

**SLUM FREE CITY PLAN OF ACTION -
COIMBATORE CORPORATION
(UNDER RAJIV AWAS YOJANA)
2013 - 2022**



**Submitted to
Tamil Nadu Slum Clearance Board,
Chennai**



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ABREVIATIONS

BPL	Below Poverty Line
BSUP	Basic Service for Urban Poor
CBPMS	Community Based and Participatory Monitoring Systems
CDTI	Community Development Training Institute
CPL	Community Participation Law
EDPL	Earmarking Developed Land for the Poor
FAR	Floor Area Ratio
GAD	General Administrative Department
GIS	Geographic Information System
Gol	Government of India
GoTN	Government of Tamil Nadu
HUDD	Housing and Urban Development Department
IEBP	Internal Earmarking of Budgets for the Poor
ISHUP	Interest Subsidy Scheme for Housing for the Urban Poor
MIS	Management information System
MoHUPA	Ministry of Housing and Urban Poverty Alleviation
NIUA	National institute of Urban Affairs
PDS	Public Distribution System
PIU	Project Implementation Unit
PPP	Public Private Partnerships
RAY	Rajiv Awas Yojana
RoR	Record of Right
SFCPoA	Slum Free City Plan of Action
SJSRY	Swaran Janyanti Shahri Rozar Yojana
SRDP	State Slum Rehabilitation and Development Policy
SSA	Sarva Shiksha Abiyan
TAG	Technical Advisory Group
TDR	Tradable Development Right
ULB	Urban Local body

EXECUTIVE SUMMARY

Introduction

Rajiv AwasYojana (RAY) scheme was launched in June 2011 by the Government of India to bring all existing slums, notified or non-notified within the formal system and enable them to avail the basic amenities that is available for the rest of the city. A Slum Free City Plan of Action (SFCCoA) envisages the objectives of RAY. SFCCoA encompasses two major strategies (i) Curative Strategy, a plan to bring about the improvement of the existing slums through the participation of the existing slum dwellers and (ii) Preventive Strategy to prevent the formation of future slum. The concept of Slum Free City could be achievable only through inclusive approach in development or relocation with the slum dwellers. Hence detailed socio economic survey, has been carried out in Coimbatore city by NITTTR, Chennai, in accordance with the Tamil Nadu Slum Clearance Board. This executive summary reports the exact condition of slums in Coimbatore Corporation and suggestions to the upliftment of slum dwellers in terms of urban infrastructure development, way to overcome economic barrier and disaster risk.

Coimbatore Corporation

Coimbatore is a major industrial city in India and the second largest city in the state of Tamil Nadu. It is the administrative headquarters of Coimbatore District. It is known as 'Manchester of South India', situated on the banks of the Noyyal River and surrounded by the scenic Western Ghats. The city has a major industrial centre known for textile, engineering firms, automobile part manufacturers, and IT companies. In addition, it

has well developed infrastructure in the field of education, health care and tourism. In 2010 the Coimbatore Corporation area limit was extended from 105.6 sq km to 265.36 sq km, which is encompassing 100 wards. Three municipalities (Kurichi Municipality,

Year	Population	Increase	% of Variation
1971	356368	70063	24.5
1981	700923	344555	96.7
1991	806321	105398	15.0
2001	930882	124561	17.0
2011	1601438	670556	72.0

Kuniyamuthur Municipality, Gowndampalayam Municipality) and seven town panchayats (Sarvanampatti town panchayat, Kalappatti, Vellaloor, Vadavalli, Thudiyalur, Veerakeralam, Perur) and two village panchayat (Chinnayamplayam village panchayat, Villangurichi village panchayat) were added to the corporation. The total extent of the Local Planning Area is 1277 sq.km with a population of 21,51,466 as per 2011 Census. The population of Coimbatore city has grown from 47,007 in 1911, 16.01 lakhs in 2011. The population has increased 34 times from that it was in the year 1911. There had been some considerable fluctuations in population growth, during the past decades due to enhanced employment

opportunities. Influx people are denied essentials service such as clean water, electricity and health care – even though they may live close to these services because of economic background. Too many are forced to live in dangerous and exploitative place in ramshackle dwellings and overcrowded settlements that are highly vulnerable to disease and disaster and face a constant threat of eviction.

Methodology

The preparation of Slum-free City Plan will broadly involve Slum Redevelopment/Rehabilitation Plans based on (a) Survey of all slums – notified and non-notified; (b) Mapping of slums using the state-of-art technology; (c) integration of geo-spatial and socio-economic data; and (d) identification of development model proposed for each slum. Base maps to an appropriate scale would be a pre-requisite for the preparation of Slum Redevelopment Plan/Slum-free City Plan. The following steps have been meticulously followed for the preparation of Slum-free City Plan for Coimbatore City.

→ Identification and inventory of all slum clusters of all descriptions in the urban agglomeration with the help of available data from TNSCB and the concerned corporation, along with the Google images.

→ Conduct of Slum Survey based on the detailed formats provided by TNSCB which was modified after few trials in the Slum survey with mutual agreement with TNSCB, after due training of trainers, training of survey personnel /canvassers and canvassing. For the purpose of community mobilization, the interaction with the Mayor and elected Ward Councilors was made. They have helped a lot in sensitization of the community problems through canvassers selected from the sourced slum or nearby slum pockets.



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- Entry of data from Slum Surveys in the web-enabled MIS application (provided by Tamilnadu Slum Clearance Board), compilation and collation of data, preparation of Slum-wise, City and State Slum Survey Database and Baseline Reports.
- Integration of Slum MIS with GIS Maps to enable the preparation of GIS-enabled Slum Information System that is to be used for the preparation of meaningful Slum Development Plans and Slum-free City Plan using a city-wide approach.
- For each slum identified as untenable, Slum Redevelopment Plan has been prepared based on models like PPP development, infrastructure provision only, community-based development etc. This decision-making has been done with the involvement of the community after community mobilization and dialogue for deciding the model to be adopted, through a well-organized consultative meeting.
- Inventory of all possible vacant lands in each zone of the urban agglomeration that could be used for slum redevelopment/ rehabilitation development purposes.

Status of Slums in Coimbatore

Coimbatore Corporation is divided into five zones. Each zone is having 20 wards. Totally 215 slums have been identified for the enumeration purpose under RAY scheme. Coimbatore city has a total of 319 pockets of slums with 46650 households. Out of 319 slums 44 slums were developed already under various schemes by TNSCB and local body, and 60 slums are not taken for the survey due to non cooperation of slum dwellers. Hence, the investment is planned only for the surveyed slums.

S. No	Name of the Slum	No. of Slums	House Holds
1	Developed Slums by TNSCB	44	5964
2	Slums not surveyed under RAY due to non cooperation from Slum Dwellers	60	10749
3	Surveyed Slums under RAY	215	29937
Total		319	46650

Details of the slums in Coimbatore (both notified

and non-notified) have been collected from the Coimbatore Corporation through Tamil Nadu Slum Clearance Board. The slum population of the Corporation constitutes nearly 16% of the total population of the Corporation. The largest slum of the city Nanjundapuram Ittery has a population of 4631 persons and is situated in ward No.

No of Slums	Slum Population	No. of HHs	Area in Sq.Km
215	110143	29937	3.42

95 of South zone. Because of IT, Educational institution and other Industrial growth, the migration to the city is high. High rents, prohibitive land prices, very limited or no access to credit facilities for the urban

poor, and lack of credit worthiness have been the important factors contributing to the growth of the slums in Coimbatore Corporation area. Estimated statistics from the socio economic survey shows there are 29937 slum households in Coimbatore Corporation of 3.42 sq.km area

Basic definition of Slum clearly categories based on the housing condition and surrounding environment. Housing disadvantage is a complex concept. It usually refers to the adequacy of the structure and associated services; but it may also include aspects

of security of tenure and affordability. Three most common indicators of housing adequacy are: (a) Space per person, (b) Permanent Structures and (c) Housing in compliance with local standards. Main

Sl.No	Type of Houses	No. of Houses	%
1	Pucca	5439	18
2	Semi Pucca	23689	79
3	Kutchra	809	03
	Total	29937	100

objective of the slum development programmes is to provide decent shelter and minimum acceptable size. Kutchra and Semi pucca households need to be transformed to Pucca structure with due consideration of the land ownership. In Coimbatore Corporation around 25000 households are Semi Pucca & Kutchra category which needs to be transformed to Pucca structure.

Water is one of the great necessities of human life. A supply of clean water is absolutely necessary for life and health. Yet many people of the world do not have access to clean water. Households in informal settlements use less than half of the amount of water

as the average usage in the same cities, owing to poorer availability and greater costs. Irregular water supply leads to spend excess amount towards procuring water for potable purpose. The median water price in informal settlements is almost five times the average price. In Coimbatore Corporation

Zone	Total HouseHold	Individual Tap Connection
North Zone	2599	431
East Zone	1628	374
West Zone	3765	388
South Zone	17826	2318
Central Zone	4119	125
Total	29937	3636

87.6 % of households are not having Individual water supply facility. There is a highest demand for water supply connection in the Central zone which is having 0.42%

The difference among the levels of services largely owes to the availability of revenue. Cities in developed countries have 32 times as much money per person to spend on infrastructure and other urban services as

cities in least developed countries. In Coimbatore Corporation, the corporation made facility to collect the solid waste from the slums in different frequency namely daily, alternate days, once in fortnight. Totally 85 slums are not having the facility to dispose the solid waste. In Coimbatore Corporation slums 62% of households are not having the individual toilet facility. Infrastructure improvement with proper facility and uninterrupted water supply for sanitation is must for the improvement.

Tenability analysis for the Coimbatore Corporation slums has been carried out as per the standard procedure. Tenability analysis clearly shows the majority falls in the status of fitness of land for human habitation. A total of 99 slums are falling under the category of untenable.

	North zone		East zone		West zone		South zone		Central zone		Total	
	No. of Slums	No. of Households	No. of Slums	No. of Households	No. of Slums	No. of Households	No. of Slums	No. of Households	No. of Slums	No. of Households	No. of Slums	No. of Households
Tenable	15	1498	13	1400	13	1589	69	13767	06	1097	116	19351
Untenable	11	1101	4	228	22	2176	44	4059	18	3022	99	10586
Total	26	2599	17	1628	35	3765	113	17826	24	4119	215	29937

Slum Categorization - Development of Matrix

The RAY guidelines stresses on the prioritization of slums on the basis of assessment matrices. The parameters used in matrix include BPL, SC/ST population and infrastructure. As per the RAY guidelines the slums of the Coimbatore Corporation are addressed by the three interrelated parameters namely (i)

Poverty, (ii) Vulnerability of housing and (ii)

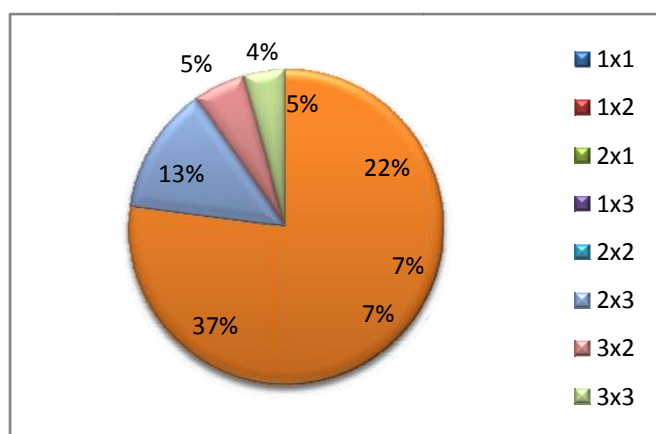
Infrastructure deficiency. During the field survey

the enumerators collected socio-economic data of each slum dwellers and slum profile data for each slum through respective questionnaire.

Based on these field data, poverty, housing

vulnerability and infrastructure deficiency for all tenable and untenable slums have been worked out and discussed in detail. This arrangement

would help authorities to prioritize interventions in slums for improving the observed deficiencies. Such a prioritization is all the more necessary because funds are limited and the limited funds when deployed on predetermined priority areas and services will maximize benefits. The matrix was developed on eight



parameters under two components and each parameter was given weights and the scores were generated. Around 5 % of the slums in Coimbatore Corporation come under the category of delisting and 28% of slums come under the category of less vulnerability and poor infrastructure. Hence focus need to be towards providing basic infrastructure to improve the environment of slums. There is a need for immediate attention in improving the housing condition for 20 slums.

S.No	Ward No	Slum Name	Tenability	Matrix/ Rank	No. of Household
North Zone					
1	002	Anna Colony -Thudiyalur	Tenable	2x2	154
2	003	PattathuArasimmanKovil Veethi Part -I	Tenable	2x2	30
3	003	PattathuArasimmanKovil Veethi Part - II	Untenable	2x2	7
4	004	Kalaingar Nagar	Untenable	2x3	128
5	026	Gandhi Veethi - Vattamalaipalayam	Tenable	2x2	38
6	026	MeenatchiAmman Koi lVeethi -Ambedkar Nagar	Tenable	2x2	279
7	028	Chinnametupalayam AD Colony	Tenable	3x2	38
8	028	Anna Nagar	Tenable	2x2	53
9	031	Kumaran Nagar	Tenable	2x1	31
10	031	KVK Nagar	Untenable	2x2	55
11	031	Periyar Nagar	Tenable	3x3	148
12	040	Avarampalayam - PattalammanKoil Street	Untenable	2x3	266
13	040	Chinnasamy Nagar Pallam	Untenable	2x2	62
14	040	Vivekananda Nagar	Untenable	1x3	94
15	041	AmbedkarVeethi	Tenable	2x2	53
16	041	IyyavuVeethi	Tenable	2x2	52
17	041	KakkanVeethi	Tenable	2x3	204
18	041	Rabindranath Tagore Street - Part I	Untenable	3x2	57
19	041	Rabindranath Tagore Street - Part II	Untenable	3x2	62
20	041	RajarathinamVeethi	Tenable	2x2	41
21	042	UdayampalaymHarijan Colony	Tenable	2x2	105
22	043	JeevaVeethiUrmandampalayam	Tenable	2x1	141
23	044	Karuppusamy Nagar	Untenable	2x1	212
24	044	V.O.C Nagar Ext and Velusamy Nagar	Untenable	1x2	114
25	046	Old Sathy Road	Untenable	2x3	44
26	047	Arthnur Amman KoilVeethi	Tenable	2x2	131
Total No. of HHS in North Zone					2599
East Zone					
27	032	Ambedkar Nagar	Tenable	2x2	239
28	032	Lenin Veethi	Tenable	2x2	90

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29	033	Pudhu Colony	Tenable	2x2	180
30	033	RathinagiriVeethi	Tenable	3x2	21
31	033	ShastriVeethi - Kalapatti	Tenable	2x3	85
32	034	Kalappatti Nehru Nagar	Tenable	2x2	11
33	034	Nehru Nagar PalliVeethi Part - I	Untenable	2x2	100
34	034	Nehru Nagar PalliVeethi Part - II	Tenable	2x2	114
35	034	Veeriampalayam Gandhi Veethi	Tenable	2x2	152
36	034	Veeriampalayam Nehru Veethi	Tenable	1x2	26
37	035	Kallimedu	Tenable	3x2	43
38	035	Stalin Nagar	Tenable	2x2	37
39	056	Anna Nagar - Peelamedu	Untenable	2x3	59
40	061	Anna Nagar - Ondipudur	Untenable	2x3	25
41	061	NoyyalBannari Amman Nagar - Ondipudur	Untenable	2x3	30
42	062	CMC Colony - Neelikonampalayam	Tenable	2x2	156
43	064	CMC Colony - Vardharajapuram	Tenable	2x3	260
Total No. of HHS in East Zone					1628
West Zone					
44	006	EdaiyarPalayam - Harijan Colony	Tenable	2x2	80
45	006	Gandhiji Nagar Near -Vivekandha Nagar Part-I	Tenable	1x2	28
46	006	Gandhiji Nagar Near - Vivekandha Nagar Part-II	Untenable	1x2	20
47	006	KamarajNagar - Harijan Colony	Tenable	2x2	66
48	007	Mullai Nagar	Untenable	2x2	136
49	007	Prabhu Nagar	Untenable	2x2	393
50	008	EdaiyarPalayam - Meenakshi Amman KovilVeethi	Tenable	2x2	103
51	009	Ambedkar Nagar	Untenable	2x2	57
52	009	Ashok Nagar East	Untenable	2x2	22
53	009	Ashok Nagar West	Untenable	1x2	198
54	009	Driver Colony	Untenable	1x2	193
55	009	Kamarajar Nagar	Untenable	1x2	109
56	009	Karunanidhi Nagar	Untenable	1x2	312
57	009	MariyammanKovilVeethi	Tenable	1x2	34
58	009	PN PudurKuttai	Untenable	1x2	37
59	010	Gohulam Colony 7 th Street. Pallam	Untenable	1x3	60
60	015	Balan Nagar PallaSalai	Untenable	3x3	26
61	015	Mullai Nagar PallaSalai	Untenable	2x3	30
62	015	New ThillaiNagar - Slum Area	Untenable	1x3	45
63	015	ValliammalKoilStreet - Maruthamalai	Untenable	1x3	35
64	016	Indira Nagar	Untenable	1x3	135
65	017	AjunurHarijan Colony	Tenable	2x3	25
66	017	ArunthathiyarVeethi - Veerakeralam	Tenable	2x2	50
67	017	Balaji Nagar Pallam	Untenable	3x3	55

