hours daily. In Calicut, the situation is still more grim. Water is supplied only for 8 hours on alternative days. Although it gives an impression of larger average duration of water supply on daily basis, (4 hours daily), a weak pressure in the ferrule does not enable the slum dwellers to draw sufficient water for drinking.

4.35 Inadequate quantity of water supplied has compelled the slum dwellers to depend on alternative sources of water supply. Thus in Cochin, the slum dwellers are depending on well and public hand pumps for water supply. The slum dwellers in all such slums complained that the water drawn from the alternative sources is not potable.

Situation

4.36 One of the basic services to be provided in the slums according to the norms and standard of the EIUSP is sanitation i.e. latrines, bathrooms on community basis, drainage and the disposal of solidwaste. Of all these components of sanitation, latrine is the most basic need. A look at Table 4.9 reveals that 9 sample slums out of 22, have not yet been provided with latrines. Of these, 6 are in Cochin, 2 in Calicut and the

remaining 1 in Trivandrum. The remaining 13 slums (out of 22 sample slums) do have this facility. Whereas in 7 slums the number of latrines for both sexes are evenly distributed in the remaining slums, it is not so. In fact in only 2 of them separate facilities exist for males and females.

4.37 It needs to be mentioned that the provision of public latrines on community basis apart, in a few slums, some of the households have installed their own individual privies. Chakkamadam in Trivandrum and Mailairpadam and Vettakandu in Calicut are the cases in point where the private ESP privies have been installed in large numbers. In Calicut in the 2 slums mentioned above, almost all the households have their own privies (Table 3.9). The provision of this most critical and basic service in other slums is found to be unsatisfactory. In as many as 9 slums in the three cities, there does not exist either the private or public privies. In Cochin, there are 6 sample slums where this facility does not exist in any form. Calicut has 2 such sample slums. Trivandrum has only one. The rest of the sample slums (10 in number) have been provided with community latrines. Of these, in 8 slums this facility has been provided for both the sexes separately.

4.38 Despite the provision of community latrines in 9 slums, the situation does not seem to have improved. This is again reflected from Table 4.9. The suggested norm by the EIUSP for the provision of latrines on community basis is one seat for 4 to 5 households. It is seen from the Table that this norm has been achieved only in 3 slums viz. Kochiparambu and Moopa colony in

Cochin and Vellayel in Calicut. The situation seems to be acute in all the slums in Trivandrum as the dependency is very high. The situation is very grim in Cochin because 6 sample slums have not yet been provided with this basic facility. So is the situation in Calicut.

4.39 The Guidelines issued by the Government of Kerala as well as the norms suggested by the EIUSP requires the provision of bath rooms on community basis. The survey of improved sample slums reveals that this has gone by default in all the slums survey in the three cities.

4.40 Drainage is yet another very important component of sanitation. It is gratifying to note that all the sample slums in the three cities have been provided with pucca drains in varying proportion. However, only 5 slums (out of 22) have been fully provided with pucca drains. Of these, 3 (Mailairpadam, Nadinagar and Vattakandu) are in Calicut. Of the remaining slums, one is in Trivandrum (near R.C. Church, Poonthure) and the other (Thuruthy) in Cochin. Another 5 slums have been provided with pucca drains to the extent of 50 to 75 per cent of the total areas. Four, out of these 5 slums are in Cochin and 1 in Trivandrum (Table 4.10). In another 7 slums, pucca drains provided cover to only about 25 to 50 per cent of the total area. The remaining slums (5 in number) are covered with pucca drains only to the extent of about 25 to 50 per cent of their physical area (Table 4.10).

4.41 Street cleaning and disposal of garbage is found to be a regular practice only in 12 sample slums. The residents of the remaining 10 sample slums have to clean the street on their own and they throw the garbage either in the nearby canal and drains (wherever they are located nearby), or into the street. Of the 12 slums having the facility of street cleaning and garbage disposal, 6 reported the disposal of garbage at a frequency of thrice a week. Another 2 slums reported garbage disposal by the municipal staff twice a week and another 2 only once a week. The slum dwellers of the remaining 2 slums, did not specify the frequency but said that the removal of garbage is adhered to only periodically.

Street Lighting

4.42 Of all the improved sample slums, 2 slums have not yet been provided with street light. Both of them (Nettaparambu & Kaniyamthrutho and Kavilampally Padam) are in Cochin. Table 4.11 shows that in some of the slums, street light has not been provided according to the norms. It may be recalled that the EIUSP prescribed lamppost for every 30 meters of street length. The situation of street light is thus found to be unsatisfactory in Moopa colony, Mailairpadam, Kochiparambu, M.K.S. Parambu, Nellukadave, Puthiyathoppudhuta and Kardavanthra Pulaya colony.

4.43 Almost all the sample slums except Kavilampallypadam and Pandarachisa colony in Cochin have access to electricity for domestic connections. There is one slum in Calicut viz. Puthiyathoppudhuta where all the households have the benefit of

domestic connections (Table 4.12). In another 8 slums, more than 50 per cent of the households have got the domestic connection.

Pre-Nursery and Primary Education

4.44 An attempt was made to find out the availability of facilities like creche, balwadi, nursery and primary education in the slums surveyed. The findings are tabulated in Table 4.13. It may be seen from this Table that these facilities are available only in a few slums. Of all the 22 sample slums creche was reported to exist only in one slum in Cochin. Balwadis are available only in 7 slums and Primary school only in 2 slums.

4.45 It needs to be mentioned that slum improvement does not mean only provision of basic services and improvement of physical environment. A broader view of slum improvement includes within its ambit also the components meant for promoting social development and creation of economic opportunities. The role of pre-nursery, nursery, primary education and other educational institutions hardly needs to be stressed in this regard. The review of sample slums thus suggests that the social components as well have gone by default in the slums improvement programme. It is worth mentioning that neither the EIUSP nor the Guidelines of the Kerala Government talk of taking care of socio-economic components of slum improvement.

Health Facilities

4.46 Health services are yet another very important component of social welfare services. The survey of slum settlements reveal that it is almost non existent in the sample

slums in the three cities. Even the primary health centres and dispensaries are not to be found in any of the slums surveyed (Table 4.14). This is the basic unit of health services to which the people turn to during distress. Of all the 22 sample slums, only one slum (Anchmada) in Trivandrum reported the existence of a maternity centre. Chirakulum is yet another slum where health facility is being provided by a voluntary organisation namely Trivandrum Social Service Society. The analysis thus shows that slum dwellers are completely deprived of this facility.

Group Satisfaction and Requirement of Service

4.47 The analysis of accessibility of the slum dwellers to various services and facilities does not present a very bright situation. An attempt was made to know the overall group satisfaction of the slum dwellers with respect to availability of various services as well as their requirement of services. The responses elicited in this regard are presented in Table 4.15. Of all the sample slums, response relating to group satisfaction and requirement of services could not be obtained for Nettaparambus Kaniyamthrutho in Cochin.

4.48 The Table shows that only in 4 slums, (out of 22) the slum dwellers are found to be fully satisfied with water supply. Of these 3 are in Cochin and one in Trivandrum. Street lights provided does not seem to be to the satisfaction of slum dwellers in any of the sample slums. The slum dwellers in only 3 slums seem to fully satisfied with the availability of latrines. Of these, 2 belong to Calicut (Mailairpadam and Vattakandu) and in both these slums most of the slum dwellers have their individual

ESP latrines. The slum dwellers of only one slum (Kissan colony) in Cochin are found to be fully satisfied with the state of street cleaning and garbage disposal. However, the residents of 5 slums are found to be partly satisfied with health facilities. As the analysis of availability of health services has earlier revealed that it does not exist even in rudimentary form, the slum dwellers are using the facilities available in the neighborhood. So is the situation with respect to educational facilities.

4.49 Table 4.15 also depicts the opinion of slum dwellers regarding the requirement of services and facilities. Codes 3 (dissatisfied) and 4 indicate the services very much required by the slum dwellers. The Table thus points towards important policy implications for the provision of services.

Maintenance of Services

4.50 The satisfaction of beneficiaries depends on an adequate provision of services as well as proper and effective maintenance of services which keeps the provided services in operational conditions. Are the services provided in the various slums properly maintained? The study team wanted to get at it by knowing the perception of the beneficiaries themselves. Their perception of maintenance of services is reported in Table 4.16. It may be seen from this Table that the services provided do not seem to be properly maintained. The residents of as many as 20 slums reported that the services are not maintained at all. Their varied responses converge on a common reason for the lack

of maintenance namely the apathy and indifference of the municipal corporation in the three cities. The common complaint of the slum dwellers across the board in the three cities pertained to the lack of cleanliness and clearing of choked public latrines, non replacement of fused bulbs in the street in time, non repairing of the broken water taps, drains and footpath, inadequate street cleaning and garbage disposal and so on.

4.51 The residents of only 2 slums (Chirakula in Trivandrum and Kadavanthra Pulaya colony in Cochin) revealed that their slums are maintained properly. Even here, however, the slum dwellers of Chirakula said that they are not satisfied with the upkeep of lavatories and street lighting. The slum dwellers of the latter slum said that the maintenance is proper due to an active interest taken by the slum dwellers themselves.

4.52 The analysis of services provided in the improved slum thus brings home a two-fold deficiency. First, the level of services provided is inadequate as there is found to be a great deal of deviation from the minimum norm of basic services. Some of the services and facilities are conspicuous by their complete absence. Provision of bathrooms on community basis, paved streets, pucca drains are some of such services. Whereas bathrooms have not yet been provided in any of the slums, other services and facilities as well are not existing in some of the slums. Thus one comes across only the rudiments of services. Second, whatever services have been provided in the slums are not properly maintained. This has led to further decline of

services. The services provided have consequently deteriorated so that they do not serve the needs of the slum dwellers. Choking of lavatories, drains, non-replacement of fused bulbs in the streets are examples of deterioration of services provided due to lack of proper operation and maintenance. These two factors taken together have led to a large scale dissatisfaction of the slums dwellers.

4.53 Table 4.16 focuses on the lack of and even total absence of maintenance of services and amenities. The study team therefore wanted to know from the officials manning the provision of civic services the reasons for this. With this end in view, structured discussions were held with the Director of Municipal Administration, Commissioners of the three Municipal Corporations in Trivandrum, Cochin and Calicut and the Mayor of Cochin Municipal Corporation. It is curious to note that except the Mayor and the Commissioner, Municipal Corporation of Trivandrum (MCT) none of the functionaries would even admit of any problems of maintenance. When asked to indicate the reasons for the inadequate maintenance of services, they said that there does not exist any problems of maintenance. Only the Mayor, Cochin Corporation and the Commissioner MCT mentioned the constraints on resources which adversely affect the maintenance of services. Financing of slum improvement programme and maintenance of services is dealt with in greater detail in Chapter V.

Voluntary Organisaation

4.53 Slum improvement is a multy faceted programme having several components intended to deal with provision and upgradation of services and amenities, shelter, social development and economic upliftment. The success of such a complex programme inevitably requires a convergence of efforts of public agencies, voluntary and non-governmental organisations (NGO) and the slum dwellers themselves. An attempt was therefore made by the study team to enquire into the involvement of voluntary organisations in the complex task of slum improvement by trying to enlist them according to the nature of their activities in the improved slums in the three cities. This has drawn a blank. Of all the 22 sample slums, presence of NGOs was felt only in one slum namely the slum near R.C. Church, Poonthure in Trivandrum. Two NGOs viz. Student Union Library and TSS Unit are doing some social work in this slum. Whereas the former contributes its mite in helping the children in their studies, the latter is helping in construction of community hall (Table 4.17). Slum improvement is a programme basically participatory in nature. It is supposed to be organised according to the basic precepts of urban community development so that it involves participation of the people (beneficiaries) not only in programme implementation but also in its formulation. It should conform to the ideals of people's programme with government participation. The programme is likely to succeed only when the local community understands its own problems, realises its responsibilities and organises itself to exercise necessary powers. The role of local associations and panchayats thus assumes critical importance.

4.55 With a view to find out such awareness and organisation, the slum dwellers were asked to indicate the type of local associations existing in the slums and the purposes for which they have been started. The findings are presented in Table 4.18. It may be seen from this table that the slum dwellers seem to be much more concerned with the trade union politics rather than with their own welfare. This is evident from the presence of a large number of trade union associations like INTUC, CITU and AITU in 3 slums, all of them in Cochin. Only one slum, namely, Nadinagar in Calicut has an association of slum dwellers viz. Anmed Desh Seva Sangham with a primary objective of improving the conditions in the slum. The rest of the sample slums have not organised themselves to either act as pressure group for provision and maintenance of services or as catalytic agents for bringing about change.

Beneficiaries' Contribution for Improvement:

4.56 Slum improvement not only calls for convergence of efforts of the public agencies, NGOs and the beneficiaries, it also requires pooling of financial resources out of schematic budgets of various government departments, from voluntary organisations and contribution by the beneficiaries as well. So far no such convergence of financial resources is found to have been initiated in the slum improvement effort in the three cities. Contribution by the local community by way of partial or full cost recovery has not yet been tried in any of the three cities.

4.57 Participatory development not only means exercising necessary powers through its chosen representatives but also implies physical and monetary contribution in improvement programme. The slum dwellers' willingness in this regard was therefore ascertained by asking some of the most articulate of them the contribution they were likely to make at least for the upkeep and maintenance of services. It is heartening to note that only in 2 slums (Chakkamadom in Trivandrum and Vellayal in Calicut) the residents declined to make any contribution (Table 4.19). In rest of the slums, the slum dwellers were found motivated enough to contribute their labour but not any money. Barring the slums in Calicut, the slum dwellers in the remaining two cities agreed to contribute their labour varying from a couple of hours a week to 8 hours a day. In Calicut though they were ready to contribute their mite in the form of labour, they were not sure of their contribution in terms of hours. Thus, by and large, the slum dwellers are found to be motivated for contributing their sweat capital towards the upkeep and maintenance of slums.