EXECUTIVE SUMMARY

68	017	VinayagarKovilVeethi - Kalveerampalayam	Tenable	2x2	47
69	018	Ajay Mugarji Street	Untenable	2x2	47
70	019	KalaingarKarunanidhi Nagar	Untenable	1x2	45
71	020	Anna Nagar Sugar Cane Main Road	Untenable	1x2	104
72	020	Ex Servicemen Colony	Untenable	1x2	34
73	020	MGR Nagar	Untenable	1x2	83
74	020	MuthumariammanKoil Street	Tenable	2x2	249
75	020	Tank bed line	Tenable	2x2	122
76	021	Kamarajapuram	Tenable	2x2	639
77	024	MacrikanRoad - R.SPuram	Tenable	1x2	90
78	024	SundaramVeethi	Tenable	2x3	56
Total No. of HHs in West Zone					3765
South Zone					
79	077	ChokkanpudurSelvapuram E.B. Colony	Untenable	2x3	31
80	077	ChokkanpudurSelvapuram MasaniammanKoilVeethi	Untenable	2x3	112
81	077	Jeeva Lane	Tenable	2x2	351
82	077	Karupannan Lane-1	Tenable	2x2	57
83	078	DevendrarVeethi North	Tenable	2x2	299
84	078	Kempatty Colony	Tenable	2x2	388
85	078	PonniVeethi	Tenable	2x2	27
86	078	Selvapuram - Perur Main Road	Tenable	1x3	16
87	078	SoliyaVellalar Street North	Tenable	1x2	67
88	085	ChettiVidhi Main Road	Untenable	1x2	90
89	085	KardikoilVeethi	Untenable	2x2	66
90	085	KuppannanThottam	Untenable	2x3	50
91	085	MGR Nagar - Sundamuthur Road	Tenable	1x1	62
92	085	PommanChettiVeethi	Untenable	1x3	27
93	085	South of Perur TNSCB Scheme and Road Slum	Tenable	1x2	1439
94	085	VaishiayalVeethi	Untenable	1x2	26
95	086	North of Perur TNSCB Scheme and Road Slum	Tenable	1x2	2171
96	087	Adisakthi Nagar	Untenable	2x2	45
97	087	Bharathi Nagar	Untenable	3x3	13
98	087	Gandhi Nagar	Untenable	2x3	100
99	087	Jeeva Nagar	Untenable	3x3	90
100	087	QuiathMillath Street	Untenable	3x2	104
101	087	Kurunchi Nagar	Untenable	1x3	66
102	087	Palakad Main Road	Untenable	1x2	17
103	087	Part of ward 21	Tenable	2x2	245
104	087	Periyasamy Street	Untenable	3x2	261
105	087	Satham Nagar	Untenable	2x2	100
106	087	Thiruvalluvar Extension	Untenable	2x2	227

EXECUTIVE SUMMARY

107	087	ThiruvalluvarNagar - Thirumoorthy Nagar	Untenable	2x2	231
108	088	AllagasiThottam	Tenable	1x2	96
109	088	Boer Street	Tenable	1x2	362
110	088	Dalfactory Street	Tenable	1x2	131
111	088	Grosscut - 1	Tenable	2x2	40
112	088	KaliyappaGounder Street	Tenable	1x2	49
113	088	Kottamedu	Untenable	2x3	33
114	088	Manikara Street	Tenable	1x1	43
115	088	Muventhar Nagar	Tenable	1x2	120
116	088	Upplithidu	Tenable	1x2	34
117	088	Vellaler Street	Tenable	1x2	94
118	089	Anna Nagar	Tenable	1x2	46
119	089	Harijana Colony 89	Tenable	2x2	116
120	089	Kamarajar Colony	Tenable	2x2	51
121	089	NTP_Street	Tenable	1x1	257
122	089	PajaniKoilVeethi	Tenable	2x2	108
123	089	Periyar Nagar	Untenable	3x2	43
124	089	Vaikkalpalayam	Tenable	2x2	104
125	091	Nethaji Nagar	Tenable	2x2	53
126	091	Parvathi Nagar	Tenable	2x2	72
127	091	Sathya Nagar	Tenable	1x1	105
128	091	ThottaRayanKoil Line	Tenable	1x2	21
129	092	Anna Nagar	Tenable	2x2	38
130	092	BatharakaliyAmmanKoilStreet	Tenable	1x1	35
131	092	Madurai VeeranKovilVeethi	Tenable	2x1	22
132	092	Narasimmapuram	Tenable	1x1	170
133	092	Senthazhail Nagar	Tenable	2x2	295
134	092	Sugunapuram East	Tenable	1x2	310
135	092	Sugunapuram Hills	Tenable	1x3	399
136	092	SugunapuramvinayakarKoil Street	Tenable	1x2	147
137	092	Vinayarkoil street	Tenable	1x1	127
138	093	BagavathiNagar - Periyar	Tenable	2x2	135
139	093	Amman Colony Part - I	Tenable	2x2	36
140	093	Amman Colony Part - II	Untenable	2x2	12
141	093	Gnanapuram	Tenable	2x2	91
142	093	MaduraiveeranStreet - Periyar	Tenable	2x2	122
143	093	MariyammanKoilVeethi	Tenable	2x1	260
144	093	Periyar Nagar	Tenable	2x2	256
145	093	Sriram Nagar	Tenable	1x2	23
146	094	Kurchi Boyer Veethi	Tenable	2x1	154
147	094	Machampalayam(Harijan Colony)	Tenable	2x1	316

148	094	MariammanKoil Street (Machampalayam Road)	Tenable	2x1	347
149	094	UppiliarThittu	Untenable	2x2	220
150	095	AnaimeduDharka Line	Untenable	3x3	31
151	095	Anaimedu	Untenable	3x3	386
152	095	Balusamy Naidu Street	Untenable	2x3	206
153	095	BhajanaiKoil Street	Tenable	1x2	64
154	095	KurchiGandiji Road	Tenable	3x2	480
155	095	Kurchi Silver Jubilee Street Part - I	Tenable	3x2	70
156	095	Kurchi Silver Jubilee Street Part - II	Untenable	3x2	180
157	095	Najundapuramlttery Part - I	Untenable	2x2	356
158	095	Najundapuramlttery Part - II	Tenable	2x2	695
159	095	PlaniyappaGounderStreet - Pudu Street	Tenable	2x2	31
160	095	Podanur Fish Market	Untenable	1x2	54
161	095	Polachi Main Road	Tenable	2x2	144
162	095	PollachiRoad 1.Anna Nagar West	Untenable	2x3	81
163	095	VannaraPettai	Tenable	2x2	68
164	096	Kurchi Round Road – KuriappanPalliVeethi	Tenable	1x1	252
165	097	Bharathi Nagar	Tenable	1x2	21
166	097	Gandhi Nagar Lower - KelPakuthi	Untenable	2x3	88
167	097	Gandhi Nagar Middle	Untenable	1x3	25
168	097	Gandhi Nagar Upper - MelPakuthi	Untenable	2x3	90
169	097	Indira Nagar	Untenable	2x2	25
170	097	J.J. Nagar East - KolapadiPakuthi	Untenable	2x3	71
171	097	J.J. Nagar West - KolapadiPakuthi	Untenable	2x3	334
172	097	KaruppurayanKovilVeethi	Untenable	2x1	8
173	097	Pillayarpuram	Tenable	1x3	714
174	097	Thirumurugan Nagar	Untenable	2x2	8
175	098	Noorpath Colony	Tenable	1x1	219
176	098	Panchayath Office Road Part - I	Tenable	2x1	30
177	098	Panchayath Office Road Part - II	Untenable	2x1	71
178	098	Uthami Nagar	Tenable	1x1	168
179	099	SupparayanMuthali Street	Tenable	3x2	127
180	100	Carmel Nagar Part - I	Tenable	2x3	10
181	100	Carmel Nagar Part - II	Untenable	2x3	51
182	100	Echanari - Harijan Colony	Tenable	2x2	92
183	100	EchanariPadasalaveethi	Tenable	1x2	57
184	100	Echanari Railway Gate	Untenable	1x3	27
185	100	J.J. Nagar - Ganesspuram	Tenable	2x1	26
186	100	KalluKuli	Untenable	1x2	43
187	100	KattuNayakkan Part (Part - I)	Tenable	1x2	25
188	100	KattuNayakkan Part (Part -II)	Untenable	1x2	11

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189	100	Madurai VeeranKoil Street - Metur	Tenable	2x2	57
190	100	MuthuMariyammanKovil Street	Untenable	1x2	27
191	100	ThannirThottam	Untenable	2x3	32
		Total No. of HHS in South Zone			17826
Central Zone					
192	045	Balusamy Nagar	Untenable	2x2	113
193	045	Damu Nagar	Tenable	2x2	52
194	045	Kamarajapuram Part - I	Tenable	2x2	100
195	045	Kamarajapuram Part - II	Untenable	2x2	105
196	045	Kannappa Nagar	Tenable	2x1	26
197	045	NarayanaGounder Street	Untenable	2x1	28
198	045	Teachers Colony	Untenable	2x2	26
199	048	Anna Nagar	Untenable	2x2	89
200	048	V.O.C Nagar	Untenable	1x2	66
201	048	Ex.Serviceman Colony	Untenable	1x3	41
202	049	Chinnaraj Nagar	Untenable	1x2	92
203	049	Kallukuzhi	Tenable	2x3	252
204	049	Sampath Street	Untenable	1x2	26
205	050	7 th Street Bridge Near Slum	Untenable	2x2	36
206	050	Hosimin Nagar	Untenable	1x2	437
207	051	Sastri Nagar	Untenable	1x3	294
208	052	Siddaputhur Part - II	Tenable	2x1	158
209	052	Siddaputhur Part - I	Tenable	2x2	509
210	053	Dhanalakshmi Nagar	Untenable	2x2	254
211	053	KarupakalThottam	Untenable	1x2	184
212	070	KulathumeduVaikkal	Untenable	2x2	67
213	071	Majeed Colony	Untenable	2x3	343
214	082	Ukkadam	Untenable	3x3	779
215	072	Kadalakarasanthu	Untenable	3x3	42
		Total No. of HHS in Central Zone			4119
		Grand Total			29937

Slum Development Options

i. Objectionable Slums

Out of 215 surveyed slums, 99 slums are found to be located in objectionable zone. This constitutes 10586 of the households. Around 32.02 acres of vacant lands are identified by TNSCB, Coimbatore for the resettlement of the untenable slums. Currently Tamil Nadu slum clearance board is constructing 13440 tenements for the slum dwellers under JNNURM scheme. These tenements will be

sufficient to accommodate untenable slums. Densification of low density slums will also help in creation of land vacated by resettled slums. Option of relocation depends upon the availability of land and number of slum dwellers. Residential density and FSI to analyse whether the slum would be able to take additional population that may be shifted in case of necessary resettlement of nearby untenable slums/ high density slums. As per the Guideline, around 100 housing units can be built in one acre land. Hence the requirement of the land for the curative measures is around 10 acres. The remaining land may be used for the preventive measure at Coimbatore region. The Resettlement phasing for un-tenable slums and Improvement of the infrastructure and livelihood have been indicated.

ii. Unstable Land Tenure

Only 99 slums are falling under the unstable land tenure thereby indicating that the remaining 116 slums have mostly patta.

iii. Livelihood status

Livelihood status is mainly depending upon the educational status of the slum dwellers. Education is not a problem especially in Coimbatore Corporation. The no. of educational institutions are quite high. However, only the supply of educational facility does not ensure the education of the children in the slum area. From the socio economic survey, it has been observed that the population of uneducated people in slum is varying from 20% to 30%. Only 10% of slum dwellers are having diploma and higher qualification. Due to the vulnerable and weak socio-economic status, school dropouts are more in Coimbatore slums. 40% of households in slum area of Coimbatore city are getting income of less than Rs. 5000 which is inadequate to fulfill their day to day requirements.

Type of Development Strategies

From the results of the deficiency matrix, the following facts have emerged which play a key role in formulating the strategies of slum development, in other words, the curative strategies for enhancing the slum-living environment:

- Improvement of livelihood of the slum dwellers.
- Infrastructure development.

The above two development strategies are playing the vital role to improve the status of living condition of slum dwellers to meet the basic amenities without any vulnerability.

To improve the livelihood of the slum dwellers, the data from the socio economic survey at Coimbatore city, further helped to evolve different schemes that would be needed to improve their livelihood income, living-environment, and their education. Based on the discussion with the slum community, the following three schemes have been evolved and proposed for implementation.

- ✓ Community development Training Institute
- ✓ Employment Web portal
- ✓ Community welfare schemes.

Further, the infrastructure development was analysed with the following parameters like

- ❖ Development of infrastructure without housing like roads, street light, sewerage, storm water drainage and Toilet facility.
- ❖ Development options of in-situ development of housing
- ❖ Remodelling of housing units, and
- ❖ Resettlement.

The parameters in the livelihood improvement and infrastructure development, improvement are represented with different schemes in curative measures for the formulation of slum development.

COMMUNITY DEVELOPMENT TRAINING INSTITUTE

The proposed Community Development Training Institute (CDTI) is an Institute under the Tamilnadu Slum Clearance Board, for the purpose of development of slum community through proper training on skills required to make them self sufficient to live a moderate life. Thus, major activities envisaged of CDTI are listed below:

- Poverty Alleviation (Supporting communities in savings, credits and loans and community development plan, etc.)
- Community Welfare Assistance in setting up of Community Development Organizations Councils throughout the State

- Promoting Skill Development, Sustainable livelihood and Environmental Management Solving land and housing disputes in slums to the extent possible.

Citywide slum upgrading the strategies or principles of CDTI are given below:

To play supporting role in community development process in Slums

Slum Dwellers, not CDTI, are the owners and key actors of the process

To coordinate with govt. agencies, NGOs, other civic groups

To promote Skill up-gradation, and community-based savings

To use finance as a tool for development

EMPLOYMENT WEB PORTAL

Technology has changed the way job seekers search for jobs and employers find appropriate employees. An employment portal has been developed to empower the slum dwellers to get the appropriate job within their ward or zone. It also help the employers to identify persons nearby places.

CONSULTATION AND CITIZEN PARTICIPATION

To prepare the Slum Free Action Plan, the Tamil Nadu Slum Clearance Board consults with appropriate public and private agencies and conducts consultative meetings to obtain inputs from elected people representatives as well as from progressive citizens. This assures that the document is comprehensive. This draft Slum Free Action Plan was made available to them for review and comment and a detailed presentation about the project was given in the consultative meetings.

Key Recommendations

The following key recommendations based on the detailed socio economic survey and interaction with slum dwellers in Coimbatore was made to evolve slum free city. It is observed that numbers of slums are increasing due to the urbanisation process. The slum people must be afforded with improved housing, amenities and opportunities they need to realise their rights and potential. The following actions must be taken to

EXECUTIVE SUMMARY

1. Plan out slum improvement strategies with respect to infrastructure in 116 slums under RAY in a phased manner.
2. Improve the livelihood conditions of slum people by properly trained in operation of earth moving equipments, Motor mechanic, Carpentry, Masonry, Office automation, and Tailoring.
3. Promote development of (a) Community Development Training Institute (b) Affordable Housing (c) Employment Portal
4. Develop slums with proper approach, local transport, water & electricity, proximity to schools, primary health centre.
5. Involve different private agencies, NGOs at national/ International level for the supply of housing to the slum people.

Financial Requirements

It reveals from the surveyed slum data, out of 29937 households, 16053 HHs need to be intervened at total cost of Rs.1913.20 crores. Housing is not an obligatory duty of the local body though planning of city is highly influenced by the housing sector and regulation mechanism. Housing reflects the economy & quality of life of any urban area. Poor planning mechanism leads to slums & illegal growth. Therefore it is necessary to form housing strategy for better city and reduce the proliferation of slums, other illegal developments. For the preventive strategy, based on 2011 census the future house demand has been arrived. The projected housing demand at the end of 2022 is 8345 households which require cost of Rs. 1010.02 crores. For Coimbatore City total cost is arrived to Rs.2923.22 crores for both preventive and curative measures.

CHAPTER 1 OVERVIEW

1.1 Introduction

Globally, slums are growing, because of rapid urbanization which sets tremendous pressure on urban resources. In many cities, more than one quarter of the population lives in slums or squatter settlements, without adequate shelter, urban infrastructure and services, because the development of infrastructure in these cities and towns has not cope up with the increase in demand. Hundreds of millions of urban poor in the developing world have few options but to live in squalid, unsafe environments where they face multiple threats to their health and security. Slums and squatter settlements lack the most basic infrastructure and services. They are exposed to disease due to unhygienic and vulnerable to natural disasters. Slum and squatter settlements are growing at an alarming rate, projected to be double in 25 years.

One billion people live in slums i.e. one in seven of us. Unless urgent action is taken, 1.4 billion people will live in slums by 2020. Source: www.homeless-international.org

There is a growing global concern about slums, as manifested in the recent United Nations Millennium Declaration and subsequent identification of new development priorities by the international community. In light of the increasing numbers of urban slum dwellers, governments have recently adopted a specific target on slums, i.e. Millennium Development Goal 7, Target 11, which aims at significantly improving the lives of at least 100 million slum dwellers by the year 2020. Much more needs to be done if 'cities without slums' are to become a reality.

Every year, the world's urban population is increasing by about 70 million, equivalent to seven new megacities. These people all need to be provided with shelter, with employment and with urban services. The stretched capacity of most urban economies in developing countries is unable to meet more than a fraction of these needs, so that the informal sector is providing most of the new employment and housing in environments that have come to be known as informal settlements or slums, where more than half of the population in many cities and towns of developing countries are currently living and working. It has been estimated that one third of the world's urban population today do not have access to adequate housing, and lack access to safe water and sanitation. These people live in overcrowded and subserviced slums, often situated on marginal and hazardous land. They lack in access to clean water, for which they will pay a premium. Their waste not only

remains untreated, it surrounds them and affects their health, especially their children's. This situation is not new. Since humanity first began to live in cities, the problems of inadequately serviced and overcrowded urban housing, in which the poorer members of urban society live, have been recognized as undesirable aspects of urban living. The more developed parts of the world have already undergone their primary urbanization, albeit at a smaller scale and at a considerably slower pace.

It was a group of 189 nations in 2000 made a promise to free people from extreme poverty and multiple deprivations. This pledge became the eight Millennium Development Goals to be achieved by 2015. In September 2010, the world recommitted itself to accelerate progress towards these goals at least 100 million slum dwellers by the year 2020. The international community in the form of this Millennium Development target is aiming for the bare minimum given the predicted growth of roughly two billion in the next 30 years. Thus, the efforts put in this direction at present are not enough. National and International policies need to be guided by the real concern and compassion to make these slums as the participatory elements in driving away distress, deprivation and other facets of poverty.

1.2 Indian Scenario:

Poverty in India has been a part of the policy debate right from the First Plan Period with the primary focus being on agriculture and rural development. Urban development was tackled through a focus on industry. While social services such as health and education provided for the urban population, there remained a concerted focus on rural India in the Five Year Plans; urban poverty was not recognized as a concern in the initial plan periods and moreover in India it is estimated to have the third of the world's poor. Figure 1.1 shows the top 10 countries with number of slum dwellers. There are no estimates in the country on the number of slum settlements and the area under them. *The crude estimates put the space under slum settlements at about 18,000 million – 20,000 million sq. feet, which is said to be an illegal and unauthorised occupation of slum dwellers. Hernando de Soto calls it "dead capital" which is productive but cannot be used or leveraged by those who live and work there.* According to 2010 data from the United Nations Development Program, an estimated 37.2 % of Indians live below the country's national poverty line. The Global Hunger Index (GHI) report 2011 places India amongst the three countries where the GHI between 1996 and 2011 went up from 22.9 to 23.7 while 78 out of 81 developing countries studied, including Pakistan, Nepal, Bangladesh, Vietnam, Kenya, Nigeria, Myanmar, Uganda, Zimbabwe and Malawi succeeded in improving hunger condition.

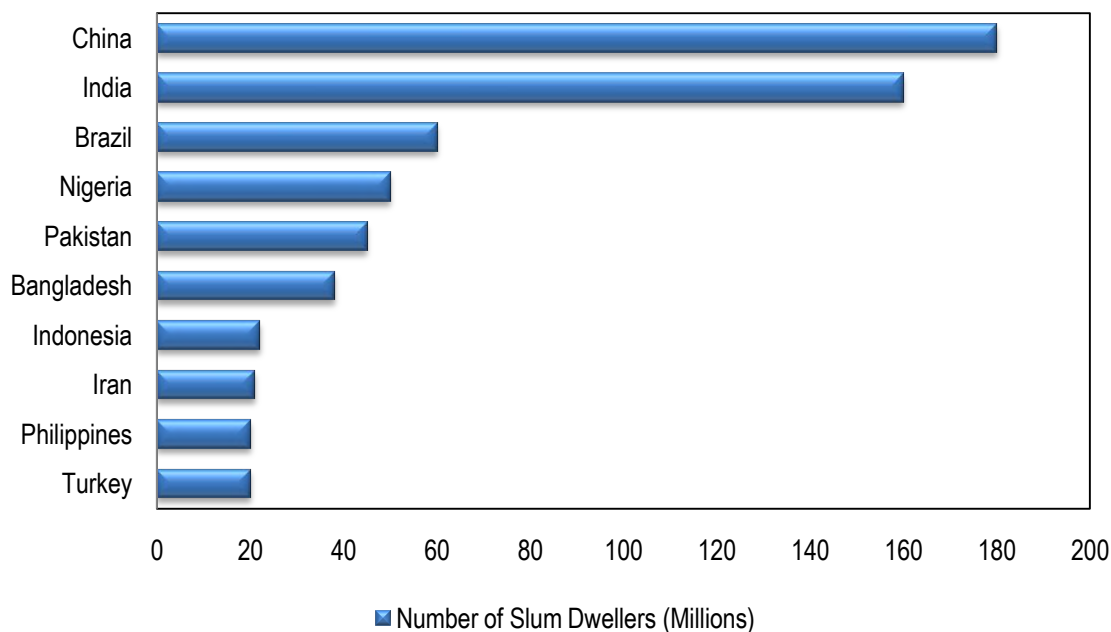


Fig. 1.1 Number of slum dwellers - Top 10 countries (Source: UN Habitat Report, 2003)

In developing countries the growth of the urbanization is very rapid. While it is widely accepted that development and urbanization go hand in hand, the expansion of cities gives rise to both opportunities and challenges, with countries urbanizing in quite different ways. Urbanization has been occurring at different times and different paces. As per the Census data, nearly one in every six urban Indian residents lives in a slum. The census defines a slum as "residential areas where dwellings are unfit for human habitation" because they are dilapidated, cramped, poorly ventilated, unclean, or "any combination of these factors which are detrimental to the safety and health".

Around 1.37 crore households, or 17.4% of urban Indian households lived in slums, as per census 2011 where as in 2001 India's slum population at 15% of the total population. Figure 1.2 shows the state wise percentage of slum households to total urban households for the entire country.

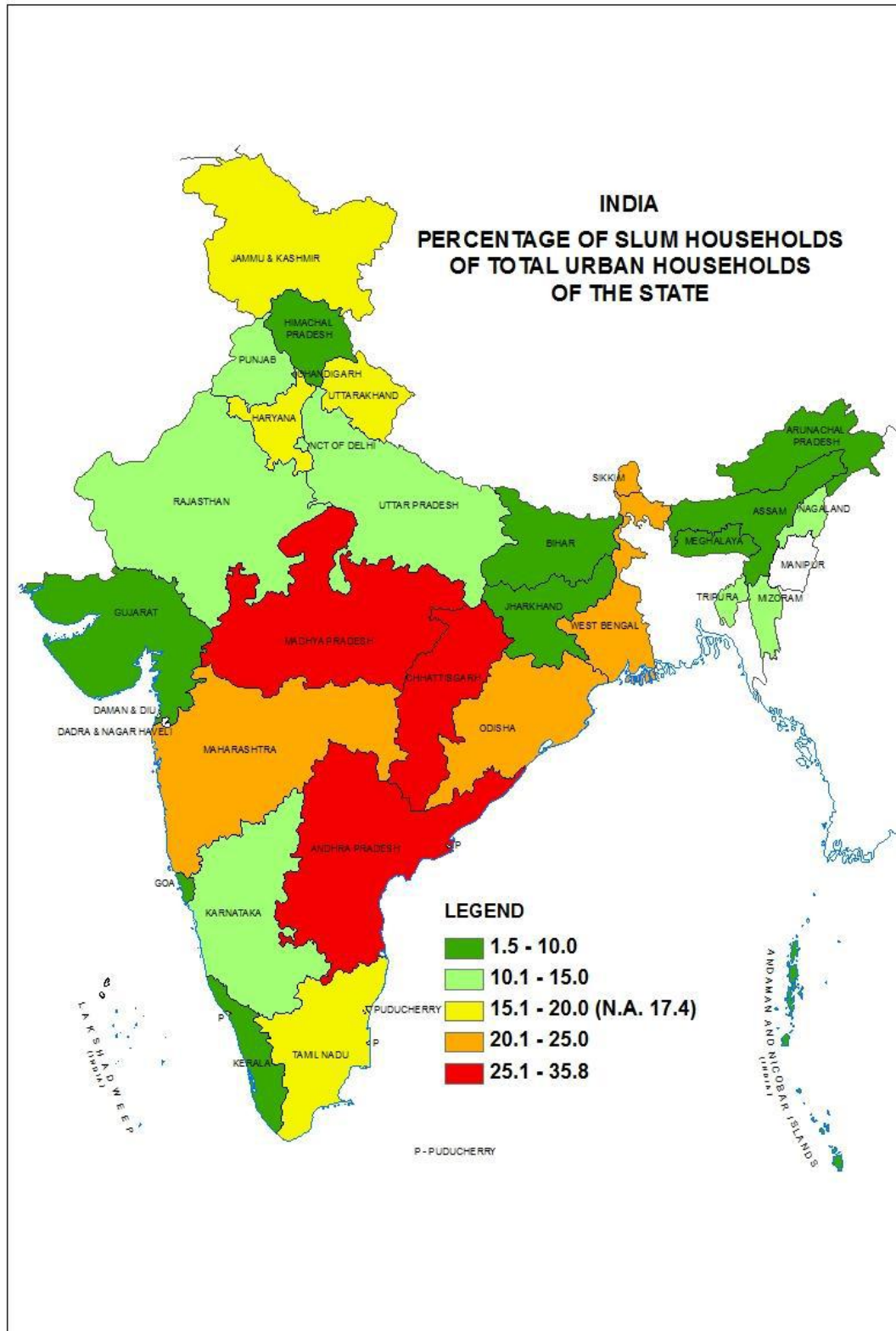
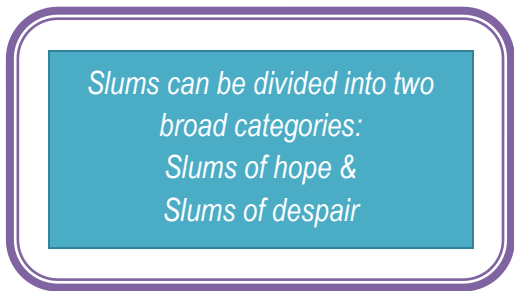


Fig. 1.2 Percentage of slum HHs to total urban HHs. (Source: Census India 2011)

1.3 Understanding Slums

The term 'slum' is used in this report in a general context to describe a wide range of low-income settlements and or poor human living conditions. There exists inadequate explanation about the definition of slums. 'Slum', at its simplest, is '*a heavily populated urban area characterized by substandard housing and squalor*'. This definition encapsulates the essential characteristics of slums: high densities and low standards of housing (structure and services), and 'squalor'. The first two criteria are physical and spatial, while the third is social and behavioural. This spread of associations is typical, not just for the definition of slums but also of our perceptions of them. Dwellings in such settlements vary from simple shacks to more permanent structures, and access to basic services and infrastructure tends to be limited or badly deteriorated. The definition of the term 'slum' includes the traditional meaning – that is, housing areas that were once respectable or even desirable, but which have since deteriorated as the original dwellers have moved to new and better areas of the cities. The condition of the old houses has then declined, and the units have been progressively subdivided and rented out to lower-income groups. Typical examples are the inner-city slums of many towns and cities in both the developed and the developing countries. Slums also include the vast informal settlements that are quickly becoming the most visible expression of urban poverty in developing world cities, including squatter settlements and illegal subdivisions. The quality of dwellings in such settlements varies from the simplest shack to permanent structures, while access to water, electricity, sanitation and other basic services and infrastructure is usually limited or not available. Such settlements are referred to by a wide range of names and include a variety of tenure arrangements.



*Slums can be divided into two broad categories:
Slums of hope &
Slums of despair*

The coverage of settlement types is even more complex when one considers the variety of equivalent words in other languages and geographical regions: *chawls* (Ahmadabad, Mumbai), *ahatas* (Kanpur), *katras* (Delhi), *bustee* (Kolkata), *zopadpattis* (Maharashtra), *cheris* (Chennai).

The Encyclopaedia Britannica defines slums as residential areas that are physically and socially deteriorated and in which satisfactory family life is impossible. Bad housing is a major index of slum conditions. By bad housing is meant dwellings that have inadequate light, air, toilet and bathing facilities; that are in bad repair, dump and improperly heated; that do not afford opportunity for family privacy; that are subject to fire hazard and that overcrowd the land, leaving no space for recreational use.

Registrar General and Census Commissioner of India has adopted the following definition for the purpose of Census of India. 2001, the slum areas broadly constitute of:

- All specified areas in a town or city notified as 'Slum' by State Local Government and UT Administration under any Act including a 'Slum Act'.
- All areas recognized as 'Slum' by State Local Government and UT Administration. Housing and Slum Boards, which may have not been formally notified as slum under any act
- A compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

National Sample Survey Office (NSSO), for the purpose of survey in 1976-77 defined slum as declared and undeclared slums. The declared slums were areas which have been formally declared as slum by the respective municipalities, corporations, local bodies or the development authorities. The undeclared slums were defined as “an aerial unit having twenty five or more katcha structures mostly of temporary nature, or inhabited by persons with practically no private latrine and inadequate public latrine and water.

NSSO adopted the definition of slums as “A slum is a compact settlement with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions. Such an area, for the purpose of this survey, was considered as “**non notified slum**” if at least 20 households lived in that area. Areas notified as slums by the respective municipalities, corporations, local bodies or development authorities are treated as “**notified slums**”.

UN-HABITAT defines “A slum is a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city.” Slum households as a group of individuals living under the same roof that lack one or more of the conditions given below: (a) Insecure residential status; (b) Inadequate access to safe water; (c) Inadequate access to sanitation and other infrastructure; (d) Poor structural quality of housing; and (e) Overcrowding. Table 1.1 list the indicators and thresholds for defining slums as per UN HABITAT Report (2002a)

1.4 Schemes to Alleviate Urban Poverty

The Ministry of Housing and Urban Poverty Alleviation is implementing various plans and policies in the country to address the concerns of Housing, infrastructure, slum development and basic civic amenities with special emphasis to urban poor. Various programmes implemented by the Ministry of HUPA is one way or other for the benefit of urban poor with special emphasis to slum dwellers. Some of the Major Programmes of this Ministry are:

- Jawaharlal Nehru National Urban Renewal Mission(JNNURM): Basic Services to the Urban Poor (BSUP) & Integrated Housing & Slum Development Programme (IHSDP)
- Swarna Jayanti Shahari Rozgar Yojana (SJSRY)
- Affordable Housing in Partnership (AHIP)
- Interest Subsidy Scheme for Housing the Urban Poor (ISHUP)
- Urban Statistics for HR and Assessments (USHA)
- Integrated Low Cost Sanitation Scheme (ILCS)
- Projects Schemes for the Development of North Eastern States, including Sikkim

Although Central government in coordination with State Governments, Urban Local Bodies (ULBs) implements various schemes for the upliftment of slum dwellers, but the investment required to upgrade slums and provide alternative requires substantial portion of the total budget. Table 1.1, shows the investment required to upgrade slums by 2020.

Table 1.1 Investment for upgrading slums and providing alternatives required by 2020 (Source: UN Habitat Report, 2003)

Intervention	Target population (millions)	Average cost per person (\$)	Total (\$ billions)	Source of Investment (\$ billions)		
				Donors	Governments	Slum dwellers and future low income urban residents
Upgrading slums	100	670	67	23	37	7
Providing alternatives to slums	570	400	227	78	126	22
Total	670	1070	294	101	163	29

1.4.1 Vision of Slum Free India: Launch of Rajiv Awas Yojana (RAY)

Urban poverty and slums are emerging as critical issues of public policy. The locus of poverty appears to be shifting to cities. The conditions of the poor in slums are in some respect inferior to those in rural areas. Recognizing the need to focus on the development and up gradation of slums with basic amenities and affordable housing, The scheme of RAY is a very recent scheme, which evolved from the Scheme for Slum-Free City Planning

(SFCP) under RAY, after the announcement of RAY by the President of India in June 2009 to the full-fledged scheme of RAY approved by the Cabinet Committee of Economic Affairs (CCEA) in June 2011. On 30th July 2011, the Mo HUPA organized a Conference of State Ministers of Housing, Urban Development, and Municipal Administration Local Self-Government to announce the launch of, discuss, and solicit feedback on the scheme. Her Excellency the President of India has announced Rajiv Awas Yojana aimed at ushering in Slum-free Urban India.

Prime Minister’s Announcement on Independence Day - 15th August 2009

“We had started the Jawaharlal Nehru National Urban Renewal Mission for the urban areas. We will accelerate this programme also. Today, lakhs of our citizen live in slums which lack basic amenities. We wish to make our country slum free as early as possible. In the next five years, we will provide better housing facilities to slum dwellers through a new scheme, Rajiv Awas Yojana”.

President’s Speech in Joint Session of Parliament on 4th June 2009.

“My Government proposes to introduce a Rajiv Awas Yojana for the slum dwellers and the urban poor on the lines of the Indira Awas Yojana for the rural poor. The schemes for affordable housing through partnership and the scheme for interest subsidy for urban housing would be dovetailed into the Rajiv Awas Yojana which would extend support under JNNURM to States that are willing to assign property rights to people living in slum areas. My Government’s effort would be to create a slum free India in five years through the Rajiv Awas Yojana.”

Rajiv Awas Yojana for the slum dwellers and the urban poor envisages a ‘Slum-free India’ through encouraging States/Union Territories (UTs) to tackle the problem of slums in a definitive manner. This would be achieved by a multi-prolonged approach focusing on:

- bringing existing slums within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town;
- redressing the failures of the formal system that lie behind the creation of slums; and
- tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor and force them to resort to extra-legal solutions in a bid to retain their sources of livelihood and employment.

The key suggestions that emerged from the RAY scheme include:

- Increase of central support from 50 per cent to a higher percentage (most suggested 80 per cent).
- Integrated Housing & Slum Development Programme (IHSDP) (under JNNURM) served the small and medium towns. However under RAY, there is no emphasis on the small and medium towns. Therefore, there should be no mid-course change of IHSDP, and IHSDP should continue to service the small and medium towns not covered under RAY; RAY envisage covering cities with a population of 3 lakh persons and above.
- Basic minimum civic facilities to the urban poor should be guaranteed.
- RAY is technologically intensive and this may prove counter-productive especially for smaller cities.
- States should be given the flexibility to implement reforms and not be straitjacketed in this issue with prescriptions from the central government.
- In promoting the construction of houses under RAY, flexibility to states should be given in the norms of house construction across different city sizes.
- In hilly states and special category states, particular attention must be paid to the need for states to interact with the Forest Department in the acquisition of land for housing urban poor. Further escalation of cost of projects due to the hilly terrain should be considered at the time of both DPR preparation, as well as fund releases.
- Also in hilly states, the density of 'slums slum-like conditions' is so low that in many cases, the state city would be unable to classify the area as a 'slum' for intervention under RAY. Definitional issues in this context need to be attended to.
- States administered under the provision of the VIth Schedule of the Constitution of India presents a challenge in the assignment of property rights to non-indigenous slum dwellers
- Under RAY, land markets need to be regulated such that artificial enhancing of the cost of land is avoided, otherwise the poor will be left only with illegal means of acquiring land and building housing
- For the promotion of private sector participation in the construction of affordable housing for the urban poor the two issues of taxation and approval costs must be tackled. This will significantly decrease costs (by as much as 25 per cent) and turnaround time for

The Rajiv Awas Yojana (RAY) announced in the Budget of Government for FY 2009-10 aims at promoting a slum-free India in five years and would focus on according property rights to slum dwellers

such housing projects (approvals in 2-3 weeks instead of the 2-3 years that it currently takes).

1.5 Objective and Scope of the Project

Global Objective: To implement the RAY guidelines and make the cities of Tamil Nadu Slum Free Cities. As per the scheme ten cities have been identified in Tamil Nadu (TN) namely Chennai, Madurai, Coimbatore, Thiruchirappalli, Tirunelveli, Tirppur, Erode, Salem, Vellore and Thoothukudi. TNSCB is the Nodal Agency for implementation of the project.