4.58 The review of improvement of slums thus reveals that it has not been implemented in letter and spirit of the norms as suggested by the EIUSP as also by the detailed Guidelines issued by the Government of Kerala. This is because the services have not been provided according to the suggested norms. Some of the services have not been provided at all. Second, whatever services have been provided, thus have further derelicted because of lack of proper maintenance. The net result is a large scale

dissatisfaction of the clientele group. Third, the inadequate provision and maintenance of services is also due to an indifferent attitude of the beneficiaries and the NGOs. The slums dwellers have not yet organised themselves to articulate their views and ventilate their grievances relating to the problems confronting them in their daily life.

4.59 In view of the above, the slum improvement programme does not seem to have made a substantial impact on the slums dwellers in terms of cleanliness and the accessibility of services. The improvement programme, however has made some impact in improving the road, approaches, streets so that movement of the slum dwellers has been facilitated especially during the rains. But this is at most marginal improvement. Much is desired to bring about improvement in the quality of life of the slum dwellers by improving the accessibility to services and public hygiene in the various slums.

4.60 There is therefore an utmost need to bring about improvement in the improvement programme itself. We have seen earlier in this chapter that the type of programmes and the range of services to be provided are abounding. At the policy plane itself there are as many as three schemes viz. (1) Slums Improvement Scheme, (2) Structural Environmental Scheme and (3) the Chief Minister's Fund for Slum Clearance Improvement. This coupled with the range of services added to the EIUSP list have made the programme too ambitious to be effectuated with the limited means. As the review of improvement programme reveals that it has not been possible to provide even some of the core

services like water, sanitation, drainage and street lighting according to the minimum norms. To talk of landscaping, horticulture, development of parks, playgrounds, hospitals and community centres appears to be too normative and based on airy hopes to have even a rudiment of pragmatism and related with the realities of the situation. It would therefore be prudent to reformulate the priorities and determine again a few critical services out of the EIUSP list itself to be provided on priority basis. May be to begin with, water and sanitation could be the most pressing needs to be looked after first. Other services and amenities could follow later on. This is only illustrative rather than suggestive. What is imperative in the present situation is a reformulation of priorities and confining the programme to only a few critical services rather than aspiring to provide a range of services and not succeeding in providing any of them to the satisfaction of the slum dwellers.

Table 4.1
Land Area, Ownership and Location of
Sample Slums in Trivandrum, Cochin and Calicut

Name of city/ Name of slum clusters	Area (in acres)	Ownership	Locational features	Environmental disadvantages
<u>Trivandrum</u>				
Anchamada	18.74	Municipal	Plain	Nil
Karimadam	8.60	Municipal	Plain	Stagnant water
Chirakulam	1.41	Municipal	Low lying	Stagnant water
Slum near R.C. Church, Poonthur	26.00	Municipal	Near Coastal belt	Smell
<u>Cochin</u>				
Thuruthy	2.79	Private	Plain+Low lying	Smell, Smoke, Stagnant water
Chakkamadam	2.00	Unknown	Plain+Low lying	Smell, Smoke, Stagnant water
Nellukadave	0.90	Private	Plain	Smell, Smoke, Stagnant water
Kochuparambu, Valiaparambu & Banglapparabu	4.00	Trust	Plain, water logged during monsoon	Smell, Stagnant water
Mahajanvadi	1.50	Trust	Plain	Smell, Stagnant water
M.K.S. Parambu	0.99	Private	Plain	Smell, Stagnant water
Nettaparambu & Kaniyamthrutho	0.30	Private	Plain+Low lying	Smell, Stagnant water
Kissan colony	2.97	Greater Cochin deve. Authority	Low lying	Stagnant water
S.P. Puram colony	0.62	Private	Low lying	Stagnant water
Kadavanthra	0.79	State Govt.	Plain	No disadvantage
Pulaya colony				
Kovilampally Padam	1.11	Private	Low lying, storm water drain	Smell, Stagnant water
Moopa colony	6.42	Private	Low lying	Stagnant water
Pandarachisa colony	1.48	Private	Low lying	Smell, Stagnant water
<u>Calicut</u>				
Puthiyatho- pputhoduta	17.30	Private	Plain	Smell, Stagnant water
Vellayel	51.89	State Govt.	Plain near the sea beach	Smell
Mailairpadam	4.20	Private (purchased)	Plain, low lying	Stagnant water
Nadinagar	23.10	State Govt.	Near the beach	Stagnant water due to high tides
Vattakundu	7.17	Waqf land	Low lying, near the beach	Stagnant water

+ 10% owned 90% rented accommodation. * Surrounded by stinking open drains.
Source: NIUA Survey, 1990.

Table 4.2

Tenure System and the Type of Dwellings by Uses

Name of city/ Name of slum clusters	Percentage of pattas given to slum dwellers	Type of Dwellings (%)								
		Kuchcha			Pucca			Semi pucca		
		Residen- tial	Commer- cial	Mixed	Residen- tial	Commer- cial	Mixed	Residen- tial	Commer- cial	Mixed
<u>Trivandrum</u>										
Anchamada	90.00	77.70	-	-	-	-	-	22.30	-	-
Karimadam	0.00	82.63	-	-	13.90	-	-	3.47	-	-
Chirakulam	0.00	98.00	-	-	-	-	-	2.00	-	-
Slum near R.C. Church, Poonthura	0.00	25.00	-	-	35.00	-	-	40.00	-	-
<u>Cochin</u>										
Thuruthy	0.00	100.00	-	-	-	-	-	-	-	-
Chakamadom	25.00	15.00	-	-	25.00	-	-	60.00	-	-
Nellukadave	0.00	11.90	-	-	-	-	-	88.10	-	-
Kochuparambu, Valiaparambu & Banglaparambu	0.00	42.00	-	-	10.00	-	-	48.00	-	-
Mahajanvadi	0.00	4.37	-	-	8.70***	-	-	86.96	-	-
M.K.S. Parambu	20.00	-	-	-	75.00	-	-	7.70	25.00	-
Nettaparambu & Kaniyanthrutho	0.00	92.3	-	-	-	-	-	7.70	-	-
Kissan colony	0.00	-	-	-	100.00	-	-	-	-	-
S.P. Puram colony	*	-	-	-	100.00	-	-	-	-	-
Kadavanthra Pulaya colony	100.00	57.14	-	-	17.86	-	-	-	-	-
Kavilampally Padam	*	-	-	-	-	-	-	-	-	-
Moopa colony	*	65.85	-	-	24.39	-	-	9.76	-	-
Pandarachisa colony	*	7.69	-	-	92.31	-	-	-	-	-
<u>Calicut</u>										
Puthiyatho- pputhoduta	N.A.	5.00	-	-	95.00	-	-	-	-	-
Vellayel	25.00	9.00	1.00	-	90.00	-	-	-	-	-
Mailairpadam	0.00	-	-	-	100.00	-	-	-	-	-
Nadinagar	90.00	5.00	2.00	-	48.00	-	-	-	-	-
Vattakandu	100.00	60.00	-	-	40.00	-	-	-	-	-

* Percentage not mentioned

*** Two old buildings are occupied by 30 families.

Source: NIUA Survey, 1990.

Table 4.3

No. of Slum Dwellings Recently Improved,
Sold/Purchased

Name of the city/slum	No. of Dwellings improved	No. of Dwellings sold/purchased
TRIVANDRUM		
Anchamada	60	-
Karimadam	72	-
COCHIN		
Kochuparambu, Valiaparambu & Banglaparambu	15	-
M.K.S. Parambu	3	3
Kadavanthra Pulya colony	7	-
Moopa colony	12	8
CALICUT		
Nadinagar	100	15
Total	269	26

Source: NIUA Survey, 1990.

Table 4.4
Occupational Pattern (in %)*

Name of city/ Name of slum clusters	Actual occupation of slum dwellers				
	1	2	3	4	Others
<u>Trivandrum</u>					
Anchamada	Coolies 90	-	-	10	
Karimadam	Coolies 100	-	-	-	
Chirakulam	Coolies 50	Weavers 20	Workers 5	Govt. employees	25
Slum near R.C. Church, Poonthura	Coolies 3	Fishing 90	-	Govt. employees	7
<u>Cochin</u>					
Thuruthy	Workers 100	-	-	-	
Chakamadom	Coolies 75	Sanitary workers 15	Casual work- ers 10	-	
Nellukadave	Coolies 50	Fish traders 20	Casual cool- ies 15	Casual traders	15
Kochuparambu, Banglaparambu, Valiaparambu Mahajanvadi	Workers 50 Workers 30	Petty trad- ers 40 Petty trad- ers 40	Casual work- ers 10 Milk trad- ers 20	Casual workers	10
M.K.S. Parambu	Petty trad- ers 40	Workers 20	Drivers 10	Casual workers	30
Nettaparambu, Kaniyamthrutho	Workers 40	Fish trad- ers 30	Casual work- ers 30	-	
Kissan colony	Coolies 70	Maid servants 20	Const. work- ers 10	-	
S.P. Puram colony	Coolies 50	Fishermen 40	Const. work- ers 10	-	
Kadavanthra Pulaya colony	Const. work- ers 80	Maid servants 15	Casual work- ers 4.5	Employees	0.5
Kavilampally Padam	Const. work- ers 60	Maid servants 40	-	-	
Moopa colony	Const. work- ers 40	Maid servants 15	Casual work- ers 20	Misc.	25
Pandarachisa colony	Head load workers 60	Coolies 5	Misc. 35	-	
<u>Calicut</u>					
Puthiyatho- pputhoduta	Coolies 100	-	-	-	
Vellayal	Fishermen 90	Coolies 9	Petty shop owners 1	-	
Mailairpadam	Coolies 75	Petty shop owners 25	-	-	
Nadinagar	Coolies 98	Petty shop owners 2	-	-	
Vattakandu	Coolies 70	Fishermen 20	Petty shop owners 10	-	

Source: NIUA Survey, 1990.

* Approximate figures.

Table 4.5
Distance of Slum Cluster from Work Places

Name of city/ Name of slum clusters	A-Work place (in kms)	Mode of trans- port	B-Work place (in kms)	Mode of trans- port	C-Work place (in kms)	Mode of trans- port
<u>Trivandrum</u>						
Anchamada	3.00	Bus	-	-	-	-
Karimadam	18.00	Bus	2.00	Bus	4.00	Bus
Chirakulam	1.50	On foot	-	-	-	-
Slum near R.C. Church, Poonthura	0.2	On foot	6.00	Bus	-	-
<u>Cochin</u>						
Thuruthy	Uncertain	On foot	-	-	-	-
Chakamadom	0.50	On foot	2.00	On foot	-	-
Nellukadave	5.00	Cycle	5.00	Cycle	3.00	On foot
Kochuparambu, Banglaparambu & Valiaparambu	Uncertain	On foot	-	On foot	-	-
Mahajanvadi	Uncertain	Cylce	Uncertain	On foot	Uncer- tain	On foot
M.K.S. Parambu	Uncertain	On foot	Uncertain	On foot	Uncer- tain	On foot
Nettaparambu & Kaniyamthrutho	Uncertain	On foot	Uncertain	On foot	Uncer- tain	On foot
Kissan colony	9.00	Bus/On foot	5-6	Bus/On foot	-	-
S.P. Puram colony	3.00	Bus/On foot	5.00	On foot	-	-
Kadavanthra Pulaya colony	Uncertain	Bus/On foot	Uncertain	On foot	-	-
Kavilampally Padam	Uncertain	Bus/On foot	-	-	-	-
Moopa colony	2-5	Bus/Cycle	-	-	-	-
Pandarachisa colony	Uncertain	On foot	Uncertain	On foot	3-4	Bus/On foot
<u>Calicut</u>						
Puthiyatho- pputhoduta	2.00	On foot	2.00	On foot	-	-
Vellayel	0.100	On foot	2.00	On foot	Uncer- tain	On foot
Mailairpadam	3.00	Bus	5.00	Bus	-	-
Nadinagar	2.00	Bus/On foot	4.00	Bus	-	-
Vattakandu	0.500	On foot	3.00	Bus/On foot	Within the slum	On foot

Note : Certain jobs due to their vary nature involve travelling to any place where one is likely to get work. The word uncertain therefore pertains to such categories of workers as labourers, construction workers, hawkers, milk vendors and so on.

Source: NIUA Survey, 1990.

Table 4.6
Approach to the Slum Cluster

Name of city/ Name of slum clusters	Distance from metalled road (in kms.)	Distance from jeapable road (in kms.)	Barrier and diffi- culties in reaching the slum cluster from metalled road
<u>Trivandrum</u>			
Anchamada	0.20	0.40	Nil
Karimadam	0.60	0.10	Nil
Chirakulam	0.00	0.00	Nil
Slum near R.C. Church, Poonthura	0.00	0.00	Nil
<u>Cochin</u>			
Thuruthy	0.00	1.00	Nil
Chakamadom	0.00	0.50	Nil
Nellukadave	0.00	0.25	Nil
Kochuparambu, Banglaparambu & Valiaparambu	0.00	0.03	Nil
Mahajanvadi	0.00	0.25	Nil
M.K.S. Parambu	0.00	0.00	Nil
Nettaparambu & Kaniyamthrutho	0.00	0.03	Nil
Kissan colony	0.00	0.00	Nil
S.P. Puram colony	0.00	0.00	Nil
Kadavanthra Pulaya colony	0.50	0.50	Nil
Kavilampally Padam	0.00	0.00	Nil
Moopa colony	0.40	0.40	Nil
Pandarachisa colony	0.00	0.00	Nil
<u>Calicut</u>			
Puthiyatho- pputhoduta	0.00	0.00	Nil
Vellayel	0.00	0.00	Nil
Mailairpadam	1.00	0.00	Nil
Nadinagar	0.50	0.00	Nil
Vattakandu	0.50	0.00	Nil

Source: NIUA Survey, 1990.

Table 4.7
Type of Road and Street within the Slum Cluster

Name of city/ Name of slum clusters	Type		Percentage of paved streets to total streets			
	Road	Street	0-25	25-50	50-75	75-100
<u>Trivandrum</u>						
Anchamada	Paved	Paved	-	-	*	-
Karimadam	Metalled	Paved	*	-	-	-
Chirakulam	No road	Not paved	NA	NA	NA	NA
Slum near R.C. Church, Poonthura	Metalled	Not paved	NA	NA	NA	NA
<u>Cochin</u>						
Thuruthy	Earth road	Not Paved	NA	NA	NA	NA
Chakamadom	Paved	Paved	-	50	-	-
Nellukadave	Paved	Paved	-	*	-	-
Kochuparambu & Valiaparambu	Paved	Paved	-	-	*	-
Mahajanvadi	Paved	Paved	-	*	-	-
M.K.S. Parambu	Paved	Paved	-	*	-	-
Nettaparambu & Kaniyamthrutho	No road	Paved	*	-	-	-
Kissan colony	Metalled	Paved	*	-	-	-
S.P. Puram colony	Metalled	Paved	*	-	-	-
Kadavanthra Pulaya colony	Paved	Paved	-	-	*	-
Kavilampally Padam	Paved	Not paved	NA	NA	NA	NA
Moopa colony	Concrete	Paved	-	*	-	-
Pandarachisa colony	Paved	Paved	-	*	-	-
<u>Calicut</u>						
Puthiyatho- pputhoduta	Earth road	Not paved	NA	NA	NA	NA
Vellayal	Earth road	Not paved	NA	-	-	-
Mailairpadam	Cemented (foot path)	Paved	-	-	*	-
Nadinagar	Paved (foot path)	Not paved	NA	NA	NA	NA
Vattakandu	Earth road	Not paved	NA	NA	NA	NA

* Denotes availability of paved streets.
Source: NIUA Survey, 1990.

Table 4.8

Water Supply : Number of Household
Per Public Standpost

Name of city/ Name of slum clusters	No. of house- holds	Total no. of public standpost	No. of households on one pub- lic stand- post	Duration of water supply	Any other source
<u>Trivandrum</u>					
Anchamada	279	5	56	2 hrs/day	Nil
Karimadam	518	8	65	"	Nil
Chirakulam	130	2	65	"	Nil
Slum near R.C. Church, Poonthura	1200	17	7	"	Nil
<u>Cochin</u>					
Thuruthy	50	3	17	2 hrs/day	Nil
Chakamadom	150	5	30	"	Nil
Nellukadave	84	3	28	"	Nil
Kochuparambu, Banglaparambu & Valiaparambu	500	8	63	2-3 hrs/day	3 wells 1 well
Mahajanvadi	110	4	28	"	4 wells
M.K.S. Parambu	125	3	42	"	
Nettaparambu & Kaniyamthrutho	40	2	20	"	Nil
Kissan colony	197	7	28	"	Nil
S.P. Puram colony	35	1	35	"	Nil
Kadavanthra Pulaya colony	28	3	9	"	Nil
Kavilampally Padam	95	8	12	"	Nil
Moopa colony	41	4	10	"	Nil
Pandarachisa colony	60	2	30	"	Nil
<u>Calicut</u>					
Puthiyatho- pputhoduta	68	3	23	8 hrs on alternate day	3 wells
Vellayel	150	6	25	4 hrs on alternate day	6 P.H.P. 1 Well
Mailairpadam	78	3	26	"	Nil
Nadinagar	600	6	100	"	Nil
Vattakandu	226	6	38	"	- 2 Pvt.hand- pumps - 5 Pvt.conn- ection - 6 Wells

Source: NIUA Survey, 1990.

Table 4.9

Availability of Community Latrines

Name of city/ Name of slum clusters	No. of house- holds	Total no. of lavatory seats	Male	Female	Total	No. of households per lava- tory seats
Trivandrum	279	0	0	0	NII	-
Anchamada	518	5	5	10	10	52
Karimadam	130	4	2	6	6	22
Slum near R.C. Church, Poonthura	1200	-	-	-	14	86
Cochin	50	2	2	4	4	13
Thuruthy	150	-	-	-	70*	-
Chakamadom	84	4	4	8	8	11
Kochuparambu & Valiaparambu	500	40	20	60	60	8
Mahajanvadi	110	4	4	8	8	14
M.K.S. Parambu	125	3	3	6	6	21
Nettaparambu & Kaniyamthutho	40	NII	NII	NII	NII	-
Kissan colony	197	NII	NII	NII	NII	-
S.P. Puram colony	35	NII	NII	NII	NII	-
Kadavanthra colony	28	NII	NII	NII	NII	-
Pulaya colony	95	NII	NII	NII	NII	-
Kavilampally	41	2	2	4	4	10
Moopa colony	60	NII	NII	NII	NII	-
Pandarachisa colony	68	NII	NII	NII	NII	-
Calicut	150	9	9	18	18	8
Puthiyatho- pputhoduta	78	-	-	-	78 ESP	-
Mailairpadam	600	NII	NII	NII	NII	-
Nadinagar	226	No community latrine	No community latrine	No community latrine	203 ESP latrine	-
Vatakandu						

* There is no separate latrine for ladies & gents since it is attached to each house.
NA Not available.
Source: NIVA Survey, 1990.

Table 4.10

Percentage of Area Covered by Pucca Drains

Name of city/ Name of slum clusters	Percentage of area covered by pucca drains			
	upto 25	25-50	50-75	75-100
<u>Trivandrum</u>				
Anchamada	*	-	-	-
Karimadam	*	-	-	-
Chirakulam	-	-	*	-
Slum near R.C. Church, Poonthura	-	-	-	*
<u>Cochin</u>				
Thuruthy	-	-	-	*
Chakamadam	-	*	-	-
Nellukadave	-	*	-	-
Kochuparambu, Banglaparambu & Valiaparambu	-	-	*	-
Mahajanvadi	-	*	-	-
M.K.S. Parambu	-	*	-	-
Nettaparambu & Kaniyamthrutho	*	-	-	-
Kissan colony	-	-	*	-
S.P. Puram colony	-	-	*	-
Kadavanthra Pulaya colony	-	-	*	-
Kavilampally Padam	*	-	-	-
Moopa colony	-	*	-	-
Pandarachisa colony	-	*	-	-
<u>Calicut</u>				
Puthiyatho- pputhoduta	*	-	-	-
Vellayel	-	*	-	-
Mailairpadam	-	-	-	*
Nadinagar	-	-	-	*
Vattakandu	-	-	-	*

* Denotes availability of Pucca drains.

Source: NIUA Survey, 1990.

Table 4.11

Provision of Street Light in the Slum Cluster

Name of city/ Name of slum clusters	Road length within the slum (in mts)	No. of lamp post	Distance betw- een lamp posts (mts.)
<u>Trivandrum</u>			
Anchamada	300	60	5
Karimadam	-	20	-
Chirakulam	No road	6	-
Slum near R.C. Church, Poonthura	500	70	7.14
<u>Cochin</u>			
Thuruthy	50	7	7.14
Chakamadom	1000	30	33.33
Nellukadave	500	6	83.33
Kochuparambu, Banglaparambu & Valiaparambu	3000	24	125.00
Mahajanvadi	100	6	16.67
M.K.S. Parambu	300	3	100.00
Nettaparambu & Kaniyamthrutho	NA	Nil	Nil
Kissan colony	NA	22	-
S.P. Puram colony	NA	5	-
Kadavanthra Pulaya colony	405	7	57.86
Kavilampally Padam	NA	Nil	-
Moopa colony	1050	2	525.00
Pandarachisa colony	135	12	11.25
<u>Calicut</u>			
Puthiyatho- pputhoduta	546	7	78.00
Vellayel	504	19	26.53
Mailairpadam	480	1	480.00
Nadinagar	586	17	34.47
Vattakandu	248	9	27.56

* for every 30 metres

NA Not available

Source: NIUA Survey, 1990.

Table 4.12

Percentage of Households Having Electric Connections

Name of city/ Name of slum clusters	No. of house- holds	No. of house connection	Percentage of households hav- ing connection
<u>Trivandrum</u>			
Anchamada	279	175	62.75
Karimadam	518	25	4.83
Chirakulam	130	90	69.23
Slum near R.C. Church, Poonthura	1200	20	1.67
<u>Cochin</u>			
Thuruthy	50	5	10.00
Chakamadom	150	60	40.00
Nellukadave	84	5	5.95
Kochuparambu, Banglaparambu & Valiaparambu	500	260	52.00
Mahajanvadi	110	70	63.64
M.K.S. Parambu	125	25	20.00
Nettaparambu & Kaniyamthrutho	40	1	2.5
Kissan colony	197	37	18.78
S.P. Puram colony	35	25	71.43
Kadavanthra Pulaya colony	28	21	75.00
Kavilampally Padam	95	Nil	-
Moopa colony	41	7	17.07
Pandarachisa colony	60	Nil	-
<u>Calicut</u>			
Puthiyatho- pputhoduta	68	68	100.00
Vellayel	150	75	50.00
Mailairpadam	78	56	71.79
Nadinagar	600	40	6.67
Vattakandu	226	45	19.91

Source: NIUA Survey, 1990.

Table 4.13
Education for Children

Name of city/ Name of slum clusters	Availability of			
	Creche	Balwadi	Nursery	Primary school
<u>Trivandrum</u>				
Anchamada	-	*	-	-
Karimadam	-	developing	-	-
Chirakulam	-	*	-	-
Slum near R.C. Church, Poonthura	-	-	*	*
<u>Cochin</u>				
Thuruthy	-	-	-	-
Chakamadam	-	-	-	-
Nellukadave	-	-	*	-
Kochuparambu, Banglaparambu & Valiaparambu	-	-	*	-
Mahajanvadi	*	-	-	-
M.K.S. Parambu	-	*	-	-
Nettaparambu & Kaniyamthrutho	-	-	-	-
Kissan colony	-	-	*	-
S.P. Puram colony	-	-	*	-
Kadavanthra Pulaya colony	-	-	*	-
Kavilampally Padam	-	-	-	-
Moopa colony	-	-	-	-
Pandarachisa colony	-	-	-	-
<u>Calicut</u>				
Puthiyatho- pputhoduta	-	*	-	*
Vellayel	-	-	-	-
Mailairpadam	-	*	-	-
Nadinagar	-	*	*	-
Vattakandu	-	-	-	-

* Denotes availability of facilities concerned.
Source: NIUA Survey, 1990.

Table 4.14

Health Facility

Name of city/ Name of slum clusters	Primary health centres/dispen- saries	Visiting govt. doc- tors	Maternity centres	Any other
<u>Trivandrum</u>				
Anchamada	-	*	*	-
Karimadam	Developing	-	-	-
Chirakulam	-	-	-	-
Slum near R.C. Church, Poonthura	-	-	-	Trivandrum social ser- vice society
<u>Cochin</u>				
Thuruthy	-	-	-	-
Chakamadom	-	-	-	-
Nellukadave	-	-	-	-
Kochuparambu, Banglaparambu & Valiaparambu	-	-	-	-
Mahajanvadi	-	-	-	-
M.K.S. Parambu	-	-	-	-
Nettaparambu & Kaniyamthrutho	-	-	-	-
Kissan colony	-	-	-	-
S.P. Puram colony		NO RESPONSE		
Kadavanthra Pulaya colony	-	-	-	-
Kavilampally Padam	-	-	-	-
Moopa colony	-	-	-	-
Pandarachisa colony	-	-	-	-
<u>Calicut</u>				
Puthiyatho- pputhoduta	-	-	-	-
Vellayel	-	-	-	-
Mailairpadam	-	-	-	-
Nadinagar	-	-	-	-
Vattakandu	-	-	-	-

* Denotes availability of facilities concerned.
Source: NIUA Survey, 1990.

Table 4.15

Group Satisfaction and Requirement of Services and Facilities

Name of city/ Name of slum clusters	Satisfaction and Requirement					
	Water supply	Street light	Lava- tories	Street cleaning & garbage disposal	Medical facili- ties	Education for chil- dren
<u>Trivandrum</u>						
Anchamada	3	2	3	3	2	1
Karimadam	3	2	3	3	4	3
Chirakulam	3	2	2	2	2	1
Slum near R.C. Church, Poonthura	1	2	3	2	3	1
<u>Cochin</u>						
Thuruthy	3	2	2	4	4	4
Chakamadom	2	2	2	3	4	1
Nellukadave	2	2	1	2	5	4
Kochuparambu, Banglaparambu & Valiaparambu	3	2	2	3	2	2
Mahajanvadi	3	2	2	3	4	4
M.K.S. Parambu	2	2	2	3	4	4
Nettaparambu & Kaniyamthrutho	NR	NR	NR	NR	NR	NR
Kissan colony	1	2	3	1	2	2
S.P. Puram colony	1	2	3	2	4	2
Kadavanthra Pulaya colony	2	2	2	2	2	2
Kavilampally Padam	2	3	3	3	3	2
Moopa colony	2	3	2	2	2	2
Pandarachisa colony	1	2	2	3	3	2
	2	2	6	4	4	1
	2	3	3	4	4x	4
	3	3	1	4	4	4
	3	2	4	4	4	2
	3	3	1	4	4	2

x Beach hospital is adjacent to clusters

Satisfaction Codes

Fully Satisfied - 1

Partly Satisfied - 2

Dis-satisfied - 3

NR : No response

Source: NIUA Survey, 1990.