Specific Objectives: To prepare slum free action plan including prioritization of slums to be taken up for development in a phased manner and to support State/Cities in designing various models for slum development (Modes and Mechanisms) based on the analysis of land values and socioeconomic attributes, land use, risk mapping and focus group discussions with the community. Keeping in view the objectives the scope of the work is segregated into the components mentioned in block.

TNSCB through a competitive bidding process, has selected National Institute of Technical Teachers Training and Research (NITTTR) as the Consultant to carry out the slum survey and preparation of slum profile, household profile, livelihood profile, consolidated MIS and Slum-free plan of action in a participatory manner in the five identified cities viz., Coimbatore, Erode, Tirunelveli, Thiruchirappalli and Tiruppur. NITTTR has commenced the work at Coimbatore and as per the scope of the project, the survey have been carried out at the corporation of Coimbatore.

CHAPTER 2. SLUM SURVEY AND INVESTIGATION

2.1 CITY AN OVERVIEW

Coimbatore is a major industrial city in India and the second largest city in the state of Tamil Nadu. It is the administrative headquarters of Coimbatore District. It is known as 'Manchester of South India'. The city is located on the banks of the Noyyal River, a tributary of river Cauvery and surrounded by the Western Ghats. The city is administered by the Coimbatore Municipal Corporation. It is also a part of Kongu Nadu region of Tamil Nadu. Coimbatore is famous for Schools, Universities, Engineering Colleges, Medical, Management Schools, Textiles- Yarn, Knitted Garments, Handlooms, Textile Machinery, Motors, Pumps, Industrial goods, Cotton, Tea, and Information technology. Other important industries growing up in city is software services.

2.1.1 History

The region around Coimbatore was ruled by Sangam Cheras and it served as the eastern entrance to the Palakkad Gap, the principal trade route between the west coast and Tamil Nadu. The Kossar tribe mentioned in the second century CE Tamil epic *Silappathikaram* and other poems in Sangam literature is associated with the Coimbatore region (Kongu Nadu). Large numbers of Roman coins and other artifacts have been unearthed around Coimbatore, indicating the region's ties with Roman traders. The Coimbatore region is in the middle of the "Roman trail" that extended from Muziris to Arikamedu. The medieval Cholas conquered the Kongu Nadu in the 10th century CE. A Chola highway called "Rajakesari Peruvazhi" ran through the region. Much of Tamil Nadu came under the rule of the Vijayanagara Empire by the 15th century. The Vijayanagara regime brought new settlers from Andhra Pradesh and Karnataka.

In the 1550s, the military governors (Madurai Nayaks) of the Vijaynagara Empire took control of the region. After the Vijayanagara Empire fell in the 17th century, the Madurai Nayaks established their state as an independent kingdom, with other Vijayanagar offshoots forming new kingdoms in Vellore, Tanjore, Gingee, Chandragiri and Mysore. The Nayaks introduced the Palayakkarar system under which Kongunadu region was divided into 24 *Palayams*.

In the later part of the 18th century, the Coimbatore region came under the Kingdom of Mysore, following a series of wars with the Madurai Nayak Dynasty. When part of Kingdom

of Mysore, the region was under the administration of Hyder Ali and later Tipu Sultan of Mysore. After defeating Tipu Sultan in the Anglo-Mysore Wars, the British East India Company annexed Coimbatore to the Madras Presidency in 1799. The Coimbatore region played a prominent role in the Second Poligar War (1801) when it was the area of operations of Dheeran Chinnamalai. In 1865, Coimbatore was established as the capital of the newly formed Coimbatore district and in 1866 it was accorded municipality status (Source: http://www.tn.gov.in/district_details/538). Industrialization of the region began in 1888 and continued into the 20th century. The city experienced a textile boom in the 1920s and 1930s due to the decline of the Cotton industry in Mumbai. The region played a significant role in the Indian independence movement. Post independence, In 1981, Coimbatore was constituted as a corporation.

2.1.2 Geography and Soil

Coimbatore is situated in the western part of Tamil Nadu, bordering the state of Kerala. It is located between 10° 50' and 11° 2' north latitude and 76° 56' and 77° 1' east longitude. The city has an average elevation of 411 metres above mean sea level and is traversed in the middle by the river Noyyal rising from the Vellingiri Hills. It is surrounded by the Western Ghats mountain range to the West and the North, with reserve forests and the (Nilgiri Biosphere Reserve) on the northern side. Fig. 2.1 is showing the location map of the Coimbatore corporation.

Apart from Noyyalriver, there are eight major tanks / wetland areas located within Coimbatore and they are Singanallur, Valankulam, Ukkadam, Periyakulam, Selvampathy, Narasampathi, Krishnampathi, Selvachinthamani, and Kumaraswami tanks. Sanganurpallam, Kovilmedupallam, Vilankurichi-SinganallurPallam, KarperayanKoilpallam, Railway feeder roadside drain, Tiruchy-Singanallur Check drain and Ganapathypallam are some of the streams that drain through the city. Coimbatore district is fed with water from Noyal, Siruvani, Bhavani and Amaravathi. Siruvani, world's second purest water body is the main source of water in the city.

The soil is predominantly black, which is suitable for cotton cultivation, but some red loamy soil is also found. Coimbatore falls under the Class III/IV Seismic Zone, having experienced a 6.0 Richter scale earthquake in 1900.(Source: *Frontline*, Volume 16 – Issue 27; 25 December 1999 – 7 January 2000)

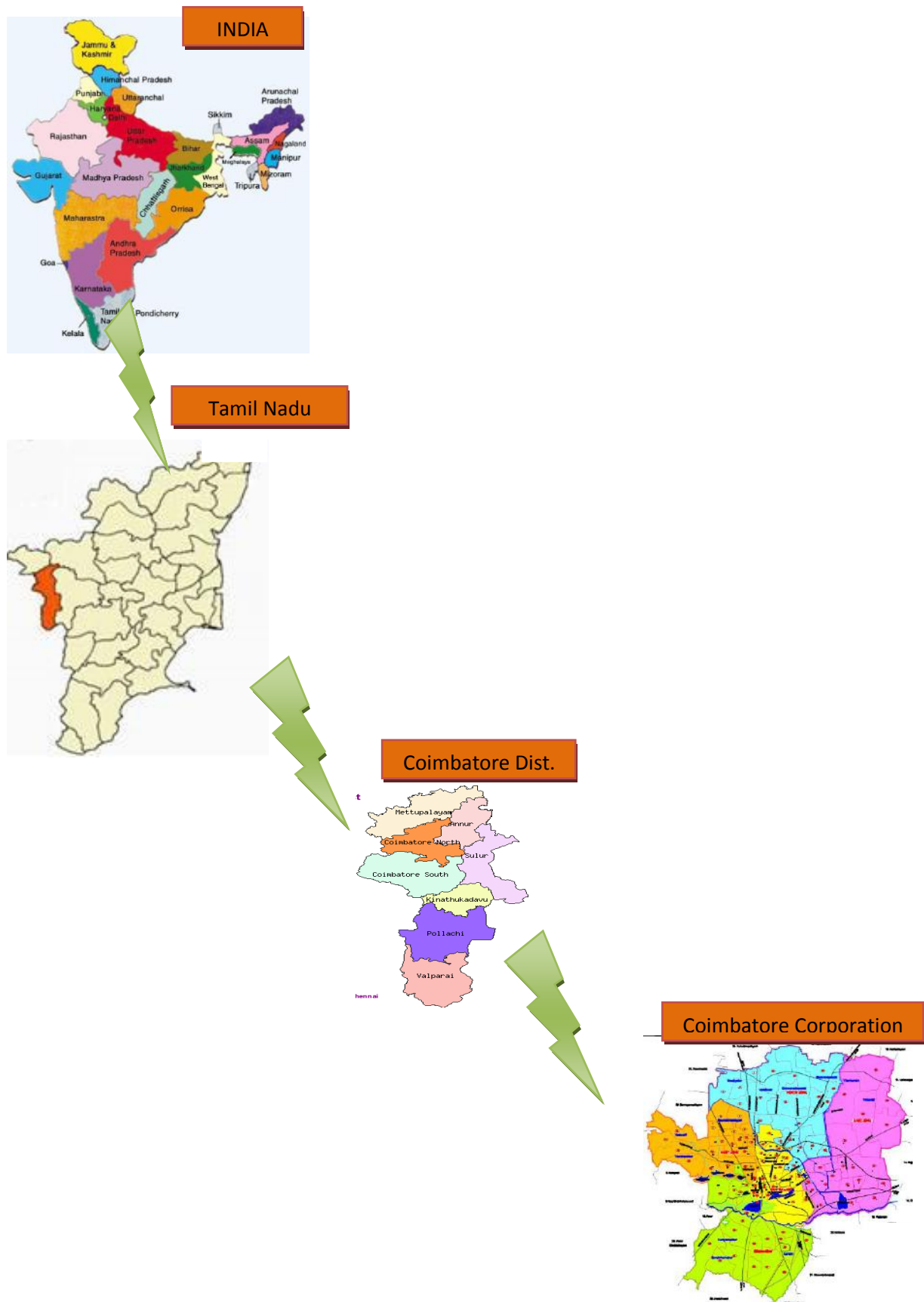


Fig. 2.1 Location map of Coimbatore Corporation

2.1.3 Climate and Rainfall

Coimbatore has a pleasant, salubrious climate due to its proximity to thickly forested mountain ranges and the cool breeze blowing through the Palghat gap which makes the consistently hot temperatures pleasant. The city has a tropical wet and dry climate, with the wet season being from October to December due to the northeast monsoon. The mean maximum and minimum temperatures varies between 35°C and 18°C highest temperature ever recorded is 41°C and lowest is 12°C. (<http://www.weatherbase.com/>)

Due to the presence of the mountain pass, more elevated parts of the district benefit from the south-west monsoon in the months from June to August. After a warm, humid September, the main monsoon starts from October lasting till early November. These monsoons are brought about by the retreating monsoon. The average annual rainfall is around 700 mm with the North East and the South West monsoons contributing to 47% and 28% respectively to the total rainfall. (<http://www.weatherbase.com/>)

2.1.4 Rapid Growth of the City

Coimbatore has seen rapid growth due to industrialisation. The Kalleeswara Mills and the Somasundra mills were established in 1910. Lakshmi Mills Company commenced their operations in 1911 in Papanaiyappalayam. By the 1930s, several textile mills had been established around Coimbatore due to the cheap power offered by the Pykara power station. Coimbatore experienced a textile boom in the 1920s and 1930s partly abetted by the decline of the textile industry in Bombay. Growth of the city was also fostered by the construction of the Mettur Dam in 1934. During this period, road and rail connectivity with Coimbatore was improved considerably facilitating easier transportation of goods. The period 1911-1921 also witnessed the construction of over 15,000 irrigation wells with government loans bringing large chunks of barren land under cultivation. Coimbatore was also home to some of the earliest film studios in South India. Rangaswamy Naidu established the Central Studios in 1935 while S. M. Sriramulu Naidu set up the Pakshiraja Studios in 1945.

In 1922, Narayanaswamy Naidu started a workshop to repair cane crushers and cotton ginning machines. Two years later, he established the Dhandayuthapani Foundry to manufacture Agricultural Pumps and Motors. Around the same time, G.D.Naidu started his unique bus service. He is also credited for manufacturing the first electric motor in India. Apart from that he started a series of Engineering companies and Industrial training institute. In 1931, Pollachi Nachimuthu Gounder started his transport business



which grew into a multi-crore industrial and trading house. In the 1940s, a Sheffield University graduate, D. Balasundaram Naidu from Avarampalayam in Coimbatore, started his company Textool to manufacture textile machines of his design. Textool in 50's and 60's was one of the largest companies in South India that designed and manufactures indigenous Machines and industrial products. In 1965 another Textile family of VLB Naidu group set up Mopeds India Ltd after a technical collaboration with Motobécane of France to manufacture their legendary Motobécane Mobylette 50 cc moped under the name Suvega, but, only the central office was in Coimbatore while the plant was set up in Tirupathi.

2.2 Overview of the ULB

In the year 1866, Coimbatore was constituted as a Municipal Town with an area of 10.88 sq.km. Coimbatore Municipality has been upgraded from special grade municipality to Corporation (third in Tamil Nadu) with effect from 01.12.1978. In 2012, the Corporation won the *Best Corporation Award* in Tamil Nadu. This corporation consists of 100 wards. For administrative purpose the Coimbatore Corporation is divided into five zones namely North, East, West, South, and Central. In 2010 the Coimbatore Corporation area limit has been increased from 105.6 sq km to 265.36 sq km. Three municipalities (Kurichi Municipality, Kuniyamuthur Municipality, Gowndampalayam Municipality) and seven town panchayats (Sarvanampatti town panchayat, Kalappatti, Vellaloor, Vadavalli, Thudiyalur, Veerakeralam, Perur) and two village panchayat (Chinnayamplayam village panchayat, Villangurichi village panchayat) were added to the corporation.

The total extent of the Local Planning Area is 1277 sq.km with a population of 21,51,466 as per 2011 Census. The LPA area includes Coimbatore Corporation, 1 Township, 31 Town Panchayats and 55 Revenue Villages spread over in Coimbatore, Palladam and

Mettupalayamtaluks. These suburbs are governed by local bodies called Village Panchayats and Town Panchayats. Besides the Coimbatore Municipal Corporation, the Coimbatore UA comprises the Town Panchayats: Vellalur, Irugur, Sulur, Pallapalayam, Kannampalayam, Veerapandi, Periyanaickenpalayam, Narasimhanaickenpalayam, Idikarai, Vedapatti, Perur, Kuniyamuthur, Madukkarai, Ettimadai, Dhaliyur, Thondamuthur, Thirumalayampalayam, Othakalmandapam, Chettipalayam, Alanthurai, Pooluvapatti, Thenkarai, Karumathampatti, Sarcarsamakulam, Mopperipalayam and Gudalur. Table 2.1 provides the complete information about the Coimbatore ULB.

Table 2.1 Information about Coimbatore Corporation

S. No.	Title	Info
1	Name of the ULB	Coimbatore
2	Area of the Corporation (sq.km.)	265.36
3	Area of the Local Planning (sq.km.)	1277
4	No. of Zones	5
5	No. of Wards	100
6	Total Population (Census 2001) in Lakhs	9.71
7	Total Households (Census 2001) in Lakhs	2.21
8	Total Population (Census 2011) in Lakhs	16.01
9	Total Households (Census 2011) in Lakhs	3.60

Source: Census 2011 and Master plan

The population of Coimbatore city has grown from 47,007 in 1911,16.01 Lakhs in 2011.The Table 2.2 shows the decimal growth of population from 1911. It is seen that the population has increased nearby22 times from that it was in the year 1911.The electric power made available from the year 1935, which encouraged establishment of number of Industries between the years 1941 and 1951.The increase in population in the year 1981is due to inclusion of additional area in Coimbatore Municipality for upgrading corporation. The increase in population in the year 2011 is due to extend of boundary of corporation limitfrom105.6 sq.km. to 265.36 sq.km. Fig. 2.2 shows the variation of population for the past five decades.The decennials growth rate during1911-81 is 96.68% in Coimbatore city. The decade wise growth and variation of population in corporation area is given in Table 2.2.

Table 2.2 Decade wise population growth and variation of Coimbatore city

Year	Population	Increase	% of Variation
1911	47007	-	-
1921	65788	18781	39.9
1931	95198	29140	44.7
1941	130348	35150	36.9
1951	197755	67407	51.7
1961	286305	88550	44.7
1971	356368	70063	24.5
1981	700923	344555	96.7
1991	806321	105398	15.0
2001	930882	124561	15.4
2011	1601438	670556	72.0

Source: Master Plan and Census of India 2011

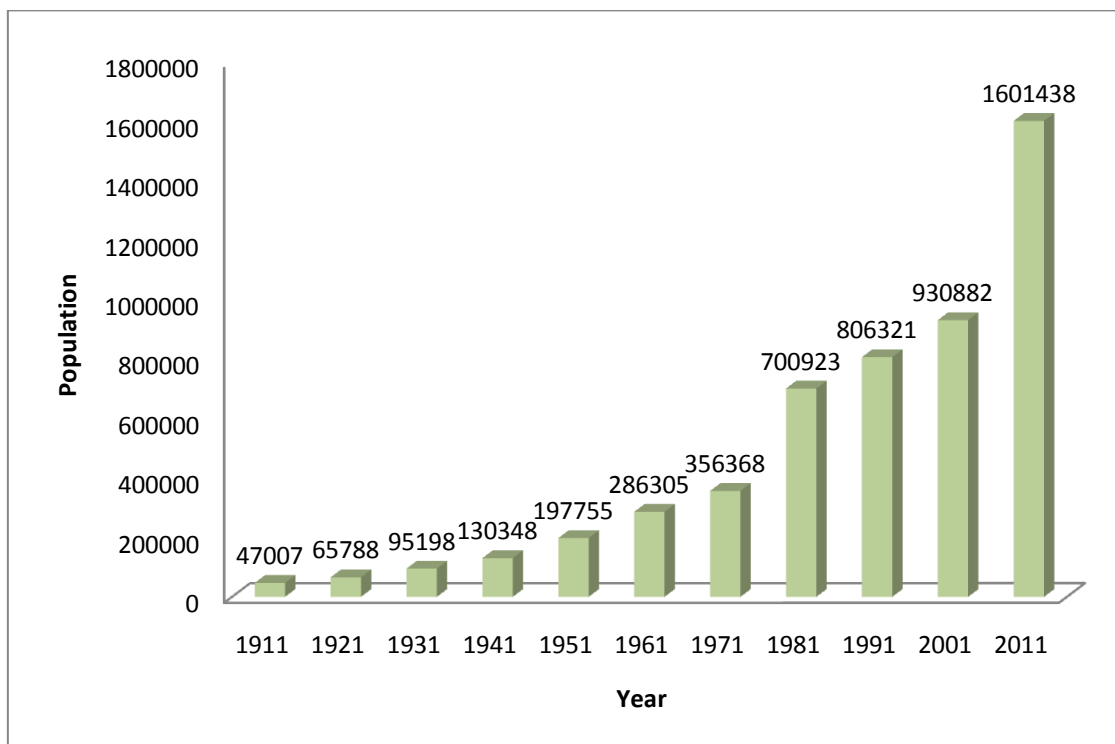


Fig. 2.2 Population Growth in Coimbatore Corporation

2.3 Land Use of the Coimbatore

The present pattern of development of various activities within the Coimbatore LPA indicates that the expansion is taking place along the major radial roads particularly on North, East and South, as mentioned in the master plan. The growth in the earlier decades was towards east because of the establishment of a number of technical and educational institutions along with the Textile mills on the major Highway to the city viz., Avinashi Road, The growth towards North South and East has been more conspicuous by its concentration within a belt along the radial road and rail routes to Mettupalayam, Pollachi, Palghat from Coimbatore. Some evidence of growth is also seen along the road to Sathyamangalam and Trichy road and also along the road leading to Maruthamalai Hills, towards west of the City.

The extent of Coimbatore Local planning area is 1277 Sq.km including corporation area. In the Local Planning Area, 22.57% of the total area is Developed land. The remaining 77.43% form undeveloped area consists of Agricultural and vacant lands. Table 2.3 lists the Land use break up of major land use within the Local Planning Area. Fig. 2.3 shows the percentage of existing land use category.

Table 2.3 Existing Land Use pattern of Coimbatore LPA

Land Use	Area in Hectare	% of developed Area	% of the total Area
Residential Use	21839.95	75.76%	17.10%
Commercial Use	479.24	1.66%	0.38%
Industrial Use	2819.24	9.78%	2.21%
Educational Use	2194.74	7.61%	1.72%
Public and Semi Public Use	1493.77	5.18%	1.17%
Agricultural Use	98874.79	---	77.43%
Total	127701.73	100.00%	100.00%

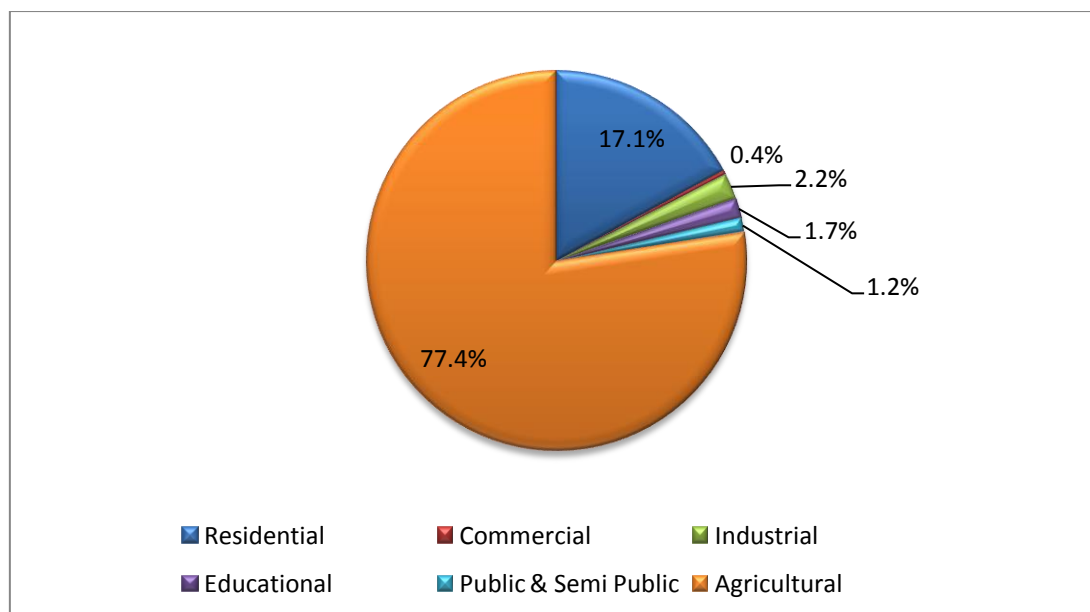


Fig. 2.3 Percentage of existing land use pattern of Coimbatore LPA

2.4 Diagnostic assessment of slums

Population growth and governance are the two main reasons for the slum increases in city. The migrated poor are settled in unusual and without any basic amenities to satisfy their land needs. The strategy employed by the urban poor is building semi pucca and katcha houses by investing minimum cost in insecure tenure which results in chaotic development of slums in Coimbatore Corporation.

UN-HABITAT says “The lack of secure tenure is a primary reason why slums persist”.

Secure tenure provides chance to access economic and social facilities, including safety, public services and livelihood opportunities. It is particularly difficult for the urban poor to obtain tenure because property registration processes are complicated and expensive. Therefore, slum areas are coupled with a high number of cramped and not planned housing usually constructed using non permanent materials such as wall with mud mortar, Asbestos sheet and roofs with straw, tiles. Floors are usually made of earth. Because of the Poverty, slum dwellers are unable to afford decent housing structures. Such structures usually do not meet any building regulation requirements. This is often cited as one of the main characteristics of slums. This includes (a) lack or inadequate access to safe drinking water and sanitation; (b) Sub-standard housing and inadequate structure (c) Hazardous locations (d) Overcrowding and high density and (e) Security of tenure. This is a very common feature

of the slums in the region of Coimbatore Corporation. Such conditions are better in some areas compared to others.

2.5 SURVEYS, INVESTIGATIONS AND CONSULTATIONS

The Coimbatore city being an industrial hub, attracts migrants from rural areas. Due to this proliferation of illegal slums and squatter settlements exist in the city. These areas become unhealthy locations and are prone to a variety of health related hazards. In addition, high land prices with inappropriate and unclear land ownership, poor access to credit and inadequate provision of serviced land has further accentuated this growth in slums

Coimbatore city has a total of 319 pockets of slums with 46650 households and distributed in five zones. Most of the slums are identified in the newly added corporation area (Kurichi Town) which comes under the south zone of the corporation. Detailed list of the slums in Coimbatore have been collected from the Coimbatore Corporation through TNSCB officials (Table 2.4.)

Table 2.4 Details of Slums in Coimbatore Corporation

S.No	Name of the Slum	No. of Slums	House Holds
1	Developed Slums under TNUDP Schemes by TNSCB	44	5964
2	Slums not Surveyed under RAY due to Opposition from Slum Dwellers	60	10749
3	Surveyed Slums under RAY	215	29937
Total		319	46650

2.5.1 Slums not Surveyed under RAY – Developed Slums

The Grant Fund was constituted as a component of the restructured Tamil Nadu Urban Development Fund with financial assistance from World Bank in 1996. The investment under TNUDP I and II primarily supported the creation of basic services. The Government of Tamil Nadu (GoTN) has implemented the Third Tamil Nadu Urban Development Project (TNUDP-III) with the World Bank assistance. Under TNUDP scheme, TNSCB, Coimbatore Division has constructed tenements / houses for various slums which are shown in the Tables 2.5 to 2.9 by Zone wise

Table 2.5 Developed Slums in North Zone and not covered under RAY

S.No	Ward No	Name of the Slum	Remarks	House Holds
1	12	K KPudur	Tenable Slum TNSCB Development under TNUDP	117
2	41	Ganapathi– LBS	Tenable Slum TNSCB Development under Land Bank Scheme	47
Total No. of HHs in North Zone				164

Table 2.6 Developed Slums in East Zone and not covered under RAY

S. No.	Ward No	Name of the Slum	Remarks	House Holds
1	55	LML Colony Bharathypuram	Tenable Slum TNSCB Development under TNUDP	56
2	55	Jothi Nagar	Tenable Slum TNSCB Development under TNUDP	70
3	70	Balasubramanian Nagar	Tenable Slum TNSCB Development under TNUDP	73
4	65	Annanagar Sowripalayam	Tenable Slum TNSCB Development under TNUDP	122
5	69	Periyar Nagar	Tenable Slum TNSCB Development under TNUDP	92
6	70	Rajiv Nagar	Tenable Slum TNSCB Development under TNUDP	242
7	70	Rajiv Gandhi Nagar Phase – 1	Tenable Slum, TNSCB Development under Tenement	144
8	70	Rajiv Gandhi Nagar Phase – II	Tenable Slum, TNSCB Development under Tenement	72
9	59	Singanallur - LBS	Tenable Slum, TNSCB Development under Land Bank Scheme	124
10	14	Kothari Layout	Tenable Slum TNSCB Development under TNUDP	26
Total No. of HHs in East Zone				1021

Table 2.7 Developed Slums in West Zone and not covered under RAY

S. No	Ward No	Name of the Slum	Remarks	House Holds
1	9	Dr.Ambedkar Nagar	Tenable Slum TNSCB Development under TNUDP	52
2	14	Bhuvanewari Nagar	Tenable Slum TNSCB Development under TNUDP	55
3	13	Venkatapuram	Tenable Slum TNSCB Development under TNUDP	149
4	20	Gandhi Nagar – Seeranaickenpym	Tenable Slum TNSCB Development under TNUDP	99

5	24	Methavar Colony	Developed under Tenements	115
6	22	Arundhadhiyar Colony	Tenable Slum TNSCB Development under TNUDP	66
Total No. of HHs in West Zone				536

Table 2.8 Developed Slums in South Zone and not covered under RAY

S. No	Ward No	Name of the Slum	Remarks	House Holds
1	73	Bye-Pass Road	Tenable Slum TNSCB Development under TNUDP	66
2	92	Anna Nagar MGR Nagar	Tenable Slum TNSCB Development under TNUDP	133
3	14	Ashok Nagar East	Tenable Slum TNSCB Development under TNUDP	200
4	92	Annai Indira Nagar	Tenable Slum TNSCB Development under TNUDP	124
5	14	Sivagami Nagar	Tenable Slum TNSCB Development under TNUDP	42
6	60	Kallimedu	Tenable Slum TNSCB Development under TNUDP	50
7	90	Vivekananda Square	Tenable Slum TNSCB Development under TNUDP	270
8	90	Gandhi Square - Arivoli Nagar	Tenable Slum TNSCB Development under TNUDP	85
9	17	Gondi Colony	Tenable Slum, TNSCB Development under Tenement	59
10	17	Gondi Nagar	Tenable Slum, TNSCB Development under 11 th Finance Scheme	56
11	97	Pillayarapuram (Kurichi)	Tenable Slum TNSCB Development under 11 th Finance Scheme	302
12	97	Sugunapuram (East)	Tenable Slum TNSCB Development under 11 th Finance Scheme	289
13	97	Sugunapuram (Phase – 1)	11 th Finance Scheme	242
14	97	Periyar Square	11 th Finance Scheme	27
Total No. of HHs in South Zone				1945

Table 2.9 Developed Slums in Central Zone and not covered under RAY

S.No.	Ward No	Name of the Slum	Remarks	House Hold
1	45	Shanmuga Gounder Nagar	Tenable Slum TNSCB Development under TNUDP	92
2	45	NarayanasamyGounder Street	Tenable Slum TNSCB Development under TNUDP	70
3	53	Anna Nagar Jawahar Nagar	Tenable Slum TNSCB Development under TNUDP	119
4	70	Ammankulam South	Tenable Slum TNSCB Development under TNUDP	304
5	70	Ammankulam Road	Tenable Slum TNSCB Development under TNUDP	109
6	71	Sivaram Nagar	Tenable Slum TNSCB Development under TNUDP	126
7	82	Vincent Road	Tenable Slum TNHB Tenements	352
8	84	BalayamThotam	Tenable Slum TNHB Tenements	16
9	84	BalayamThotam	Tenable Slum TNHB Row House	290
10	84	Slaughter House	Tenable Slum TNHB Tenements	246
11	84	LingegowderThottom	Tenable Slum TNHB Row House	286
12	64	CMC Colony	Tenable Slum TNSCB Tenements	288
Total No. of HHs in South Zone				2298

2.5.2 Slums not Surveyed under RAY due to Opposition from Slum Dwellers

Our enumerators visited the below mentioned slums more than five times to collect socio economic data. But they were unable to collect the data due to opposition from the slum dwellers which comes 10749 households of 60 slums. The slum details are given in the Tables 2.10 to 2.14.

Table 2.10 Slums in North Zone not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Holds
1	44	Raju Nagar	Untenable Slums Objectionable land	85
TNUDP Scheme Implemented Slums				
2	28	Anna Nagar Chennavedampatti	Tenable Slum	76

3	49	Thairltery	Tenable Slum	97
4	4	Jallikkorai	Tenable Slum	67
5	2	Ambedkar Nagar – Thudiyalur	Tenable Slum	52
TOTAL				377

Table 2.11 Slums in East Zone not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Holds
TNUDP Scheme Implemented Slums				
1	60	Ondipudur North	Tenable Slum	82
2	71	Ammankulam Channel	Tenable Slum	200
3	64	Gandhinagar Upplipalayam	Tenable Slum	63
TOTAL				345

Table 2.12 Slums in West Zone not Surveyed under RAY due to Opposition from Slum Dwellers

S. No.	Ward No	Name of the Slum	Remarks	House Holds
1	10	Chairman Raj Nagar	Untenable Slums Objectionable land	193
2	10	Chairman Raj Nagar Patta	Tenable Slums	310
3	10	Indira Roller Mill	Untenable Slums Objectionable land	69
4	10	Kannappan Puram	Untenable Slums Objectionable land	128
5	10	Periyar Nagar	Untenable Slums Objectionable land	151
6	6	MGR Nagar	Tenable Slums	188
7	6	Advani Nagar	Untenable Slums Objectionable land	192
8	24	Methavar Colony encroachments	Untenable Slums Objectionable land	89
9	57	Muthananakulam	Untenable Slum Objectionable land	1470

TNUDP Scheme Implemented Slums				
10	9	Anna Nagar MGR Nagar	Tenable Slum	133
11	9	Dr.Ambedkar Nagar Ph – II	Tenable Slum	215
12	8	Annai Indira Nagar	Tenable Slum	124
13	14	Thilakar Veethi	Tenable Slum	76
14	76	Vedapatti Road	Tenable Slum	90
15	76	Thiru. Vee. Ka Nagar	Tenable Slum	57
16	26	Nagarajapuram	Tenable Slum	250
17	8	Jeeva Nagar	Tenable Slum	204
18	19	Linganoor (Part 1)	Tenable Slum	100
19	19	Linganoor (Part 2)	Tenable Slum	135
20	16	Vadavalli Nagar – Rajiv Nagar	Tenable Slum	152
21	4	Anna Nagar Goundanpalyam	Tenable Slum	93
22	10	Ashok Nagar East	Tenable Slum	200
TOTAL				4619

Table 2.13 Slums in South Zone not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Holds
1	1	Ramanadevar Street	Tenable Slums	255
2	96	Near RJ Hospital, Putuviki	Untenable Slums Objectionable land	37
3	87	Karuparayan Koil Street	Tenable Slums	100
4	99	Tomcheri	Untenable Slums Objectionable land	30
5	99	Eswar Chetty Street	Tenable Slums	30
6	99	Boyer Street, Konavaikal Palayam	Tenable Slums	100
7	1	Gondi Colony encroachments	Untenable Slums Objectionable land	100
TNUDP Scheme Implemented Slums				
8	100	Mettur Annapuram	Tenable Slum	114

9	85	Sundakkamuthur Road	Tenable Slum	58
10	97	Indira Nagar Kurichi	Tenable Slum	91
11	93	B.K.Pudur	Tenable Slum	71
12	91	AnnaiSathya Nagar	Tenable Slum	149
13	97	Vanjiamman Nagar	Tenable Slum	56
14	93	Sugunapuram West	Tenable Slum	151
15	54	Anna Colony Karumbukadai	Tenable Slum	102
TOTAL				1444

Table 2.14 Slums in Central Zone not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Holds
1	73	Valankulam	Untenable Slums Objectionable land	820
2	70	Ammankulam – Erimedu	Untenable Slums Objectionable land	482
3	53	Rayar Nagar	Untenable Slums Objectionable land	55
4	84	Ukkadam CMC Colony encroachments Slaughter House (Corporation Land)	Untenable Slums Objectionable land	768
5	84	Slaughter House - Encroachment in TNSCB	Untenable Slums Objectionable land	274
6	84	Slaughter House - Encroachment in Corp	Untenable Slums Objectionable land	130
7	64	CMC Colony Encroachment	Untenable Slums Objectionable land	144
TNUDP Scheme Implemented Slums				
8	70	Masala Colony	Tenable Slum	120
9	49	Thair Itteri	Tenable Slum	71
10	51	Ganesh Nagar	Tenable Slum	150
11	51	Anna Nagar – Jawahar Nagar	Tenable Slum	119
12	49	Anna Nagar	Tenable Slum	106

13	49	Gandhinagar Sivananda Colony	Tenable Slum	400
14	70	Ammankulam South Extn.	Tenable Slum	259
15	70	By Pass Road	Tenable Slum	66
TOTAL				3964

2.5.3 Surveyed Slums under RAY

After detailed deliberation with corporation officials, community organizers, TNSCB officials, elected representative etc., list of slum for the project is finalized. Totally 215 slums have been enumerated under RAY scheme. Henceforth, statistical analysis presented in the report will reflect only the survey slums. Table 2.15 shows the number of wards and area of each zone of the Coimbatore city.