Requirement Codes

Very much required - 4

Indifferent - 5

Not required at

present - 6

Table 4.16
Maintenance of Services in the Improved Slums

Name of city/ Name of slum clusters	Properly maintained (yes/no)	If yes, are the slums dwellers satisfied?	If no, reasons for dissatisfaction
1	2	3	4
<u>Trivandrum</u>			
Anchamada	No	-	Corporation staff do not pay any attention
Karimadam	No	-	-do-
Chirakulam	Yes	Barring the lavatories and street light	-
<u>Cochin</u>			
Slum near R.C. Church, Poonthura	No	-	Garbage is collected only once a week
Thuruthy	No	-	Apathy of civic authorities
Chakamadom	No	-	-do-
Nellukadave	No	-	-do-
Kochuparambu, Banglaparambu & Valiaparambu	No	-	-do-
Mahajanvadi	No	-	Lack of cleanliness
M.K.S. Parambu	No	-	NR
Nettaparambu & Kaniyamthrutho	No	-	Apathy of civic authorities
Kissan colony	No	-	NR
S.P. Puram colony	No	-	NR
Kadavanthra Pulaya colony	Yes	Yes the slum dwellers also take interest	-
Kavilampally Padam	No	-	NR
Moopa colony	No	-	NR
Pandarachisa colony	No	-	NR

Contd...

1	2	3	4
<u>Calicut</u>			
Puthiyathopputhoduta	No	-	Corporation is not doing any cleaning at all.
Vellayel	No	-	NR
Mailairpadam	No	-	Corporation does not pay any attention, shortage of water supply
Nadinagar	No	-	Apathy of corporation staff
Vattakandu	No	-	Apathy of corporation staff towards cleanliness and replacement of fused bulbs

NR - No response.

Source: NIUA Survey, 1990.

Table 4.17

Voluntary Organisations and Co-operative Society

Name of city/ Name of slum clusters	Voluntary organisation		Co-operative society	
	Name	Functions	Name & year of establish- ment	Functions
<u>Trivandrum</u>				
Anchamada	Nil	NA	-	-
Karimadam	Nil	NA	Nil	NA
Chirakulam	Nil	NA	Nil	NA
Slum near R.C. Church, Poonthura	Student union library T.S.S. Unit	To help child- ren in their studies; const. of community hall	Nil Nil Nil	NA NA NA
<u>Cochin</u>				
Thuruthy	Nil	NA	Nil	NA
Chakamadom	Nil	NA	Nil	NA
Nellukadave	Nil	NA	Nil	NA
Kochuparambu, Banglaparambu & Valiaparambu	Nil	NA	Nil	NA
Mahajanvadi	Nil	NA	Nil	NA
M.K.S. Parambu	Nil	NA	Nil	NA
Nettaparambu & Kaniyamthrutho	Nil	NA	Nil	NA
Kissan colony	Nil	NA	Nil	NA
S.P. Puram colony	Nil	NA	Nil	NA
Kadavanthra Pulaya colony	Nil	NA	Nil	NA
Kavilampally Padam	Nil	NA	Nil	NA
Moopa colony	Nil	NA	Nil	NA
Pandarachisa colony	Nil	NA	Nil	NA
<u>Calicut</u>				
Puthiyatho- pputhoduta	Nil	NA	Nil	NA
Vellayel	Nil	NA	Nil	NA
Mailairpadam	Nil	NA	Nil	NA
Nadinagar	Nil	NA	Nil	NA
Vattakandu	Nil	NA	Nil	NA

NA Not applicable.

Source: NIUA Survey, 1990.

Table 4.18

Local Associations

Name of city/ Name of slum clusters	Name/ level	Constituitions Yes/No	Paid member- ship Yes/No	Reasons for starting
1	2	3	4	5
<u>Trivandrum</u>				
Anchamada	Nil	NA	NA	NA
Karimadam	Nil	NA	NA	NA
Chirakulam	C	Yes	No	to improve the slum
Slum near R.C. Church, Poonthura				
	Nil	NA	NA	NA
<u>Cochin</u>				
Thuruthy	Nil	NA	NA	NA
Chakamadom	Nil	NA	NA	NA
Nellukadave	Nil	NA	NA	NA
Kochuparambu, Banglaparambu & Valiaparambu				
	Nil	NA	NA	NA
Mahajanvadi	Nil	NA	NA	NA
M.K.S. Parambu	Nil	NA	NA	NA
Nettaparambu & Kaniyamthrutho				
	Nil	NA	NA	NA
Kissan colony#				
	I.N.T.U.C (T)	Yes	Yes	To solve
	C.I.T.U.(T)	Yes	Yes	the problem
	A.I.T.U.(T)	Yes	Yes	of labour class
S.P. Puram colony#				
	I.N.T.U.C (T)	Yes	Yes	To solve
	C.I.T.U.(T)	Yes	Yes	the problem
	A.I.T.U.(T)	Yes	Yes	of labour class
Kadavanthra Pulaya colony				
	Nil	NA	NA	NA
Kavilampally Padam				
	C.I.T.U.(T)	Yes	Yes	For welfare of labourers

Contd....

1	2	3	4	5
Moopa colony	Nil	NA	NA	NA
Pandarachisa colony	Nil	NA	NA	NA
<u>Calicut</u>				
Puthiyathopputhoduta	Nil	NA	NA	NA
Vellayel	Nil	NA	NA	NA
Mailairpadam	Nil	NA	NA	NA
Nadinagar	Anmed Desh Seva Sanhgam (C)	Yes	Yes	To improve the slum conditions
Vattakandu	Nil	NA	NA	NA

These are politically backed unions.
 C = Cluster level ;
 N = Neighbourhood level;
 T = Town/City level
 Source: NIUA Survey, 1990.

Table 4.19
Contribution of Slum Dwellers Towards the
Upkeep and Maintenance of Services

Name of city/ Name of slum clusters	No Contri- bution	Monetary Contribution		Physical contribution (hrs. in a week)
		Fully	Partially	
<u>Trivandrum</u>				
Anchamada	-	Nil	Nil	6 hrs/day
Karimadam	-	Nil	Nil.	NA
Chirakulam	-	-	-	6 hrs/day
Slum near R.C. Church, Poonthura	-	-	-	8 hrs/day
<u>Cochin</u>				
Thuruthy	-	Nil	Nil	1 hr/day
Chakamadom	*	NA	NA	NA
Nellukadave	-	Nil	Nil	8 hrs/day
Kochuparambu, Banglaparambu & Valiaparambu	-	Nil.	Nil	4 hrs/week
Mahajanvadi	-	Nil	Nil	8 hrs/week
M.K.S. Parambu	-	-	-	1 hr/day
Nettaparambu & Kaniyamthrutho	-	Nil	Nil	1 hr/day
Kissan colony	-	Nil	Nil	8 hrs/week
S.P. Puram colony	-	Nil	Nil	6 hrs/day
Kadavanthra Pulaya colony	-	Nil	Nil	2-3 hrs/week
Kavilampally Padam	-	Nil	Nil	1-2 hrs/week
Moopa colony	-	Nil	Nil	8 hrs/week
Pandarachisa colony	-	Nil	Nil	2 hrs/week
<u>Calicut</u>				
Puthiyatho- pputhoduta	-	Nil	Nil	Depends upon the nature of work
Vellayel	*	NA	NA	NA
Mailairpadam	-	Nil	Nil	Depends upon the nature of work
Nadinagar	-	Nil	Nil	Depends upon the nature of work
Vattakandu	-	Nil	Nil	Depends upon the nature of work

* Denotes no any contribution by the slum dwellers.
Source: NIUA Survey, 1990.

Table 4.20

Caste Groups

(in %)

Name of city/ Name of slum clusters	Scheduled Caste	Scheduled Tribe	Others
<u>Trivandrum</u>			
Anchamada	57.35	32.26	10.30
Karimadam	-	-	100.00
Chirakulam	75.00	15.00	10.00
Slum near R.C. Church, Poonthura	8.33	-	91.67
<u>Cochin</u>			
Thuruthy	-	-	100.00
Chakamadom	-	-	100.00
Nellukadave	-	-	100.00
Kochuparambu & Valiaparambu	-	-	100.00
Mahajanvadi	-	-	100.00
M.K.S. Parambu	-	-	100.00
Nettaparambu & Kaniyamthrutho	-	-	100.00
Kissan colony	52.28	-	47.72
S.P. Puram colony	42.86	-	57.14
Kadavanthra Pulaya colony	100.00	-	-
Kavilampally Padam	26.32	-	73.68
Moopa colony	4.88	-	95.12
Pandarachisa colony	41.67	-	58.33
<u>Calicut</u>			
Puthiyatho- pputhoduta	-	-	100.00
Vellayel	20.00	-	80.00
Mailairpadam	-	-	100.00
Nadinagar	-	-	100.00
Vattakandu	10.00	-	90.00

Source: NIUA Survey, 1990.

CHAPTER V

FINANCING OF SLUM IMPROVEMENT AND MAINTENANCE

5.1 After the transfer of the programme of Environmental Improvement of Urban Slum from the Central Sector to the state sector in 1974, the financial allocation for slum improvement has been the responsibility of the state government. Before this the central government used to give per capita grant of Rs.150 to the State Government for financing of improvement. Since 1974, the central government gives only the usual Block Grants and loan to the state government which are not tied with any specific scheme or programme. It is the initiative of the state government to allocate the funds for slum upgradation out of the block grant. However, as it forms part of the Minimum Needs Programmes and was later on included in the Prime Minister's 20 point Programme, the central government provides for central outlays for this scheme.

5.2 In Kerala, the allocation for slum improvement is governed by the Guidelines referred to earlier. Accordingly, the financial assistance is given to the local bodies as a mix of grant and loan. 50 per cent of the total allocation is given as grant and the remaining 50 per cent as loan. It also provides for relating the financial assistance with the "urgency of the case and financial position of the local body".

5.3 The allocation of funds for slum improvement, till very recently, had continued to be made in an ad-hoc manner. The funds allocated did not have any relationship with the magnitude of

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slum population in each district. Since 1989, the as the funds are allocated and distributed for each district taking into account "the number of slums in existing in each district. Though this has gone a long way in rationalising the system or allocation, nevertheless, it has brought the constraints on resources into even more sharp focus. Since 1989, as the funds are allocated and distributed for each district, the total availability of funds has become inadequate. There is an explicit recognition of it in the official circles as also in the circular referred to earlier.

5.4 We have earlier seen the number of slum settlements and slum population existing in the cities of Calicut, Cochin and Trivandrum. The funds made available for the three cities in the last six years is given in Table 1 below.

Table 1
Allocation of Funds for Slum Improvement in Calicut,
Cochin and Trivandrum

	(Rs. in lakhs)		
Years	Calicut	Cochin	Trivandrum
1984-85	1.33	32.24	7.99
1985-86	5.00	3.09	1.25
1986-87	0.85	-	1.42
1987-88	2.19	0.80	5.78
1988-89	8.04	5.94	8.67
1989-90	5.88	7.55	4.76
Total	23.29	49.62	29.87

Source: Office of the Director, Municipal Administration,
Trivandrum.

5.5 A look at the Table reveals two things. First, the funds allocated do not have any pattern and consistency. This applies equally well to all the three cities. In Cochin, for instance, the funds made available in 1984-85 was to the tune of Rs.32.34 lakhs in 1984-85. This dwindled down to Rs. 3.09 lakhs in 1985-86 and then to zero in the next year. Thereafter it again got a paltry sum of Rs. 80 thousand and suddenly in the next year, the allocation is found to have increased to Rs. 5.94 lakhs. In Trivandrum and Calicut as well, the allocation is found to be in spurts not showing any pattern of growth in it. This shows the lack of consistency and momentum in formulation of slum improvement project itself. Project formulation is and hence allocation of funds have not been sustained on a regular basis.

5.6 Second, the funds made available to the three cities do not have any relationship with the magnitude of slum population. Thus, whereas Calicut has the highest number of slum amongst the three cities, it is Cochin which has got the highest amount of fund for slum improvement. Trivandrum which has the least number of slum population is almost at par with Calicut so far as the allocation of funds is concerned. It is worth mentioning that even though the funds were envisaged to be distributed after 1989 to the cities according to the magnitude of slum population, there does not seem to be any relationship between slum population and distribution of funds. The reason for this could again be the abilities of the municipal corporations in the three cities to sustain the project formulation and implementation on a

regular basis. The constraints on the availability of resources is yet another important reason. The availability of funds being already limited, when distributed amongst a large number of cities, it proves to be inadequate in view of the magnitude of the problem. In certain instances, the improvements have been carried out by using the Councillor's funds. As the Councillors have some constituency at their disposal funds, some rudimentary services have been provided out of this fund.

5.7 As mentioned earlier in Chapter IV, the Government of Kerala provides the funds for slum improvement at a higher per capita amount as compared to the EIUS. The latter provided for Rs. 150 per capita for this purpose when the programme was first launched in 1972. It was increased to Rs.250 in 1984 and then to Rs. 300 per capita in 1985-86. The government of Kerala has been giving funds to the municipal bodies at the rate of Rs. 400 per capita which is higher than the central government norm. The Government of Kerala thus might be, at the face of it, said to be providing fund much more liberally. However, a deeper analysis does not indicate such a rosy picture.

5.8 This is mainly due to inflation over the years which has neutralised the effect of enhancement in the per capita norm to Rs. 400. Between 1972 and 1989, the Consumer Prices Index Number for Urban Non-manual Labour increased from 189 to 708. Hence, in view of the price rise the amount of Rs. 400 should in fact have been increased to Rs. 477 at the current prices. Taking the price deflater into account, the amount of Rs. 400 is in fact only equal to Rs.104 at the 1970 prices.

5.9 Thus in fact the authorities have been spending even less than Rs. 150 in actual practice due to decline in the value of money. Therefore the per capita norm needs constant review and adjustments in view of the price rise. If not done, the investment will not have a dent on the magnitude of the slum problem in the three cities.

Operation and Maintenance

5.10 Financing of slum improvement, and for that matter any project, requires to have a look at the operations and maintenance implications of capital investment. It is here that many a project have derelicted due to lack of maintenance. This has been a universal problem in all the size category of towns including the metropolitan cities. We have seen in Chapter IV that much is desired to impove the maintenance of services. Is it due to the problem of constraints on the resources? In order to find answer to this question we look at the over-all trends in municipal finance in the three cities.

Trends in Expenditure

5.11 The revenue expenditures of the Municipal Corporatioins between 1974-75 and 1986-87 in Calicut, Cochin anid Trivandrum are tabulated in Table 5.1. It is seen from this Table that the revenue expenditure at current prices has almost been stagnant in Trivandrum and has increased only marginally in Calicut. This is evident from the Index of Growth of revenue expenditure. Only in Cochin, the expenditure has increased by about 9.8 times during the period. When converted at constant prices, (at 1970 price),

the revenue expenditure is found to have only increased marginally in real terms in Cochin, and has been almost stagnant in Calicut. In Trivandrum, the growth in revenue expenditure in real terms has in fact declined as the Index of Growth has declined from 100 in the base year (1974-75) to 48.96 in 1986-87. It thus indicates that the revenue expenditure has not made much impact on the level of services especially in Calicut and Trivandrum. As the per capita expenditure is said to be a better indicator of level of services, the same is tabulated in Table

5.12 Per Capita expenditure in nominal terms is found to have marginally increased only in Cochin where it has increased from Rs. 19 in 1974-75 to 152.82 in 1986-88. There was thus an increase by about eight times. In Calicut, however, the per capita expenditure in nominal terms has increased by about less than three times from Rs. 28.43 in 1974-75 to Rs. 82.45 in 1986-87. In Trivandrum, the per capita expenditure has been stationary over the years around Rs. 35.

5.13 Per capita expenditure at constant prices is said to be a better index of level of services. It can be seen from Table 5.2. that it has increased only in Cochin. The increase is only three times in a period of about 13 years. In Calicut, the per capita expenditure in real terms has almost been stationary and in Trivandrum it has declined from Rs 22.51 in 1974-75 to only Rs. 9 in 1986-87. Thus the level of services have not increased at all in Trivandrum. In Calicut it has been almost stationary at the 1974-75 level and in Cochin it has increased but only marginally.

Trends in Revenue

5.14 We have seen that the trends in expenditure both in nominal and real terms has not made much headway. Is it due to the constraints on income? With a view to find answer to this question, we look at the trend in revenue at current and 1970 prices in Table 5.3. It should be obvious from this Table that barring Cochin, the revenue receipts of the Corporations of Trivandrum and Calicut have only marginally increased. This is evident from the Index of Growth. This in the case of Calicut has increased from 100 in 1974-75 (the base year) to 152.82 in 1986-87 and to 123.56 in case of Trivandrum representing about 1.5 and 1.2 times growth respectively in a span of 13 years. Only in Cochin the revenues have grown by about ten times during this period. Thus even in nominal terms, the revenue receipts have increased only marginally in Calicut and Trivandrum. In Cochin as well, an increase by about ten times in a period of 13 years does not appear to a satisfactory rate of growth.

5.15 In real terms, the analysis of trends in revenues present a very grim financial situation of the Municipal Corporations in Calicut and Trivandrum. Whereas in Trivandrum the Index of Growth has declined from 100 in the base year (1974-75) to 51, in Calicut it has plummeted down to 39.83.

5.16 In the case of Cochin the resource situation seems to be only marginally better as the Index of Growth has increased to 414 thus indicating a growth in real terms of only about 4 times in 13 year period. Thus the resources of the local bodies in the

three cities in general and in Calicut and Trivandrum in particular have not been augmented for financing of provision of services and maintenance of the services provided.

5.17 With a view to have a definite view in this regard the revenue receipts are presented in per capita terms both at current and constant prices in Table 5.4. This brings the resource crunch into still more sharp focus. It can be seen from this Table that in both the cities of Calicut and Trivandrum, the per capita revenue at current prices has been almost stationary indicating still worse a situation than the per capita expenditure (Table 5.2) Only in Cochin the per capita revenue at current prices has increased from Rs. 9.10 in 1974-75 to Rs. 77-76 in 1986-87. The growth is thus to the extent of about 8.5 times during this period. It may be recalled that the growth in per capita expenditure at current prices was to the extent of only 8 times. Thus the trends in growth is not found to be matching with that of revenue expenditure.

5.18 In real terms, the resource position of the Municipal Corporations in Calicut and Trivandrum appears to be quite serious. In case of Calicut, the Index of Growth of per capita revenue receipts in real terms has declined from 100 in 1974-75 to 48 in 1986-87 and in the case of Trivandrum it has come down to mere 39.0. In the case of Cochin, the revenues have increased only by about three times which is not at all a good performance by any standard.

5.19 The analysis of municipal finance thus indicates a grim local resource situation in almost all the three cities. The situation is much more serious in Calicut and Trivandrum. What may be the reasons for such a state of municipal finance? In order to find an answer to this question, a deeper analysis of local fiscal instruments and their use over the years as also a close examination of functioning of tax-administration, rates of taxes, valuation and assessment problems for property tax, user charges etc. are called for which itself requires a separate study of municipal finance in the three cities. However, with a view to have an approximation of the nature of this crises, we look at the revenue structure of Municipal Corporations in the three cities. This is presented in Table 5.5.

5.20 It could be seen from this Table that in Calicut, the proportion of total revenue derived from Tax sources has been stationary around 40 to 50 per cent during the period under refernece. So is the revenue from non-tax sources. What is worse is the fact that its income from tax sources has increased only by about 100 per cent during the period which is not a very good indicator of its tax efforts. In the case of Trivandrum as well, it has ot increase by about 107 per cent which also does not give a very good account of the tax effort of the Corporation of Trivandrum. Only in the case of Cochin Municipal Corporation, the income from Tax sources has grown by about 1356 per cent in 13 years. This explains its relatively better levels of expenditure and revenue over the years. However, non-tax sources has declined from 43 per cent in 1974-75 to only 7 per cent in

1986-87. Thus it reveals that the taxes have not been effectively used by the municipal corporations for mobilisation of additional services.

5.21 With a view to comprehend the budgetary position of the Municipal Corporations in the three cities, the closing balances are tabulated in Table 5.7. This again presents the crises which is afflicting the municipal finances in the three cities. It may be seen from this table that the Corporations of Calicut and Cochin are found to have negative closing balances. What lend seriousness to this crisis is the fact that the amount of deficit closing balance in both the cases is too large to be wiped away by occasional surpluses. Only in the city of Trivandrum, the Municipal Corporation is found to have surplus balance. But we have seen earlier that despite this its level of per capita income and expenditures have not looked up in any year for which the data are reported. This requires a separate indepth study. However, the fact remains that the local resources in the three cities are in a grim situation. It is not surprising therefore to have come across a very poor maintenance of services and even lack of it in the various improved slums in the three cities.

5.22 What is the prospect of municipal finance towards the dawn of this century? In order to know this, we have projected the revenue and expenditure by using the rate of growth observed in the past 13 years. The projected revenue expenditure and revenue receipts for the year 2001 are presented in Table 5.8.

5.23 It is seen from the Table that if the present trends continue, the Corporations of Calicut and Cochin are going to have still more serious crisis by the end of this century. The Corporation of Calicut will end up with a huge deficit of about Rs. 468 lakhs and for the Corporation of Cochin it is expected to be a staggering deficit of Rs. 6727 lakhs. It has important implications for fiscal policy at the local level for refurbishing of municipal finance.

Table 5.1

Trends in Revenue Expenditure of the Municipal Corporations
in Calicut, Cochin and Trivandrum at Current and
Constant Prices

(Rs. in lakhs)

City/Year	Expenditure at Current Prices		Expenditure at 1970 Prices	
	Expenditure	Index of Growth	Expenditure	Index of Growth
1. <u>Calicut</u>				
1974-75	99.11	100.00	65.20	100.08
1979-80	144.56	145.86	75.29	115.48
1986-87	359.36	362.59	93.10	142.79
2. <u>Cochin</u>				
1974-75	87.16	100.00	57.34	100.00
1979-80	207.57	238.15	108.11	188.54
1986-87	860.22	986.94	222.86	388.66
3. <u>Trivandrum</u>				
1974-75	146.21	100.00	96.19	100.00
1979-80	207.98	142.25	108.32	112.61
1986-87	189.53	129.63	49.10	48.96

Source : Data Bank, NIUA, New Delhi.

Table 5.2

Trend in Per Capita Expenditure

City/Year	At Current Prices		At 1970 Prices	
	Per Capita (Rs.)	Index of Growth	Per Capita (Rs.)	Index of Growth
1. <u>Calicut</u>				
1974-75	28.43	100.00	18.71	100.00
1979-80	37.91	133.30	19.74	105.50
1986-87	82.45	290.00	21.36	114.20
2. <u>Cochin</u>				
1974-75	19.06	100.00	12.54	100.00
1979-80	41.75	219.00	21.74	173.40
1986-87	152.82	801.80	39.54	315.30
3. <u>Trivandrum</u>				
1974-75	34.21	100.00	22.51	100.00
1979-80	44.52	130.10	23.19	103.00
1986-87	35.54	103.90	9.21	40.90

Source : Data Bank, NIUA, New Delhi.

Table 5.3

Trends in the Revenue Receipts of Municipal Corporations
in Calicut, Cochin and Trivandrum at Current and Constant Prices

City/Year	At Current Prices		At 1970 Prices	
	Revenue	Index of Growth	Revenue	Index of Growth
1. <u>Calicut</u>				
1974-75	127.01	100.00	83.56	100.00
1979-80	197.55	155.54	102.89	+123.13
1986-87	194.10	152.82	50.28	-39.83
2. <u>Cochin</u>				
1974-75	41.60	100.00	27.37	100.00
1979-80	316.50	760.82	164.84	602.27
1986-87	438.32	1053.65	113.55	414.87
3. <u>Trivandrum</u>				
1974-75	300.67	100.00	197.81	100.00
1979-80	327.30	108.86	170.47	13.82
1986-87	371.50	123.56	96.24	+51.35

Source : Data Bank, NIUA, New Delhi.

Table 5.4

Trend in Per Capita Revenue

City/Year	At Current Prices		At 1970 Prices	
	Per Capita	Index of Growth	Per Capita	Index of Growth
1. <u>Calicut</u>				
1974-75	36.44	100.00	23.97	100.00
1979-80	51.81	142.20	26.98	112.60
1986-87	44.53	122.20	11.54	48.10
2. <u>Cochin</u>				
1974-75	9.10	100.00	5.99	100.00
1979-80	63.65	699.50	33.15	553.40
1986-87	77.76	854.50	20.15	336.40
3. <u>Trivandrum</u>				
1974-75	70.35	100.00	46.29	100.00
1979-80	70.06	99.60	36.49	78.80
1986-87	69.65	99.00	18.05	39.00

Source : Data Bank, NIUA, New Delhi.

Table 5.5
Revenue Structure

City/Year	Tax Revenue	Non-Tax Revenue	Other Taxes	Shared Taxes	Grants	Total
1. Calicut						
1974-75	5124000 (40.4)	5173000 (40.7)	51000 (0.40)	814000 (6.4)	1539000 (12.1)	12701000 (100.0)
1979-80	6816000 (34.5)	9774000 (49.5)	94000 (0.5)	2403000 (12.2)	668000 (3.3)	19755000 (100.0)
1986-87	10300000 (53.1)	7620000 (39.3)	Nil	Nil	14900000 (7.6)	19410000 (100.0)
2. Cochin						
1974-75	1851000 (44.5)	1798000 (43.2)	Nil	511000 (12.3)	Nil	4160000 (100.0)
1979-80	26573000 (83.9)	966000 (3.1)	Nil	3598000 (11.4)	513000 (1.6)	31650000 (100.0)
1986-87	26947259 (61.5)	3069362 (7.0)	Nil	8964508 (20.4)	4850863 (11.1)	43831992 (100.0)
3. Trivandrum						
1974-75	17146000 (57.0)	12511000 (41.6)	Nil	Nil	410000 (1.4)	30067000 (100.0)
1979-80	26484000 (80.92)	4701000 (14.35)	483000 (1.47)	Nil	1062000 (3.25)	32730000 (100.0)
1986-87	35591464 (95.8)	1543129 (4.2)	Nil	15050 (Neg.)	Nil	37149643 (100.0)

Source : Data Bank, NIUA, New Delhi.