Table 2.15 Zone and Ward details of Coimbatore City

S.No.	Zones	Wards	Total No. of Wards	Area in sq.km
1	North	1, 2, 3, 4, 26, 27, 28, 29, 30, 31, 38, 39, 40, 41, 42, 43, 44, 46, 47 and 55.	20	59.23
2	East	32, 33, 34, 35, 36, 37, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 69 and 75	20	73.66
3	West	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24	20	56.07
4	South	76, 77, 78, 79, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99 and 100	20	45.43
5	Central	25, 45, 48, 49, 50, 51, 52, 53, 54, 68, 70, 71, 72, 73, 74, 80, 81, 82, 83 and 84	20	22.65
	TOTAL		100	257.04

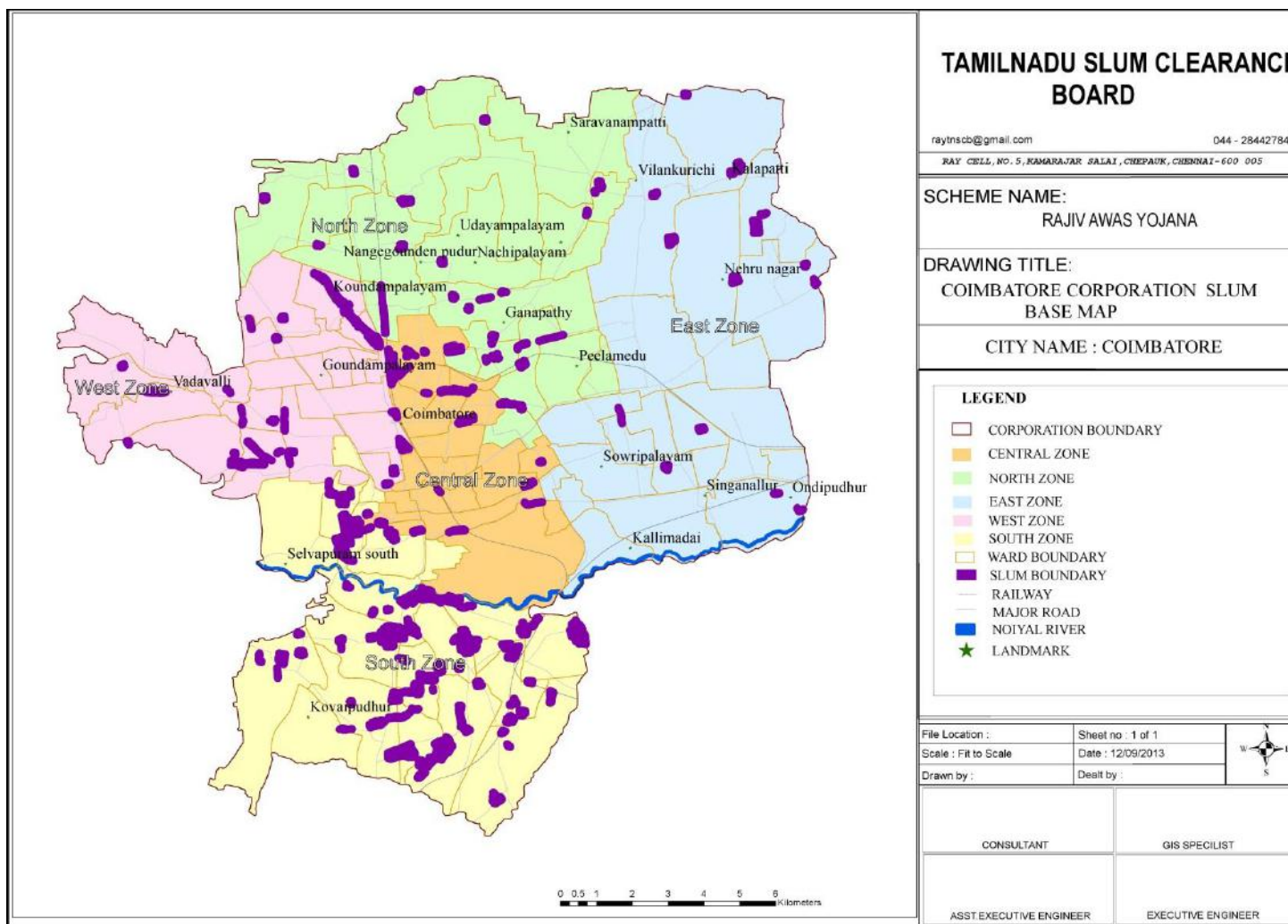


Fig. 2.4. Base Map with location of slums

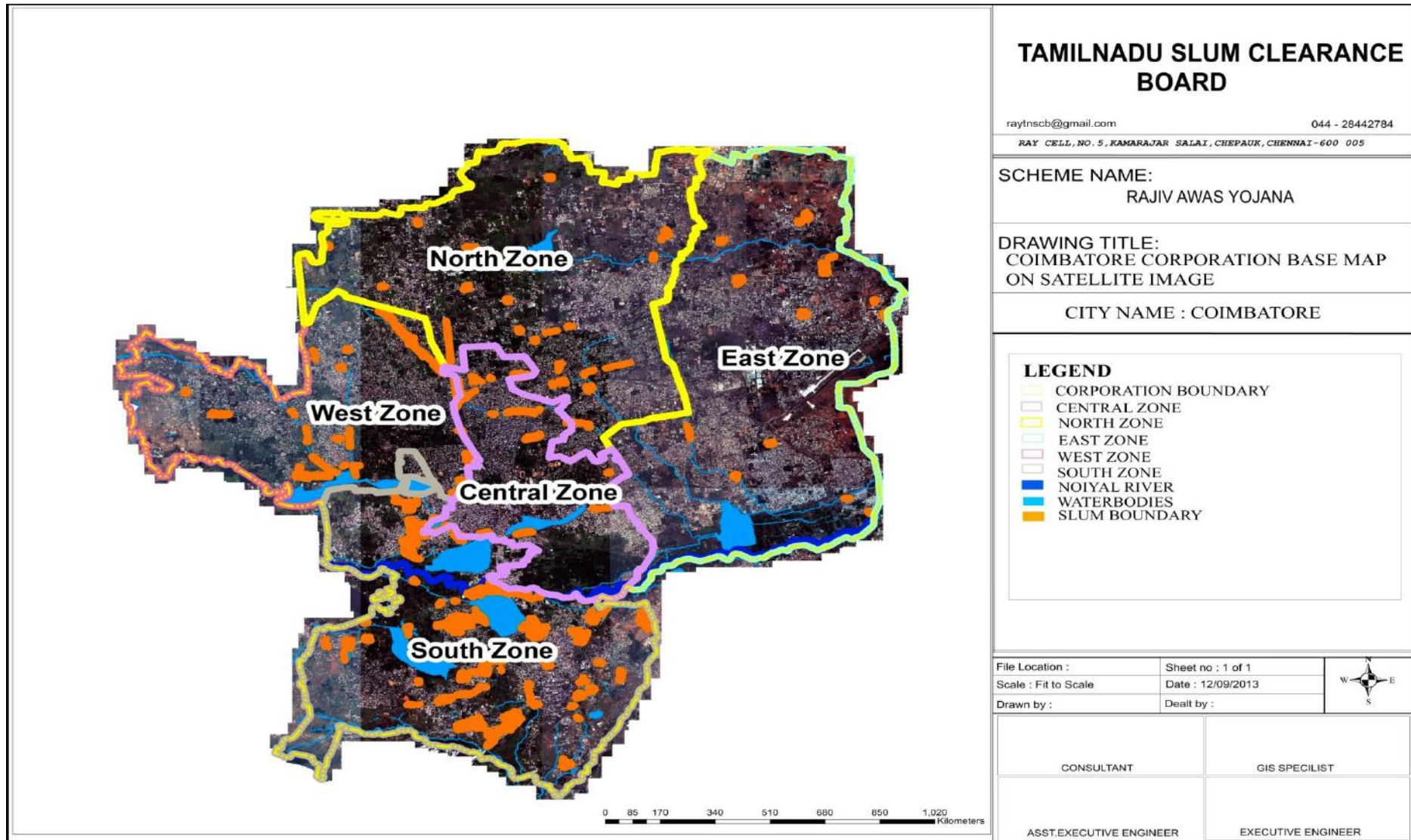


Fig. 2.5 Spatial distribution of slums on satellite imagery

Base map of Coimbatore Corporation with all important landmarks and the detailed demarcation of slums is shown in Fig. 2.4. Satellite map of Coimbatore Corporation along with locations of slums is shown in Fig. 2.5.

2.6 Methodology

The main aim of this project is the preparation of Slum-free City Plans based on guidelines provided by the Ministry of Housing and Urban Poverty Alleviation, GoI, and Tamil Nadu Government through Tamil Nadu Slum Clearance Board (TNSCB). The preparation of Slum-free City Plan will broadly involve Slum Redevelopment/Rehabilitation Plans based on (a) Survey of all slums – notified and non-notified; (b) Mapping of slums using the state-of-art technology; (c) integration of geo-spatial and socio-economic data; and (d) identification of development model proposed for each slum. Base maps to an appropriate scale would be a pre-requisite for the preparation of Slum Redevelopment Plan/Slum-free City Plan. States /UTs may need to proceed in the following steps for the preparation of Slum-free City Plans. The methodology followed in carrying out the above work consists of the following steps.

Step 1: The preparation of base maps for the whole city and its fringes are carried out using the Quick Bird satellite images which are provided by TNSCB.

Step 2: Identification and inventory of all slum clusters of the five zones carried out with the help of satellite image and list provided by the Tamil Nadu Slum Clearance Board (TNSCB).

Step 3: Conduct of Slum Survey based on the detailed formats provided by Tamilnadu Slum Clearance Board after due training of trainers, training of survey personnel /cavassers and community mobilization.

Step 4: Collection of photo identification data of slum dwellers (Mostly head of family).

Step 5: Development of Slum Map of every slum within the region and its fringes using GIS with Quick Bird images, ground level spatial data collected through GPS coordinates, collating spatial information with respect to plot boundaries, network of basic infrastructure like roads, sewerage, storm drainage and water lines, etc and superimposing this on the satellite image and importing them into GIS platform.

Step 6: Entry of data from Slum Surveys in the web-enabled MIS application, compilation and collation of data, preparation of slum-wise. The MIS will assist in developing a robust Slum and Slum Households Information System.



Fig 2.6 Methodology deployed for preparing SFCPoA

Step 7: Integration of Slum MIS with GIS Maps to enable the preparation of GIS-enabled Slum Information System that is to be used for the preparation of Slum Development Plans.

First Slum Enumeration Block (EB) is demarcated based on the information provided by TNSCB officials as well as information obtained from Coimbatore Corporation. As one-to-one mapping between HLB number and EB number was not planned, it was not possible to exactly get the “Slum HLB” numbers. Based on the list of Notified/Non Notified slums provided by the officials, whereas additional slums were also identified based on the actual living conditions. Methodology followed for enumeration is shown in Fig. 2.6.

2.7 Socio Economic Survey

2.7.1 Stakeholders Consultation

The first step in each level the key stakeholders are identified to involve in Slum Free City Plan of Action. The Officers from TNSCB played a crucial role in completing this task as they have a good knowledge of existing slum condition. Consequently, Corporation officials identified and suggested key stakeholders to implement the study and its concepts.

The stakeholder consultation are done at four stages

(i) Official meetings:

At this stage of meeting the proposals of the development are discussed in detail with the Worshipful Mayor of Coimbatore Corporation, Commissioner of Corporation, City Engineer, SE, EE and AEs of Slum Clearance Board, Councillors and other officials concerned. In addition to the programme slum dwellers and local NGOs" are also consulted

(ii) City level consultation:

During the city level consultations, the stakeholders discussed about the Strength and weaknesses of the major issues in the city with sectoral officials like water supply, Sanitation, Slum Clearance board etc.,

(iii) Ward level consultation:

At this stage the salient features of RAY are discussed with municipal councillors, NGOs, Women Self Help Groups and academic institutions to prepare a more detailed action plan for each of the key issues.



Fig 2.7: Consultative Meeting with the Slum Dwellers

(iv) Slum level consultation:

At this stage the slum dwellers were informed on necessity of their involvement and roles as representatives of the settlements in this project. The slum dwellers were given an opportunity to express the challenges being faced in the settlements and prioritized the issues of basic amenities of sanitation, drainage and drinking water in settlement. The high degree of passion exhibited by the slum community during the slum level consultative meeting is a clear sign of their readiness to cuddle change and also to participate for the improvement of conditions in the settlement.

The Tamil Nadu Slum Clearance Board confers with ULB, public and private agencies and conducts consultative meetings to obtain essential input for Slum Free City Plan of Action, from elected people representatives as well as from progressive citizens. In Coimbatore Six consultative with stake holders, public and other government official has been conducted in connection with Rajiv Awas Yojana which is shown in Fig 2.7.

After detailed deliberation with corporation officials, community organizers, TNSCB officials, elected representative etc., list of slum for the project is finalized. Totally 205 slums have been identified for the enumeration purpose under RAY scheme. Slums covered under JNNURM, IHSDP scheme are not taken for the survey. Table 2.16 lists the name of the slums in the five zones of Coimbatore Corporation with number of households. Out of 100 wards 39 wards do not have slums. The Ward 01, 05, 11, 12, 13, 14, 22, 23, 25, 29, 30, 36, 37, 38, 39, 54, 55, 57, 58, 59, 60, 63, 65, 66, 67, 68, 69, 72, 73, 74, 75, 76, 79, 80, 81, 82, 83, 84, 90.

Table 2.16 Surveyed Slums under RAY in Coimbatore Corporation

S.No	Ward No	Slum Name	Tenability	Matrix/ Rank	No. of Households
North Zone					
1	2	Anna Colony - Thudiyalur	Tenable	2x2	154
2	3	Pattathu Arasimman Kovil Veethi Part -I	Tenable	2x2	30
3	3	Pattathu Arasimman Kovil Veethi Part - II	Untenable	2x2	7
4	4	Kalaingar Nagar	Untenable	2x3	128
5	26	Gandhi Veethi - VattamalaiPalayam	Tenable	2x2	38
6	26	Meenatchi Amman Koil Veethi - Ambedkar Nagar	Tenable	2x2	279
7	28	Chinnametupalayam AD Colony	Tenable	3x2	38
8	28	Anna Nagar	Tenable	2x2	53
9	31	Kumaran Nagar	Tenable	2x1	31
10	31	KVK Nagar	Untenable	2x2	55
11	31	Periyar Nagar	Tenable	3x3	148
12	40	Avarampalayam – Pattalamman Koil Street	Untenable	2x3	266
13	40	Chinnasamy Nagar Pallam	Untenable	2x2	62
14	40	Vivekananda Nagar	Untenable	1x3	94
15	41	Ambedkar Veethi	Tenable	2x2	53
16	41	Iyyavu Veethi	Tenable	2x2	52
17	41	Kakkan Veethi	Tenable	2x3	204
18	41	Rabindranath Tagore Street - Part I	Untenable	3x2	57
19	41	Rabindranath Tagore Street - Part II	Untenable	3x2	62
20	41	Rajarathinam Veethi	Tenable	2x2	41
21	42	Udayampalaym - Harijan Colony	Tenable	2x2	105
22	43	JeevaVeethi - Urumandampalayam	Tenable	2x1	141
23	44	Karuppusamy Nagar	Untenable	2x1	212
24	44	V.O.C Nagar Ext and Velusamy Nagar	Untenable	1x2	114
25	46	Old Sathy Road	Untenable	2x3	44
26	47	Arthnur Amman Koil Veethi	Tenable	2x2	131
		Total No. of HHs in North Zone			2599
East Zone					
27	32	Ambedkar Nagar	Tenable	2x2	239
28	32	Lenin Veethi	Tenable	2x2	90

29	33	Pudhu Colony	Tenable	2x2	180
30	33	Rathinagiri Veethi	Tenable	3x2	21
31	33	Shastri Veethi - Kalapatti	Tenable	2x3	85
32	34	Kalappatti Nehru Nagar	Tenable	2x2	11
33	34	Nehru Nagar Palli Veethi Part - I	Untenable	2x2	114
34	34	Nehru Nagar Palli Veethi Part - II	Tenable	2x2	100
35	34	Veeriampalayam Gandhi Veethi	Tenable	2x2	152
36	34	Veeriampalayam Nehru Veethi	Tenable	1x2	26
37	35	Kallimedu	Tenable	3x2	43
38	35	Stalin Nagar	Tenable	2x2	37
39	56	Anna Nagar Peelamedu	Untenable	2x3	59
40	61	Anna Nagar - Ondipudur	Untenable	2x3	25
41	61	Noyyal Bannari Amman Nagar - Ondipudur	Untenable	2x3	30
42	62	CMC Colony - Neelikkonampalayam	Tenable	2x2	156
43	64	CMC Colony - Vardharajapuram	Tenable	2x3	260
Total No. of HHs in East Zone					1628
West Zone					
44	5	Ashok Nagar East	Untenable	2x2	22
45	5	Mullai Nagar	Untenable	2x2	136
46	6	Gandhiji Nagar Near Vivekandha Nagar Part-II	Untenable	1x2	20
47	6	KamarajNagar - Harijan Colony	Tenable	2x2	66
48	7	Edaiyar Palayam - Harijan Colony	Tenable	2x2	80
49	7	Gandhiji Nagar Near - Vivekandha Nagar Part-I	Tenable	1x2	28
50	8	Ambedkar Nagar	Untenable	2x2	57
51	8	Edaiyar Palayam - Meenakshi Amman Kovil Veethi	Tenable	2x2	103
52	9	Ashok Nagr West	Untenable	1x2	198
53	9	Driver Colony	Untenable	1x2	193
54	9	Kamarajar Nagar	Untenable	1x2	109
55	9	Mariyamman Kovil Veethi	Tenable	1x2	34
56	9	PN Pudur Kuttai	Untenable	1x2	37
57	9	Prabhu Nagar	Untenable	2x2	393
58	10	Gohulam Colony 7 th Street. Pallam	Untenable	1x3	60
59	10	Karunanidhi Nagar	Untenable	1x2	312

60	15	Balan Nagar Palla Salai	Untenable	3x3	26
61	15	Mullai Nagar Palla Salai	Untenable	2x3	30
62	15	Valliammal Koil Street - Maruthamalai	Untenable	1x3	35
63	16	New ThillaiNagar - Slum Area	Untenable	1x3	45
64	17	Arunthathiyar Veethi - Veerakeralam	Tenable	2x2	50
65	17	Balaji Nagar Pallam	Untenable	3x3	55
66	17	Indira Nagar	Untenable	1x3	135
67	17	Vinayagar KovilVeethi - Kalveerampalayam	Tenable	2x2	47
68	18	Ajay Mugarji Street	Untenable	2x2	47
69	18	Ajunur - Harijan Colony	Tenable	2x3	25
70	19	Kalaingar Karunanidhi Nagar	Untenable	1x2	45
71	20	Anna Nagar Sugar Cane Main Road	Untenable	1x2	104
72	20	Ex Servicemen Colony	Untenable	1x2	34
73	20	MGR Nagar	Untenable	1x2	83
74	20	Muthumariamman Koil Street	Tenable	2x2	249
75	20	Tank bed line	Tenable	2x2	122
76	21	Kamarajapuram	Tenable	2x2	639
77	24	Macrikan Road - R.S Puram	Tenable	1x2	90
78	24	SundaramVeethi	Tenable	2x3	56
		Total No. of HHs in West Zone			3765
South Zone					
79	77	Chokkanpudur Selvapuram E.B. Colony	Untenable	2x3	31
80	77	Chokkanpudur Selvapuram Masaniamman Koil Veethi	Untenable	2x3	112
81	77	Jeeva Lane	Tenable	2x2	351
82	77	Karupannan Lane-1	Tenable	2x2	57
83	78	Devendirar Veethi North	Tenable	2x2	299
84	78	Kempatty Colony	Tenable	2x2	388
85	78	PonniVeethi	Tenable	2x2	27
86	78	Selvapuram - Perur Main Road	Tenable	1x3	16
87	78	SoliyaVellalar Street North	Tenable	1x2	67
88	85	ChettiVidhi Main Road	Untenable	1x2	90
89	85	Kardi Koil Veethi	Untenable	2x2	66
90	85	Kuppannan Thottam	Untenable	2x3	50
91	85	MGR Nagar - Sundakamuthur Road	Tenable	1x1	62