Table 5.6

Revenue Expenditure Under Different Heads

City/Year	Gen.adminis- tration and Collection of Revenue	Water Supply & Public Health	Public Safety	Public Works	Education	Recreational Activities	Others	Total
1. Calicut								
1974-75	1336000 (13.5)	1955000 (19.7)	863000 (8.7)	1159000 (11.7)	Nil	Nil	4598000 (46.4)	9911000 (100.0)
1979-80	2581000 (17.8)	2828000 (19.6)	1530000 (10.6)	3117000 (21.6)	Nil	Nil	4400000 (30.4)	14456000 (100.0)
1986-87	9000000 (25.1)	14500000 (40.3)	3192000 (8.9)	7800000 (21.7)	Nil	1444000 (4.0)	Nil	35936000 (100.0)
2. Cochin								
1974-75	1496000 (17.2)	4411000 (50.6)	662000 (7.6)	1986000 (22.8)	161000 (1.8)	Nil	Nil	8716000 (100.0)
1979-80	4021000 (19.4)	6756000 (32.5)	1582000 (7.6)	3592000 (17.3)	262000 (1.3)	Nil	4544000 (21.9)	20757000 (100.0)
1986-87	8930600 (10.4)	416452000 (48.4)	8116000 (9.4)	14403000 (16.7)	2720000 (3.2)	5680000 (6.6)	4527523 (5.3)	86022323 (100.0)
3. Trivandrum								
1974-75	2051000 (14.0)	2111000 (14.5)	472000 (3.2)	934000 (6.4)	223000 (1.5)	Nil	8830000 (60.4)	14621000 (100.0)
1979-80	3761000 (18.1)	500400 (24.0)	3418000 (16.4)	3384000 (16.3)	248000 (1.2)	Nil	4983000 (24.0)	20798000 (100.0)
1986-87	3871425 (20.4)	428238 (2.3)	9500000 (50.1)	3624982 (19.1)	1036663 (5.5)	491724 (2.6)	Nil	18953032 (100.0)

Source : Data Bank, NIUA, New Delhi.

Table 5.7

Revenue Expenditure and Revenue Receipts of the
Municipal Corporations of Calicut, Cochin and Trivandrum

(Rs. in lakhs)

City/Year	Expenditure	Revenue	Closing Balance
1. <u>Calicut</u>			
1974-75	99.11	127.01	+27.90
1979-80	144.56	197.55	+52.99
1986-87	359.36	194.10	-165.26
2. <u>Cochin</u>			
1974-75	87.16	41.60	-45.56
1979-80	207.57	316.50	+108.93
1986-87	860.22	438.32	-421.90
3. <u>Trivandrum</u>			
1974-75	146.21	300.67	+154.46
1979-80	207.98	327.30	+119.32
1986-87	189.53	371.50	+181.97

Source : Data Bank, NIUA, New Delhi.

Table 5.8

Projected Revenue Expenditure and Revenue Receipts of
Municipal Corporations of Calicut, Cochin and Trivandrum
for the Year 2001.

(Rs. in lakhs)

City/Year	Expenditure	Revenue	Closing Balance
1. Calicut	798.02	329.81	-468.21
2. Cochin	15047.99	8320.77	-6727.22
3. Trivandrum	177.90	483.93	+306.03

Source : Data Bank, NIUA, New Delhi.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Slum Population

6.1 Kerala has a modest level of slum population (8 to 10 per cent of urban population) as compared to other states of India. This is due to a relatively lower level of urbanisation (18.74 per cent according to 1981 census) and a slow rate of growth of urban population (3.76 per cent per annum during 1971-81) as compared to that of the country's as a whole (4.62 per cent per annum). The decennial rate of growth of population especially in the cities of Calicut, Cochin and Trivandrum has drastically declined. Other factors explaining the modest level of slum population in Kerala include (i) a very high density of the state which does not leave enough open space and vacant lands to be occupied by the slum dwellers, (ii) homestead pattern of human settlements and (iii) a well articulated rural-urban continuum. A comprehensive survey of slums in 1985 by the Town Planning Department (TPD) of the state revealed that only about 5 per cent of Kerala's urban population were living in slums.

6.2 The proportion of population living in slums in the three cities selected for the World Bank Project viz. Calicut, Cochin, and Trivandrum is also quite low. In Cochin, according to the 1985 TPD survey, 5.8 per cent of city's population was residing in slums. In Trivandrum the percentage was only about 6. Only Calicut had 19.61 per cent of its population living in slums. Information collected from the three cities reveal that

Calicut has 93730 people living in slums in 1990. The figures for Cochin and Trivandrum are 76000 and 41478 respectively.

6.3 Although the level of slum population in Kerala and the three cities of Calicut, Cochin and Trivandrum is low, the pace of slum formation is quite rapid. The number of slums in the three cities taken together has increased from 200 in 1985 to 269 in 1990 indicating 34.5 per cent increase in five years which is fairly high particularly for a situation like Kerala. Slum population in the three cities has increased even faster as it increased from about 1.53 lakhs in 1985 to about 2.11 lakhs in 1990 representing a growth of more than 38 per cent. Of all the three cities, the highest growth rate of slum population is found to be in Cochin where the number of slums has increased by more than 58 per cent and the slum population at a runaway rate of growth of 135 per cent between 1985 and 1990. Calicut with 86 slums and about 94000 slum population is next only to Cochin. However, the rate of growth in both the number of slums and slum population has been higher in Trivandrum (30.56% and 15.67% respectively) than in Calicut (14.67% and 11.14% respectively).

6.4 A substantial proportion of total slum areas in the three cities is small in size and in terms of area occupied, size of the household and population. It has thus important implications for policy intervention.

Monitoring of Slum Formation

6.5 Slum formation is monitored by the regional offices of the TPD located in the three cities. This is done in cooperation

with Municipal Corporations (MC) of the three cities. A cluster is identified as slum on the basis of a system of assigning of weights to a host of indicators of backwardness and deprivation. The indicators relate to services as also density, social groups and structural conditions of the dwelling units. The services include latrine, drainage system, roads, water supply and street lighting. An area is identified as slum if it gets a minimum weightage of 40.

6.6 An attempt has been thus made to have a formal procedure and system of identification of slums rather than to do it on an ad-hoc manner. However, the system of assigning of weightage to the various factors could be reviewed to further rationalise the system. Presently, street lighting and water supply are treated at par by giving a weightage of 5 each.

6.7 Inadequacy of latrines and drainage is given a weightage of 10 each. Thus drainage system has been given much more critical importance as compared to water which is basic for human survival. Likewise concentration of SC and ST is given a weightage of 10. It needs to be mentioned that deprivation and inaccessibility of basic services is equally critical for all the groups irrespective of caste and creed. A modicum of basic services is vital for healthy survival for all the groups. Hence the scheme of assigning the weights needs to be reviewed for rationalisation of the system.

Situational Analysis of Slums

6.8 A slum is characterised by certain basic attributes which include its illegality (as, by and large, it is an encroachment on land), lack of basic services, substandard shelter, prevalence of predominantly weaker socio-economic groups etc. The analysis of locations of slums reveals that a majority of slums are located on private land. Of the total number of 190 slums (identified by the TPD Survey of 1985 and for which the data are available) as much as 64.7 per cent are located on private land. Only about 29 per cent are located on public land and the remaining about 6 per cent of slums are situated partially on public and partially on private lands. All the Special Slums (with critical locations) are, by and large, located on public lands. Of all the three cities, Calicut has the maximum number of slums (56 out of 63) located on private lands.

6.9 Type of Structures : It is generally hypothesised that structural conditions in a slum are dependent on the ownership right. Larger the extent of ownership provides an incentive for improving the dwelling units. The analysis of structural conditions indicates that 42 per cent of total dwelling units located on private land are pucca structures and another 20.7 per cent semi-pucca structures. Thus about 62 per cent of dwelling units on private land are either pucca or semi-pucca. However, amongst the three cities, the hypothesis holds good only in Cochin as about 70 per cent of the total dwelling units on

private land are pucca. This in the case of Calicut and Trivandrum is only 41 per cent and 8.6 per cent respectively.

6.10 Social Groups : There does not exist any evidence of concentration of a particular social group. Out of a total of 24072 households living in slums in the three cities (as per 1985 TPD survey) about 92 per cent are other than ST and SC. The same pattern is discernible in the other cities except Trivandrum where a little more than one-third of the households living in Non-Special Slums belong to SC.

6.11 Services and Facilities : The analysis is based on the availability of approach road, internal roads and streets, drinking water, sanitation facilities, drainage and street lighting. The approach road does not appear to be a problem for a majority of slums (156). Only 29 slums do not have approach roads. Of the slums having approach road, only 16 reported instances of water logging on approach roads. Of this, 6 are in Calicut, 9 in Cochin and one in Trivandrum. Internal roads are available only in about one-third of the total slums. Situation appears to be most acute in Calicut where about 80 per cent of the total slums do not have internal roads. This comes to about 63 per cent in Trivandrum and about 49 per cent Cochin. All the Special Slums in Calicut and Cochin and 14 (out of 17) in Trivandrum do not have internal roads at all. Of the total slums in the three cities, as many as 126 are found to have water logging during the monsoon. About three-fourth of slums in Calicut, two-third in Cochin and nearly half the total slums in Trivandrum get water logging during the monsoon.

6.12 The analysis of accessibility to water suggests that more than one-fifth of total slums do not have accessibility to water from any source within the slum. Individual water connections are found only in about 25 per cent of slums. The situation is grim especially in Cochin where 58 Non-Special Slums are not provided with public standposts and not a single slum is found to have private water connection. About one-fourth of total slums in the three cities have to fetch water from outside their slums. As regards sanitation facilities, 156 slums (out of 189 slums for which data are available) are not provided with public sanitation facilities on community basis. However, 138 slums have private facilities of sanitation. 8 slums in Trivandrum, 7 in Cochin and 3 in Calicut do not have private or public sanitation facilities. Bathrooms on community basis is not provided in any slum in the three cities. Drainage system is virtually non-existent in the slums of the three cities. In Calicut, 71 slums (out of 73) do not have drainage system. The extent of such slums in Cochin and Trivandrum is 96 per cent and 82 per cent respectively.

6.13 Street lighting is available only in about 54 per cent of the total slums in the three cities. The situation is grim especially in the Special Slums as only 7 of them (out of 41) in the three cities are found to have street lighting. Amongst the Non-Special Slums, about two-third of them have this facility. Non-Special Slums in the cities of Calicut and Trivandrum are better placed as 48 of them in Calicut (out of 63) and 13 in Trivandrum (out of 18) are found to have street lighting.

Typology of Slum

6.14 Slums are said to be extremely complicated social sub-systems. Grouping them into distinct types therefore would be equally a complex and difficult task. Nevertheless, at the policy plane, a typology of slum is said to be necessary for evolving a perspective of policy for planned public intervention. Though there could be many ways of evolving the typology of slum, the basic consideration in this study has been criticality of location, availability of services and the type of structures in the various slums. This scheme of typology has been thought to be the best that could be made out of the type of data emanating from the 1985 TPD survey. Accordingly, all the Special Slums have been branded as a distinct type which by the nature of their very critical locations, need to be relocated on planned locations. The Non Special Slums have been grouped according to availability of five basic services viz. potable water, street lighting, drainage (pucca drains), surfaced roads and streets and sanitation (lavatories). Slums are then graded into six categories -- categories A to F. A denotes such slums which have all the five services. Type B denotes such slums which have all the five services. Type B denotes existence of 4 services. Thus the type goes on increasing till the number of services is zero. This is the Type F. Thus the six categories of slums when cross classified according to the three types of structures, give a total number of 18 types in each city. The type of structures are pucca, semi-pucca and kuchcha.

Review of Improvement

6.15 The centrally sponsored programme of Environmental Improvement of Urban Slums (EIUS) launched in 1972 forms the framework for improvement of slums. After it was transferred to the state sector in 1974, the Government of Kerala issued detailed Guidelines for the improvement of slums. The Guidelines incorporate the core services as suggested earlier by the EIUS/but it also added a few more facilities to it. These include construction of roads, filling and landscaping, horticulture, non-remunerative schemes like parks, playgrounds, welfare and community centres, fire station, hospitals and dispensaries. A wide range of activities apart, there exist a series of schemes impinging on improvement of conditions in slums. These include (i) Structural Environmental Improvement Scheme launched in February 1981 and revised in June 1981 and (ii) the Chief Minister's Fund for Slum Clearance. Both these schemes have not made any headway due to paucity of funds. The policy stance for slum improvement therefore appears to be too normative and utopian to have relevance to the realities of the situation.

6.16 The selection of slum for improvement is proposed by the Municipal Corporation. The selection process is thus basically a political process. The scheme is prepared by the TPD providing for the type of services to be made available and the cost involved. The costs are approved by the Chief Town Planner (CTP) and the funds are released at the instance of the Director of Municipal Administration (DMA). It is thus gratifying to note

that the selection process is not apolitical; it needs to be sustained and strengthened. However, the monitoring of improvement is limited to mere receiving of monthly progress report by the DMA. Nothing is, however, done to evaluate implementation and impact of programme implementation. Monitoring and evaluation thus needs to be strengthened by constituting a Review Committee in the DMA's office having representation of the CTP, Mayors, and Commissioners of the Civic authorities concerned and officials from other service departments like health, education and so on. The Review Committee should meet once in three months and try to suggest corrective action in case of major lapses in implementation as also to coordinate implmentation by myriad agencies.

6.17 Information system is sine qua non for plan formulation as well as monitoring and evaluation of implementation. At the moment there does not exist such a system. Even the data base to inadequate and is suffering from many an infirmity. Even the basic information like ownership of land occupied by the slum dwellers, the number of pattas awarded to the households in various slums, total number of slums existing in the area, household and population, the number of slums so far improved with details of extent of development, the type of improvement and services provided, allocation of funds for improvement and actual funds utilised are not readily available. There is therefore a need for developing an information system by constituting a cell within each civic authority which should deal exclusively with slums. It could have a band of motivated social

workers assigned with the responsibility of working with the slum dwellers, collection of base line data on socio-economic conditions and also acting as a vital link between the slum dwellers, public agencies and voluntary organisations.

6.18 Implementation of slum improvement programme has been reviewed on the basis of 25 per cent sample survey of improved slums in the three cities. The sample survey has thrown useful light on the deficiencies in programme implementation. The analysis of information collected revealed a two-fold deficiency in improvement of slums. First, the level of services provided is inadequate as there has been a great deal of deviation from the norms suggested by the EIUS and the Guidelines of the Kerala Government. Some of the services and facilities are conspicuous by their complete absence. Provision of bathrooms on community basis, paved streets, pucca drains are some such services. Whereas bathrooms have not yet been provided in any of the slums, other services and facilities too are not existing in a large number of slums. Second, whatever services have been provided, they are not properly maintained. This has led to further decline of services. Choking of lavatories, drains, non-replacement of fused bulbs in the streets are some of the examples of deterioration of services provided due to lack of maintenance. These two factors taken together have led to large scale dissatisfaction amongst the slum dwellers.

6.19 Slum improvement is a multy-faceted programme having several components impinging on the socio-economic development of

slum dwellers. Success of such a complex programme essentially requires convergence of efforts of public agencies, voluntary organisations and the slum dwellers themselves. Such convergence has not yet initiated the planning and implementation of slum improvement. Out of the 22 sample slums, presence of NGOs was felt only in one slum. Slum development is a programme basically participatory in nature. The slum dwellers have not yet been organised to participate in the designing and implementation of programmes. The involvement of social workers as mentioned before is an imperative to induce people's participation in slum improvement.

6.20 Slum Improvement programme calls for convergence of resources as well. The schematic budgets of various public departments, contribution by voluntary organisations and the beneficiaries need to be pooled together for providing the needed services and upgradation of dwelling units. Such a convergence has not yet marked the improvement programme in any of the three cities. Not even the beneficiaries have been involved in contributing towards the maintenance of services. The survey of improved slums has revealed that the slum dwellers are motivated enough to contribute their mite in the form of sweat capital (physical labour). This spirit needs to be mobilised by proper policy intervention and motivation.

6.21 The way the improvement of slum has been implemented leaves much scope for refurbishing of this programme. First, the policy framework itself appears to be too ambitious and normative to have any relevance with the constraints on funds. It has not

been possible so far to provide even some of the core services like water, sanitation and drainage according to the minimum norms. Talking of landscaping, horticulture, development of parks, playgrounds, hospitals and so on sounds too much utopian and dogmatic an approach. It would therefore be prudent to reformulate the priorities and redesignate a few critical services out of the EIUS list. May be, to begin with, water and sanitation could be the most pressing needs along with some kind of economic activity for generation of income and employment for the slum dwellers. These could be looked after immediately. Other services and amenities could follow later on. This is, however, only illustrative rather than suggestive. What is imperative in the present situation is a reformulation of priorities so that the limited resources could be used most judiciously.

Financing of Improvement and Maintenance

6.22 Even though the funds for slum improvement allocated by the Government of Kerala is at a higher per capita than that of the EIWS, the allocation has been done on an ad-hoc manner till very recently. Since 1989, the funds are distributed to each district on the basis of the "number of slums in existence in each district". Though this has rationalised the system of allocation to a great extent, the quantum of financial allocation needs to be related to the level of slum population in each district rather than to the number of slums. The rationalisation of fund has brought the constraints on resources into even more sharp focus. As the funds are allocated for each district, its

availability for the districts individually has proved to all be the more inadequate. There is an explicit recognition of it in the official circles as also from the actual allocations made to the Municipal Corporations in the three cities.

6.23 Analysis of flow of funds for slum improvement in the three cities in the last six years suggests that the funds allocated do not have any pattern and consistency. This is revealed by the spurts in which the fund have been released on year to year basis. (Table 1, Ch. V). Moreover, the funds made available to the three cities do not have any relationship with the magnitude of slum population. Even though since 1989, the funds are envisaged to be distributed on the basis of number of slums, there does not seem to be any relationship between the slum population and the fund allocated even after 1989. The reasons for this are basically two. First, the constraints on fund does not permit a more liberal allocation and second, the inabilities of the municipal authorities to sustain project formulation and implementation on a regular basis.

6.24 Even though the Government of Kerala's per capita norm of Rs. 400 for slum improvement is higher than the norm of the EIUS (Rs. 300), and on the face of it, it presents a better financial situation, its adjustments at constant price does not make it appear that rosy and bright. Since 1972 (when the EIUS was launched) the increasing rate of inflation has neutralised the effect of enhancement in the per capita norm. The amount of Rs. 477 at the current prices. In other words, at 1970 price,

the per capita norm of Rs. 400 is equal to Rs. 104 only. Thus the authorities have been spending even less than Rs. 150 which was the per capita norm of the EIUS in 1972 when the programmes was launched by the central government. Apparently, the per capita norm needs to be reviewed in view of price rise or else the investments will not have any dent on the magnitude of slum population.

6.25 Maintenance of services is equally an important aspect of improvement. The study has shown a poor and even lack of maintenance of the services providedc under the improvement programme. The analysis has revealed that a weak local fiscal health has been instremental in non-maintenance of services provided. An analysis of trends in revenue expenditure and revenue receipts of the municipal corporations inthe three cities has revealed that in real terms the per capita expenditure and income have been stagnating between 1974-75 and 1986-87 for which the data are available. The resource situation of the Municipal Corporations of Calicut and Trivandrum appears to be quite serious as their per capita receipts in real terms have declined to a very large extent. Even in case of Cochin, it has increased but only marginally. The projections of revenue expenditure and income reveals that if the present trends continue, the Corporations of Calicut and Cochin are going to have still more serious financial crisis by the end of this century. This has vital implications for fiscal policy at the local level.

APPENDIX I

**LIST OF SLUMS
IN THE THREE CITIES**

A. Calicut

Slums Identified
Upto 1985

S.No.	Location No.	Name of Slum	Area (Hect.)	No. of House hold	Popu-lation
1.	1	Vellayil	10.00	1173	8598
2.	2	Kalluthafkadavu	1.20	68	320
3.	3	Veliyanchery	2.40	138	709
4.	4	Vattkundu	2.90	226	1596
5.	5	Nadinagar	9.35	385	2553
6.	6	Kottaparamba	0.60	39	276
7.	7	Mukadar	5.25	242	1724
8.	8	Manneripadam	1.75	78	434
9.	9	Acharathoppu	3.00	87	634
10.	10	Puthiyathopputhoduka	7.00	136	493
11.	11	Millathcolony	0.36	39	283
12.	12	Pandarathilvalappu	0.90	47	327
13.	13	Chamundivalappu	0.30	23	156
14.	14	Thalayattuparamba	1.40	110	971
15.	15	Pallykandy (East)	0.65	35	254
16.	16	Perukuzhipadam	1.34	94	528
17.	17	Kannamparamba	2.90	279	2155
18.	18	Thirumunbu Nilam	6.00	168	1011
19.	19	Thadani lam	1.75	55	404
20.	20	Puthiyappa	0.25	13	67
21.	21	Paliyarakkal	1.40	52	302
22.	22	Palliyarathazhath	1.50	41	212
23.	23	Pallikandi West	2.00	68	429
24.	24	Perumalkandi	1.40	47	230
25.	25	Thaikootam	2.00	80	469
26.	26	Puthiyakadavu Beach	1.60	150	1063
27.	27	Thoppayil	2.11	187	1304
28.	28	West Hill	2.90	198	1011
29.	29	Thalappanarthoduka	0.40	58	438
30.	30	Thottulipadam	12.00	362	2759
31.	31	Poovalappu	2.50	121	893
32.	32	Vellerithodu	10.90	223	1595
33.	33	Manaripadam	0.90	34	190
34.	34	Thiruthiparamba	0.50	24	192
35.	35	Kambram	7.00	168	1069
36.	36	Cherottuvayal	9.75	431	3406
37.	37	Chappayil	4.50	274	1877
38.	38	Puthiyakadappuram	5.00	104	943

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Population
39.	39	Nainnavalappu (Pallikandi)	10.00	524	3909
40.	40	Padannayil (Medaparamba)	5.25	240	1784
41.	41	Vellayilsouth	10.00	484	4473
42.	42	Chirakuzhipadanna	2.20	100	576
43.	43	Satharam Compound	0.16	36	183
44.	44	Kalluttunada	2.50	147	844
45.	45	Veneervayal	1.20	37	250
46.	46	Karulthazham	1.75	42	227
47.	47	Chalikara	4.00	117	720
48.	48	Thiruthivalappu	12.50	224	1651
49.	49	Maruthamuliparamba	23.50	357	2593
50.	50	Koyavalappu	30.50	197	1472
51.	51	Kappakkal	1.50	407	2810
52.	52	Puthiyarapadanna	1.00	75	481
53.	53	Illthayi	1.80	48	235
54.	54	Kalloorthazham	2.30	44	278
55.	55	Thaivalappu	11.75	122	723
56.	56	Thiruthivayal	10.00	253	1535
57.	57	Valakandathazham	7.00	165	1089
58.	58	Vayal Meembadivyal Kunnathazham (Kavilthazham)	N.A.	N.A.	1451
59.	59	Pandaramnilam Vayal	1.40	32	198
60.	60	Chevarambalam	1.50	12	66
61.	61	Kudilthodu (Chittadithazham)	4.20	54	275
62.	62	Kalathilthazhamnilam	2.50	56	284
63.	63	Thirunilam Paramba	N.A.	N.A.	678
64.	64	Chandunninairpadanna	4.65	214	1479
65.	65	Valappilthody	1.00	25	188
66.	66	Kalathil Paramba	5.00	121	722
67.	67	Pattarcolony	2.00	43	257
68.	68	Thottilpeedika	0.75	18	84
69.	70	Chettair Housenilam	1.20	67	378
70.	71	Ayappankvilthazham	12.00	168	963
71.	72	Chakkumkadvu	24.00	681	5086
72.	73	Maloorkunu	1.50	36	221
73.	74	Kaneerthodi	0.75	23	115
74.	75	Kaizhar Madam	3.00	95	678
75.	76	Mundadithazhamvyal	1.50	24	120
76.	77	Kothi	N.A.	N.A.	3717

CALICUT

Slums Identified
Since 1986

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Popu- lation
77.	1'	Chitadithazham	N.A.	N.A.	N.A.
78.	2'	Karaparamb	6.40	31	168
79.	3'	Kattuvayal	0.70	69	320
80.	4'	Kothi South	5.25	534	3711
81.	5'	Payyanakkal	0.25	16	82
82.	6'	Vellayil & Eastern Side of Beach Road	N.A.	N.A.	N.A.
83.	7'	Puthiyapalam Thekke Padanna 1986	9.60	241	1698
84.	8'	Kommerry Ecess Land Colony Area	N.A.	N.A.	N.A.
85.	9'	Kavilthazham	13.75	333	451

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Popu- lation
B TRIVANDRUM					
Slums Upto 1985					
1.	1	R.C. Street Kunnukuzhy	1.30	257	1280
2.	2	Oorkulam	0.60	68	346
3.	3	Slum near Sewerage farm	1.50	155	821
4.	4	Slum near Titanium	3.50	148	750
5.	5	Krishnapillei Nagar	1.50	236	1192
6.	6	Karimadom Colony	2.80	493	2311
7.	7	Barton Hill	3.00	372	1778
8.	8	Chirakulam	0.50	118	499
9.	9	Poundkulam	0.90	158	646
10.	10	Puthencotta Burial Ground	0.40	46	239
11.	11	Tagore Gardens	0.35	25	108
12.	12	Anchamada H. Colony	7.20	289	1362
13.	13	Thirichatrapuram Colony	2.00	103	443
14.	14	Kunnuvila Colony	0.10	18	78
15.	16	Vadavathu Colony at Muttathara	2.00	267	1304
16.	17	Charuvilakathu Slum near M.G. College	0.08	7	40
17.	18	Valiyathura Fishermen Colony	3.00	380	1998
18.	19	L.S. Road Sanghumugham	4.00	243	1320
19.	20	New Block colony in Poonthura	1.20	310	1749
20.	21	Kollur Bund Colony	0.20	55	212
21.	22	Kannamathura	1.50	141	636
22.	23	Thekkumoodu Bund Colony	0.30	87	311
23.	24	U.F.I. Colony Muttathara	0.30	49	251
24.	25	Fishermen Settlement from Veli to Sangumugham	10.00	533	2609
25.	26	Slum near Kuriathy	0.08	13	64
26.	27	Plamoodu Thottu Varambu	0.40	71	781
27.	28	Paruthikuzhi Attuvarambu	0.50	85	408
28.	29	Uppidamoodu I	0.08	7	38
29.	30	Uppidamoodu II	0.07	9	36
30.	31	Fisherment Settlement Poonthura	61.00	2102	11831
31.	32	Chullayi Padinjarethekkum- bhagam	0.03	5	21
32.	33	Korakulam near M.G.College	0.07	7	41
33.	34	Murinjalalam bund Colony	0.06	8	21

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Popu- lation
Slums Identified Since 1986					
34.	1'	Perunelly	N.A.	N.A.	N.A.
35.	2'	Kamaleswaram	N.A.	N.A.	N.A.
36.	3'	Slum near Pettah Rly. Stn.	N.A.	N.A.	N.A.
37.	4'	Pourasamathy	9.00	384	2304
38.	5'	Vayyamoola	N.A.	N.A.	506
39.	6'	Vettucaud St. Mary's H.S.	2.54	127	762
40.	7'	Paruthykuzhy	N.A.	83	408
41.	8'	Kannanthura	N.A.	N.A.	N.A.
42.	9'	Madhavapuram	10.00	1056	1386
43.	10'	Slum near R.C. Church toppu	2.3	96	528
44.	11'	Puthen road mukku near Vallakadavu mosque	N.A.	N.A.	N.A.
45.	12'	Cheelanthi mukku	N.A.	N.A.	N.A.
46.	13'	Slum in between Sanghumughom and Vettucaud	N.A.	N.A.	N.A.