92	85	Pomman Chetti Veethi	Untenable	1x3	27
93	85	South of Perur TNSCB Scheme and Road Slum	Tenable	1x2	1439
94	85	Vaishiayal Veethi	Untenable	1x2	26
95	86	North of Perur TNSCB Scheme and Road Slum	Tenable	1x2	2171
96	87	Adisakthi Nagar	Untenable	2x2	45
97	87	Bharathi Nagar	Untenable	3x3	13
98	87	Gandhi Nagar	Untenable	2x3	100
99	87	Jeeva Nagar	Untenable	3x3	90
100	87	Quaid-e-Millath Street	Untenable	3x2	104
101	87	Kurunchi Nagar	Untenable	1x3	66
102	87	Palakad Main Road	Untenable	1x2	17
103	87	Part of ward 21	Tenable	2x2	245
104	87	Periyasamy Street	Untenable	3x2	261
105	87	Satham Nagar	Untenable	2x2	100
106	87	Thiruvalluvar Extension	Untenable	2x2	227
107	87	Thiruvalluvar Nagar- Thirumoorthy Nagar	Untenable	2x2	231
108	88	Allagasi Thottam	Tenable	1x2	96
109	88	Boer Street	Tenable	1x2	362
110	88	Dalfactory Street	Tenable	1x2	131
111	88	Grosscut- 1	Tenable	2x2	40
112	88	Kaliyappa Gounder Street	Tenable	1x2	49
113	88	Kottamedu	Untenable	2x3	33
114	88	Manikara Street	Tenable	1x1	43
115	88	Muventhar Nagar	Tenable	1x2	120
116	88	Upplithidu	Tenable	1x2	34
117	88	Vellaler Street	Tenable	1x2	94
118	89	Anna Nagar	Tenable	1x2	46
119	89	Harijana Colony 89	Tenable	2x2	116
120	89	Kamarajar Colony	Tenable	2x2	51
121	89	NTP Street	Tenable	1x1	257
122	89	Pajani Koil Veethi	Tenable	2x2	108
123	89	Periyar Nagar	Untenable	3x2	43
124	89	Vaikkalpalayam	Tenable	2x2	104
125	91	Nethaji Nagar	Tenable	2x2	53

126	91	Parvathi Nagar	Tenable	2x2	72
127	91	Sathya Nagar	Tenable	1x1	105
128	91	Thotta Rayan Koil Line	Tenable	1x2	21
129	92	Anna Nagar	Tenable	2x2	38
130	92	Batharakaliyamman Koil Street	Tenable	1x1	35
131	92	Madurai Veeran Kovil Veethi	Tenable	2x1	22
132	92	Narasimmapuram	Tenable	1x1	170
133	92	Senthazhail Nagar	Tenable	2x2	295
134	92	Sugunapuram East	Tenable	1x2	310
135	92	Sugunapuram Hills	Tenable	1x3	399
136	92	Sugunapuramvinayakar Koil Street	Tenable	1x2	147
137	92	Vinayakar Koil Street	Tenable	1x1	127
138	93	BagavathiNagar - Periyar	Tenable	2x2	135
139	93	Amman Colony Part - I	Tenable	2x2	36
140	93	Amman Colony Part - II	Untenable	2x2	12
141	93	Gnanapuram	Tenable	2x2	91
142	93	Maduraiveeran Street - Periyar	Tenable	2x2	122
143	93	Mariyamman Koil Veethi	Tenable	2x1	260
144	93	Periyar Nagar	Tenable	2x2	256
145	93	Sriram Nagar	Tenable	1x2	23
146	94	Kurchi Boyer Veethi	Tenable	2x1	154
147	94	Machampalayam - (Harijan Colony)	Tenable	2x1	316
148	94	MariammanKoil Street (Machampalayam Road)	Tenable	2x1	347
149	94	UppiliarThittu	Untenable	2x2	220
150	95	AnaiMedu Dharka Line	Untenable	3x3	31
151	95	Anaimedu	Untenable	3x3	386
152	95	Balusamy Naidu Street	Untenable	2x3	206
153	95	BhajanaiKoil Street	Tenable	1x2	64
154	95	Kurchi Gandiji Road	Tenable	3x2	480
155	95	Kurchi Silver Jubilee Street Part - I	Tenable	3x2	180
156	95	Kurchi Silver Jubilee Street Part - II	Untenable	3x2	70
157	95	Najundapuramlttery Part - I	Untenable	2x2	356
158	95	Najundapuramlttery Part - II	Tenable	2x2	695
159	95	Planiyappa Gounder Street - Pudu Street	Tenable	2x2	31
160	95	Podanur Fish Market	Untenable	1x2	54
161	95	Polachi Main Road	Tenable	2x2	144
162	95	Pollachi Road 1. Anna Nagar West	Untenable	2x3	81

163	95	Vannarapettai	Tenable	2x2	68
164	96	Kurchi Round Road - Kuriappan Palli Veethi	Tenable	1x1	252
165	97	Bharathi Nagar	Tenable	1x2	21
166	97	Gandhi Nagar Lower – Kel Pakuthi	Untenable	2x3	88
167	97	Gandhi Nagar Middle	Untenable	1x3	25
168	97	Gandhi Nagar Upper – Mel Pakuthi	Untenable	2x3	90
169	97	Indira Nagar	Untenable	2x2	25
170	97	J.J. Nagar East – Kolapadi Pakuthi	Untenable	2x3	71
171	97	J.J. Nagar West – Kolapadi Pakuthi	Untenable	2x3	334
172	97	Karuppurayan Kovil Veethi	Untenable	2x1	8
173	97	Pillayarapuram	Tenable	1x3	714
174	97	Thirumurugan Nagar	Untenable	2x2	8
175	98	Noorpath Colony	Tenable	1x1	219
176	98	Panchayath Office Road Part - I	Tenable	2x1	30
177	98	Panchayath Office Road Part - II	Untenable	2x1	71
178	98	Uthami Nagar	Tenable	1x1	168
179	99	Supparyan Muthali Street	Tenable	3x2	127
180	100	Carmel Nagar Part - I	Tenable	2x3	10
181	100	Carmel Nagar Part - II	Untenable	2x3	51
182	100	Echanari - Harijan Colony	Tenable	2x2	92
183	100	Echanari - Padasalai Veethi	Tenable	1x2	57
184	100	Echanari - Railway Gate	Untenable	1x3	27
185	100	J.J. Nagar - Ganessapuram	Tenable	2x1	26
186	100	KalluKuli	Untenable	1x2	43
187	100	Kattu Nayakkan Part (Part – I)	Tenable	1x2	25
188	100	Kattu Nayakkan Part (Part –II)	Untenable	1x2	11
189	100	Madurai Veeran Koil Street - Metur	Tenable	2x2	57
190	100	Muthu Mariyamman Kovil Street	Untenable	1x2	27
191	100	Thannir Thottam	Untenable	2x3	32
Total No. of HHs in South Zone					17826
Central Zone					
192	45	Balusamy Nagar	Untenable	2x2	113
193	45	Kamarajapuram Part - I	Tenable	2x2	100
194	45	Kamarajapuram Part - II	Untenable	2x2	105
195	45	Kannappa Nagar	Tenable	2x1	26
196	45	Narayana Gounder Street	Untenable	2x1	28
197	45	Teachers Colony	Untenable	2x2	26

198	48	Ex.Serviceman Colony	Untenable	1x3	41
199	48	V.O.C Nagar	Untenable	1x2	66
200	49	Anna Nagar	Untenable	2x2	89
201	49	Chinnaraj Nagar	Untenable	1x2	92
202	49	Sampath Street	Untenable	1x2	26
203	50	7 th Street Bridge Near Slum	Untenable	2x2	36
204	50	Hosimin Nagar	Untenable	1x2	437
205	51	Sastri Nagar	Untenable	1x3	294
206	52	Siddaputhur Part - 1	Tenable	2x2	509
207	52	Siddaputhur Part - 2	Tenable	2x1	158
208	53	Dhanalakshmi Nagar	Untenable	2x2	254
209	53	Karupakal Thottam	Untenable	1x2	184
210	70	Kulathumedu Vaikkal	Untenable	2x2	67
211	71	Damu Nagar	Tenable	2x2	52
212	71	Kallukuzhi	Tenable	2x3	252
213	71	Majeed Colony	Untenable	2x3	343
214	82	Ukkadam	Untenable	3x3	779
215	72	Kadalakara Sandhu	Untenable	3x3	42
		Total No. of HHs in Central Zone			4119
		Grand Total			29937

Base maps of each zone of Coimbatore Corporation with the detailed demarcation of slums is shown from Fig 2.8 to Fig. 2.12.