C. COCHIN

Slums Identified
Upto 1985

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Population
1.	1	Kochuparambu and Valiaparambu	0.30	327	2346
2.	2	Rehmanya Paramba	0.20	134	870
3.	3	Chakkamadam	0.75	120	729
4.	4	Eraveli	0.75	285	1983
5.	5	Srampikkal Paramba	0.20	23	140
6.	6	Jwethan Parambu	0.20	115	756
7.	7	North of Varma Company	0.80	65	369
8.	8	Panayapilly Pandikakudy	1.20	114	761
9.	9	Soudhi	0.12	15	110
11.	10	M.K.S. Parambu	0.40	169	1250
12.	11	Adhikari Valappu	0.42	138	935
13.	12	Chelaparamba	1.00	76	564
14.	13	Kalathil Paramba	0.12	14	76
15.	14	Thundi Paramba	2.00	52	285
16.	15	Malikal Paramba	0.80	142	1076
17.	16	Cherulaikadavu	2.00	184	1267
18.	17	Military Paramba	0.60	40	223
19.	18	Kovilampally Padam	0.42	60	319
20.	19	East of St. Francis Cathedral	0.60	50	308
21.	20	Thanthonnithuruth	0.20	53	311
22.	21	Pannoth Slum	0.40	29	135
23.	22	Chilavannur H.C.	1.60	22	111
24.	23	Scavangers Colony S.R.M. Road	0.40	47	224
25.	24	Perudadappu	1.00	52	266
26.	25	Manthara Pulaya Colony	0.40	16	99
27.	26	Arippakka Paramba	0.10	18	118
28.	27	Pandaraparambu	0.02	17	98
29.	28	Manapputti Parambu	2.40	118	650
30.	29	Puthiyavittil Parambu	0.12	17	144
31.	30	Panakka Parambu	0.24	12	66
32.	31	Fisherment Colony	1.40	49	328
33.	32	S.D.P.Y. Colony	0.40	28	138
34.	33	S.V. Puram	2.00	61	455
35.	34	Thammanam Labour Colony	1.20	53	321
36.	35	Vettuva Colony Thammaham	0.80	29	148

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Popu- lation
37.	36	Kissan Colony	1.20	200	940
38.	37	Kudumbi Colony	1.60	77	491
39.	38	Perandoor Bridge Slum	4.80	46	244
40.	39	Kayapilly Colony	3.60	71	460
41.	40	Slum Near Anglo-Indian School	0.80	43	251
42.	41	Chandanapally Colony	0.06	8	64
43.	42	Kochangady	0.20	20	126
44.	43	Kanpiri Colony	2.00	62	352
45.	44	Mini Colony	1.04	85	489
46.	45	Kudumbi Colony (Mattanchery)	0.30	22	111
47.	46	Colony at East St. Agnes Church	0.04	5	21
48.	47	Fishermen Colony	2.00	73	410
49.	48	Vadayar Parambu	0.10	8	45
50.	49	Chirakkal Colony	0.50	63	351
51.	50	Pulimoothil Parambu	1.60	122	617
52.	51	St. John's Pattam Colony	0.40	28	181
53.	52	Panambally Nagar (West)	0.20	16	80
54.	53	Panambally Nagar (East)	0.06	5	25
55.	54	Velluparambu Colony	0.24	26	130
56.	55	Kothara Rehabilitation Colony	0.80	55	292
57.	56	Murickathara Parambu	0.20	48	290
58.	57	Fishermen Colony Theverkad	6.00	200	1268
59.	58	Moopa Colony	2.60	20	151
60.	59	Chulezath Parambu	2.00	137	84
61.	60	Kadathanattu Colony	0.20	27	153
62.	61	Panackasseri Parambu	0.20	46	268
63.	62	Kanackathara Parambu	0.22	53	348
64.	63	Puthiyakavu Slum	0.06	9	51
65.	64	Kannankulamgara	0.06	128	51
66.	65	Karingachira	0.12	6	27
67.	66	Valiathara H.C.	1.20	43	248
68.	67	Kunnara H.C.	1.20	49	288
69.	68	One Lakh Colony near market	0.05	24	107
70.	69	One Lakh Colony	0.80	36	223
71.	70	Chelut Railway Colony	0.21	115	552
72.	71	South Padiyath Colony	0.25	41	181
73.	72	Thevara Canal Colony	0.75	59	357
74.	73	Thuruthy Colony	1.20	287	1943
75.	74	Ettirkettu	0.40	43	234
76.	75	Peruvaram Railway Puramboke	0.08	32	135

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Popu- lation
Special Slums					
77.	1"	Padathukulam	0.12	27	132
78.	2"	Vennalappara	0.12	22	109
79.	3"	E.S.I. Colony	0.08	15	69
80.	4"	E.R.G. Road	0.12	15	81
81.	5"	Sakuparambu Power House Road	0.02	7	30
82.	6"	Pativattam	0.20	43	205
83.	7"	Koithara Thodu	0.30	73	299
84.	8"	Elamkara Temple	0.02	10	37
85.	9"	Vannara Temple	0.03	9	46
86.	10"	Ambothuchira	0.06	22	111
87.	11"	Chilavannur	0.03	13	60
88.	12"	Cheruthod Colony	0.04	9	43
89.	13"	Velloparambu	0.12	10	53
90.	14"	Karithala Colony	0.14	90	344

Slums Identified
Since 1986

91.	1'	St. Agnes Church	N.A.	N.A.	21
92.	2'	Valummel Colony	N.A.	N.A.	427
93.	3'	Pallichal Colony	8.00	N.A.	1000
94.	4'	D.L.B. Colony,	20.00	76	380
95.		Palluruthy DN.No. 18			
96.	5'	Pandarachira Colony	0.6	N.A.	336
97.	6'	S.P. Puram North	0.5	N.A.	192
98.	7'	S.P. Puram South	0.46	N.A.	336
99.	8'	Kumbalangi Vazhi	N.A.	N.A.	240
100.	9'	Vathuruthy Slum	N.A.	N.A.	N.A.
101.	10'	Shipyards Kudikidappu Colony D.N.No. 27	1.40	88	500
102.	11'	Kaniampuzha Colony DN.No. 30	3.85	238	1487
103.	12'	Kadupathu Harizan Colony Dn. No. 30	N.A.	N.A.	N.A.
104.	13'	Cheruvithuppu Colony DN. No. 45	N.A.	N.A.	210
105.	14'	Pullethundil Harizan Colony DN.No. 45	N.A.	N.A.	N.A.
106.	15'	Fisherman Colony Elamkkara DN.No. 33	N.A.	N.A.	410
107.	16'	Perandoor Bridge Colony	N.A.	N.A.	N.A.
108.	17'	Vennala Harizan Colony DN.No. 33	N.A.	N.A.	N.A.

S.No.	Location	Name of slum	Area (Hect.)	No. of House- hold	Popu- lation
109.	18'	Thareparambu Colony	N.A.	N.A.	N.A.
110.	19'	Anamthuruthu Labour Colony	N.A.	N.A.	170
111.	20'	Anakettu Parambu	N.A.	N.A.	160
112.	21'	Pallichal Colony Slum	N.A.	N.A.	N.A.
113.	22'	K.M.P. Oil Mill	0.5	60	750
114.	23'	Northern Side of Pipe Line Road	2.8	68	300
115.	24'	Khadebhagom	3.5	90	450
116.	25'	Southern Side of Pipe Line Road	1.5	300	750
117.	26'	Poothully Colony	0.6	24	N.A.
118.	27'	Jaggageevan Ram Colony DN.No. 36	0.4	22	117
119.	28'	Koothappally parambu	0.5	88	443
120.	29'	Elamkulam Harijan Colony	0.18	13	182
121.	30'	Company Parambu	7.9	90	600
122.	31'	Kacheripady Kammath Maidan Road	5	925	925
123.	32'	Labour Colony Palikavu Temple	1.21	87	565
124.	33'	Fisherman Colony near Vaduthala Housing Colony	2.02	77	N.A.
125.	34'	Mangalathu Parambu Slum DN.No. 3	0.89	N.A.	610
126.	35'	Cheliparambu Slum DN. No. 4	1.12	25	450
127.	36'	Gelesethu Parambu DN. No. 5	3.44	501	2500
128.	37'	Hassan Colony Slum	0.4	50	250
129.	38'	Moolamkuzhy Slum DN.No. 15	2.48	180	900
130.	39'	Southern Side of Colony DN. No. 8	1.62	125	403
131.	40'	Chirakapadom Slum DN. No. 16	2.01	66	276
132.	41'	Northern Side of Sujatha Theatre DN.No. 12	1.46	680	N.A.
133.	42'	Anakettu Parambu Slum DN. No. 9	2.78	180	917
134.	43'	Kocherry Parambu Colony DN. No. 8	2.12	N.A.	539
135.	44'	Pulaya Colony DN.No. 9	N.A.	N.A.	N.A.
136.	45'	Soudi Slum DN.No. 17	N.A.	N.A.	N.A.
137.	46'	Kanneth Colony	N.A.	N.A.	602
138.	47'	Fisherman Colony Shanmugapuram	N.A.	N.A.	1500

LIST OF IMPROVED SLUMS

Calicut

Improved Slums

1. Veliyanchery Slum
2. Vattakundu Slum
3. Vellayil Slum
4. Nadinagar Slum
5. Mukadar Slum
6. Melaripadam Slum
7. Millath Colony
8. Chamundi Valappu
9. Pandarathil Valappu
10. Kannamparamba
11. Thirumumbu Nilam
12. Puthiyathoppu thoduka
13. Thadanilam Slum
14. Thalayattu Paramba Slum
15. Kottaparamba Slum
16. Acharathoppu Slum

Slums Being Improved

1. Puthiyara Padanna Slum
2. Thaivalappu Slum
3. Manari padam
4. Kalathil Thazham Slum
5. Thottil Peedika Slum
6. Thiruthivalappu Slum
7. Perumkuzhi padam Slum

Cochin

Improved Slums

1. Pandarachira Colony
2. S.P. Puram North
3. Moopa Colony
4. Chelliparambu
5. Soudi Colony
6. Panampally Nagar Colony
7. Fisherman Colony
8. Ponnoth Colony
9. Panakkaparambu Colony
10. Panakkeserry Colony
11. Adhikarivalappu Colony
12. Thundiparambu Colony
13. Perumpadappu Colony
14. Military Parambu
15. Pandarachira Slums
16. S.P. Puram South
17. Vennala Harijan Colony
18. Kadepathu Colony
19. Pullethundil Harijan Colony
20. Vettuva Colony
21. Annamthurathy
22. Near St. Franci's Church Broadway
23. Manapatti Colony
24. Kayappilly Colony
25. Labour Colony
26. Ettukattu Colony
27. Kissan Colony
28. Panayappilly Pandikudy Slums
29. Kadavanthra Pulaya Colony
30. Koorikuzhiparambu
31. Nellukadavu
32. Kavilampally Padam
33. Nettaparambu and Kaniyamthuruth
34. Mahajan Vadi
35. Cheralavikadavu Area
36. Kalvathy and Thuruthy Area
37. Hassan Colony
38. Kudumbi Colony
39. Maliyakkal Parambu
40. Thuruthi Colony
41. Manthra Pulaya Colony
42. Thanthonni Thururthy
43. Thammanam Labour Colony
44. Chakkamadam
45. Koithara Rehabilitation Colony
46. Kochuparambu, Valliyaparambu Bunglow Parambu
47. Moolamkuzhy
48. Murikkumthara
49. Near Rehmaniya Market

50. M.K.S. Parambu
51. St. John Pattom Colony
52. Pallichal Harijan Colony
53. Panakka Parambu
54. Cheruvithuppu Colony

Slums Being Improved

1. Kavilampally Padam
2. Kanakkathara Parambu
3. Kuttanparambu
4. Marshalling Yard

Trivandrum

Improved Slums

1. Slum at Vayyamoola Colony
2. Slum near the northern side of Vettucaud Church
3. Slum near St. Mary's High School, Vettucaud
4. Fishermen Colony south of R.C. Church, Poonthura
5. Slum improvement in Pound Colony
6. Slum at Pourasamithy Colony near Titanium
7. Karimadom Slum Clearance Scheme
8. Barton Hill Colony Improvement Scheme
9. Chirkulam Slum Improvement Scheme
10. Krishna Pillai Nagar Slum Improvement Scheme
11. Anchamada Slum Improvement Scheme
12. Perunelli Colony Slum Improvement Scheme
13. Valiyathura south Colony Slum Improvement Scheme
14. Valiyathura north Colony Slum Improvement Scheme
15. Perumpadappu Colony Slum Improvement Scheme
16. Slum Improvement Scheme near R.C. Colony, Kunnukuzhy
17. Fishermen Colony north of R.C. Church, Poonthura.

Slums Being Improved

1. Kannanthura Slum near Wireless Station I & II
2. Slum at Puthen road mukku near Vallakadavu Mosque
3. Slum at Madhavapuram colony near Chackai
4. Trichakrapuram colony Slum Improvement Scheme
5. Slum Improvement Scheme of the colony near R.C. Church, Poonthura.