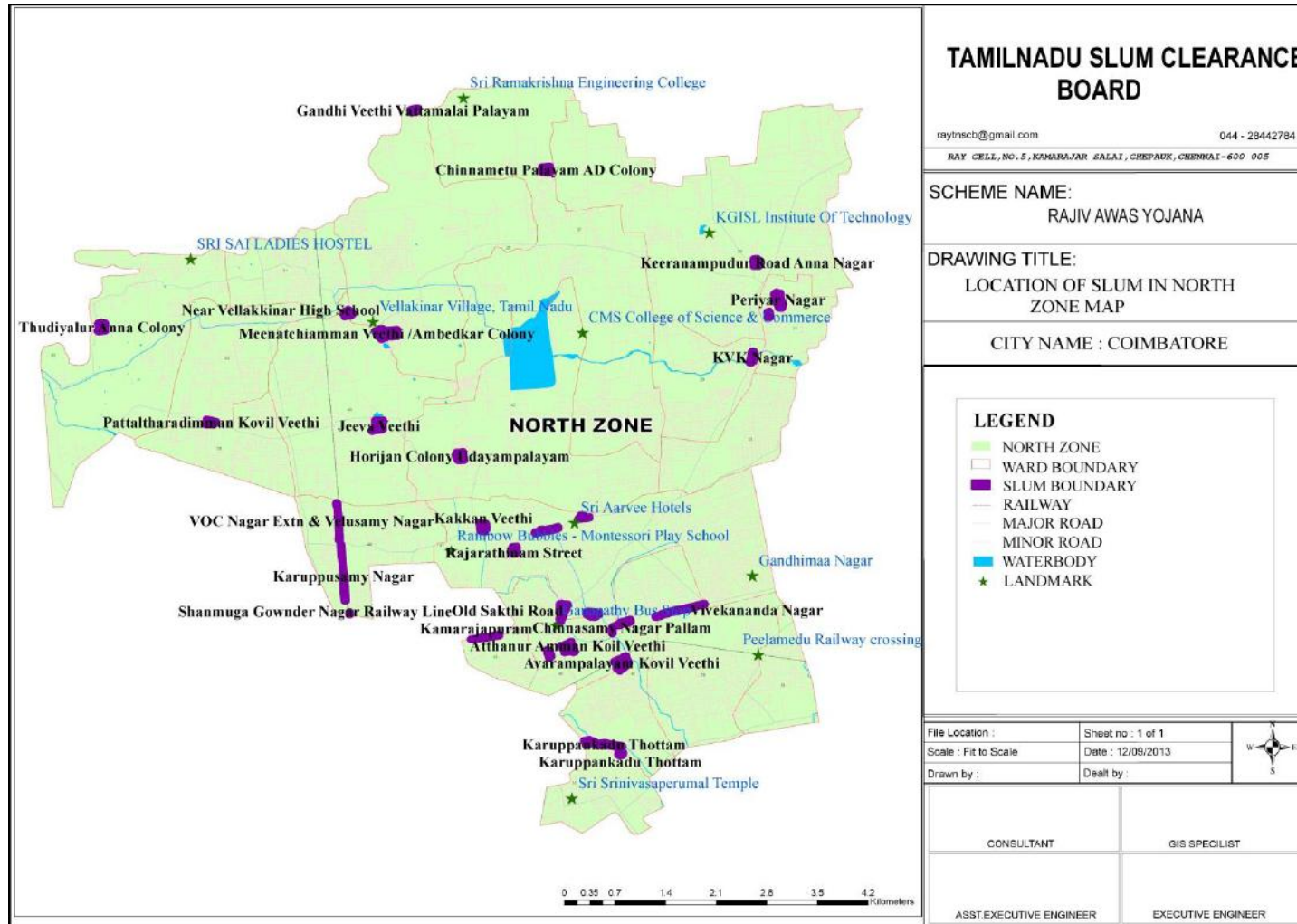


Fig. 2.8. Distribution of slums in North Zone

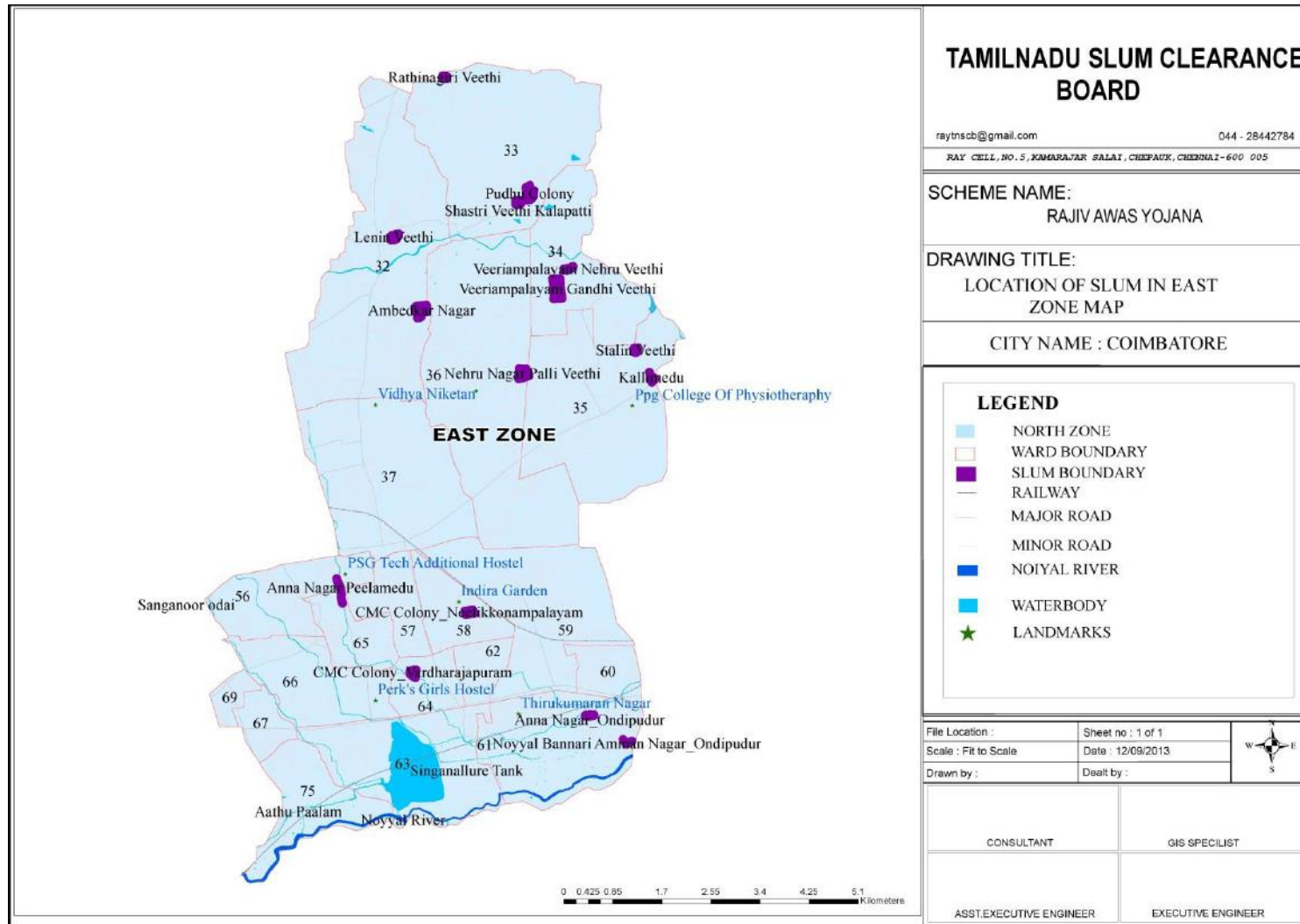


Fig.2.9. Distribution of Slums in East Zone

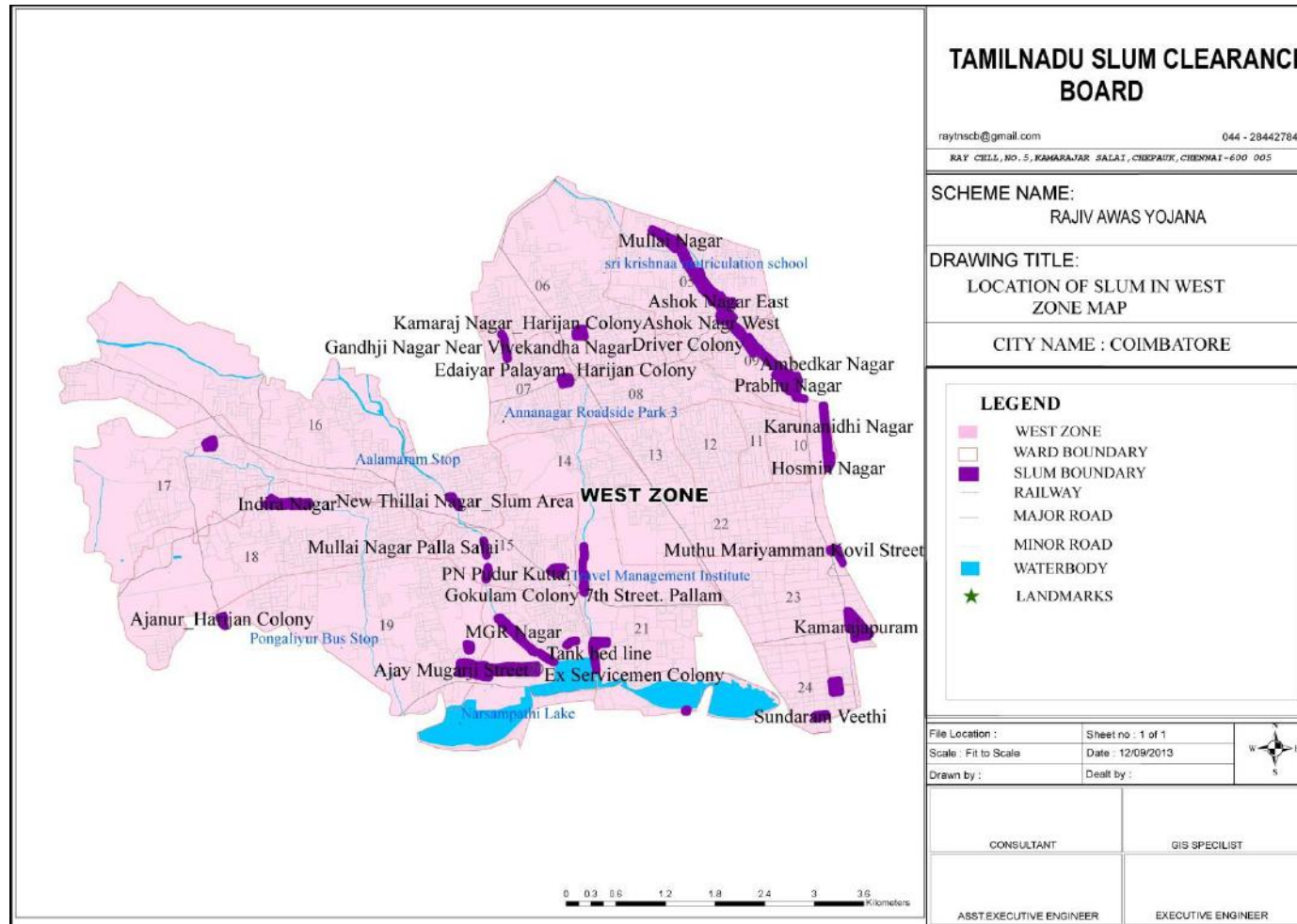


Fig.2.10. Distribution of Slums in West Zone

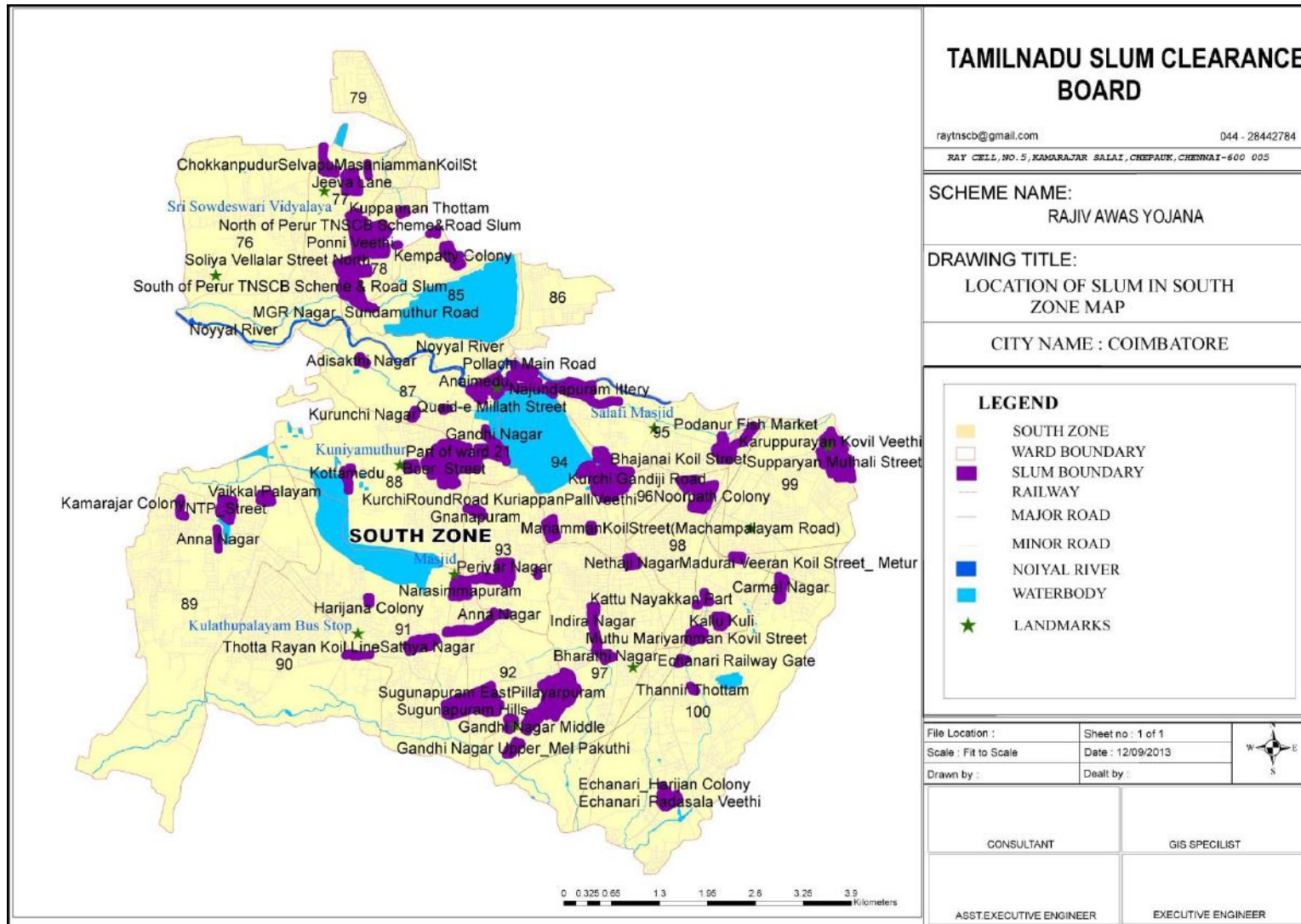


Fig.2.11 Distribution of Slumps in South Zone

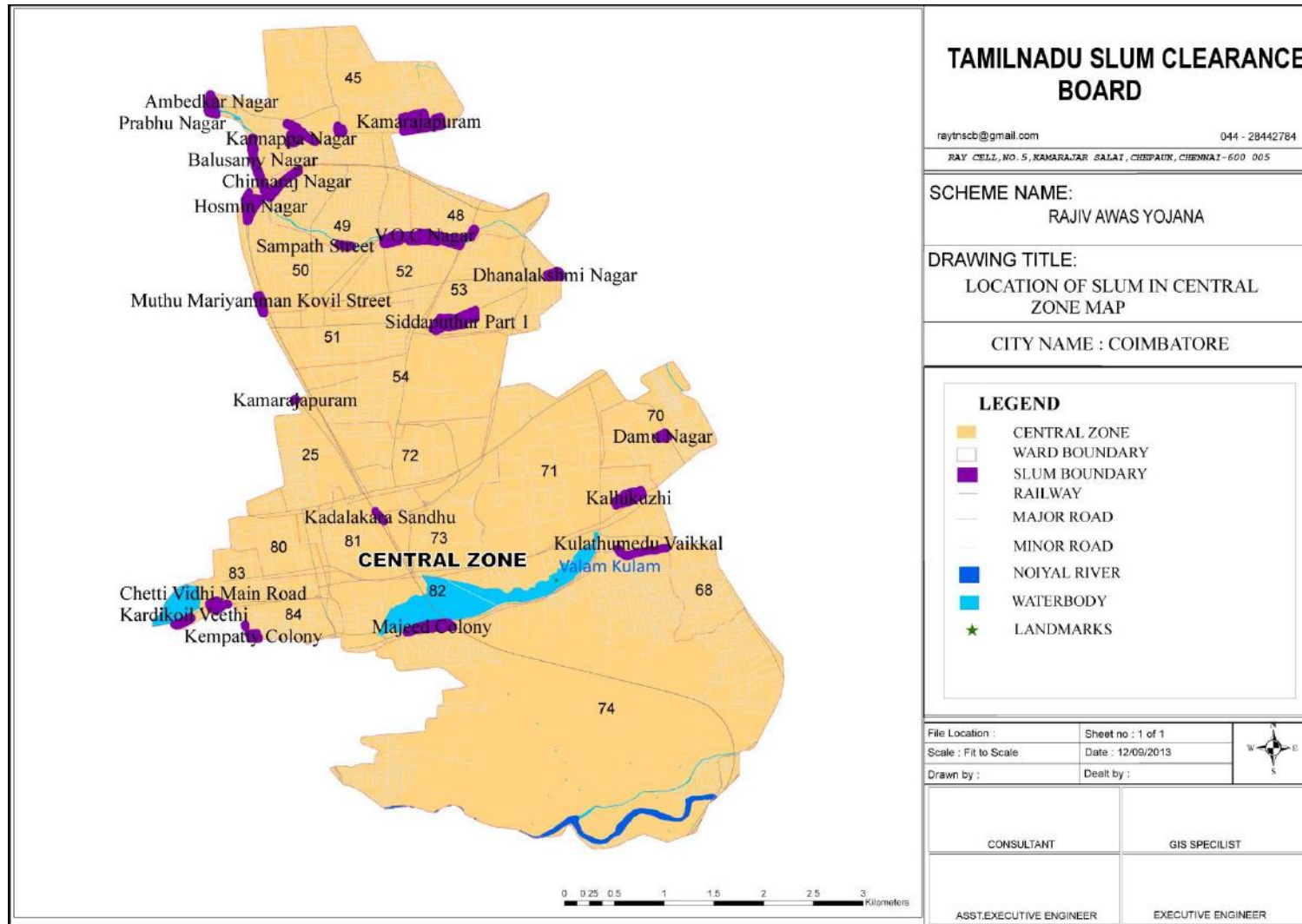


Fig.2.12. Distribution of Slums in Central Zone

The methodology adopted to perform the socio economic survey is outlined in the Fig 2.10. The boundary of each slum is demarcated with the help of TNSCB engineers. The unique number has been given to each dwelling unit within the boundary of slum, for the purpose of socio economic survey. Once the number is assigned, the enumeration is carried out using the questionnaire provided by the TNSCB which was subsequently modified by NITTTR and got vetted by TNSCB. While allotting numbers to buildings, following situations existed, (a) where houses are numbered systematically by the municipal or local authorities; (b) where numbers to open sites are given on property basis but there are number of sites where the buildings have not so far been constructed or where building numbers are existing but incomplete and not systematic, and (c) no numbering to houses exists. As per CENSUS guidelines and also the instruction of TNSCB official, the number is assigned to each house hold followed by (a), (b) notation if there exists, more than one family in same household. Based on the slum profile and information collected from the officials the physical locations of slums are given in the Table 2.17 and Fig 2.13.

Table 2.17 Distribution of Slums with reference to Physical Location

S.No.	Physical Location of Slums	Number of slums
I. Objectionable Locations		
1	Along Nallah	-
2	Along other drains	36
3	Along Railway lines / Railway land	07
4	Along Major / Minor Transport Alignment	07
5	Along River/ Water body	05
6	On River Bed/ Water body bed	15
7	Others (Hazardous or Objectionable)	24
	Total	99
II. Non Objectionable		
8	Others (Non Hazardous or Non Objectionable)	116
	Grand Total	215

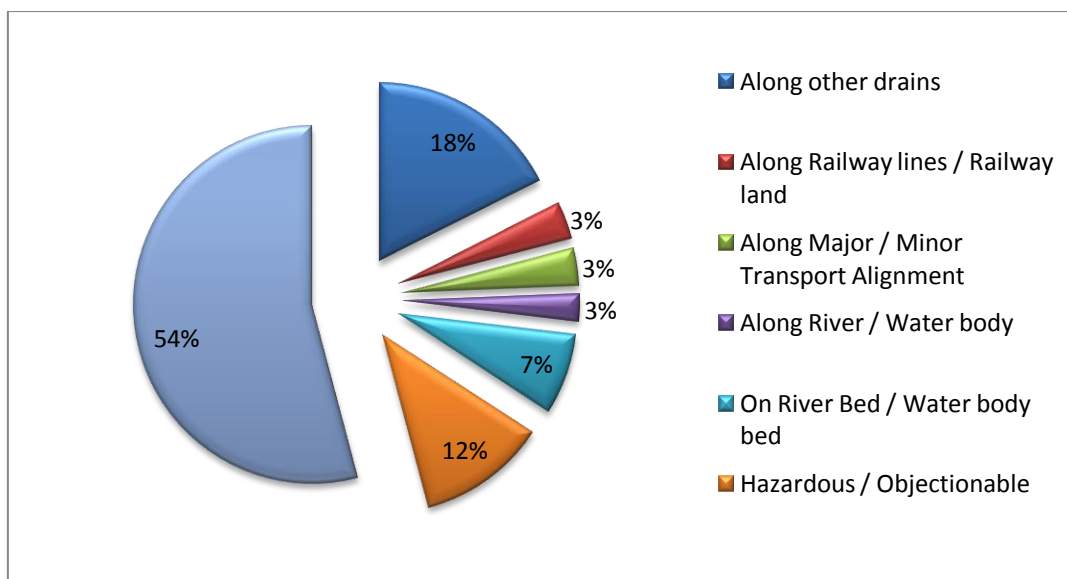


Fig. 2.13. Percentage of slums with reference to physical location

2.8 Categorization of Slums based on Tenability Analysis.

The all identified slums need to be categorised as tenable, semi-tenable, or untenable based on the location, to suggest the suitable development option. As per the RAY guidelines the proper strategies can be implemented to make city as slum free through in-situ up-gradation, redevelopment, and relocation.

2.8.1 Tenable slum

The slum is called as tenable when it is

- suitable for human habitation,
- not located on hazardous zone and
- the land is not earmarked for any major public facilities.

2.8.2 Untenable slum

The slums are called as untenable when it is located in

- Major storm water drains or Nallah
- Other drains
- Railway line
- Major transport alignment
- River or water bodies Bank

- River or water bodies Bed
- Others (Hazardous or Objectionable) including high tension lines

2.8.3 Semi-tenable slum

The slum pockets located on sites which are earmarked for non-residential uses as per Master Plan would be categorized as semi-tenable.

The tenability of all existing slum settlements has been identified using objective and verifiable parameters (land ownership, land use, spatial location, health risk, etc.) and has been categorized into Tenable and Non-Tenable. Table 2.18 provides the criteria used for evaluating the tenability of slums in Coimbatore City. Fig. 2.14 shows the tenability assessment of the slums in the Coimbatore Corporation.

Table 2.18 Criteria for Tenability Assessment

Parameter	Definition
Flooding or Drainage Corridors	
Flood plain with risk of floods	Yes/no whether in zone
Along drain canals	Yes/no whether in canal
Low lying or drainage areas	In drainage congestion zone or low lying area with severe or moderate flooding
Airports corridor	Distance (in m) from airport boundary, if within 1km of airport
Transit or Transport Corridors	
Along railway tracks	Distance (in m) from right of way i.e. within 500m of centre of track
Along major roads	Distance (in m) from centre right of way i.e. within 200m of highways and main arteries
In Airport area	Distance (in m) from right of way
Other Risk Conditions	
On old/ near land fill sites	Yes/no
Near urban dairies	Yes/no
Other Hazardous or Objectionable including High tension line	Yes /no

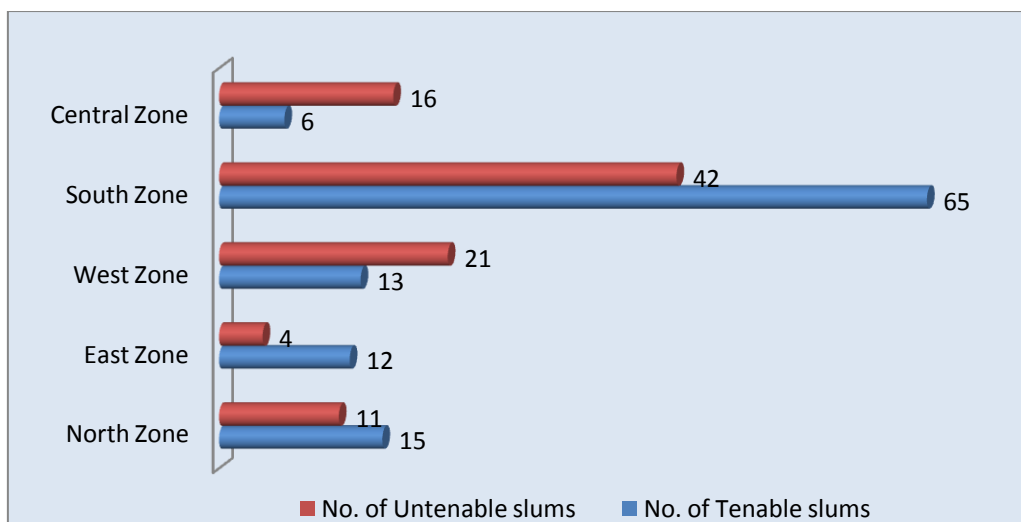


Fig 2.14 Tenability of Coimbatore slums

Tenability analysis for the Coimbatore Corporation slums has been carried out as per the standard procedure. Fig. 2.14 shows the tenable and untenable slums in order to determine whether the area is fit for human settlement. Tenability analysis clearly shows the status fitness of land for human habitation and void of health hazards.

There exists a common misperception that all slums are alike and that the people who live in slums conform to common stereotypes. In reality, however, there exists a wide range of people among slum residents. Table 2.19 lists the zone wise number of slums and households with respect to tenable and untenable. Fig.2.15 represents the tenability status of the slums.

Table 2.19 Zone wise distribution of Tenable and Untenable Slums with households

S.No.	Zone Name	Tenable		Untenable		Total	
		No. of Slums	No. of HHs	No. of Slums	No. of HHs	No. of Slums	No. of HHs
1	North Zone	15	1498	11	1101	26	2599
2	East Zone	13	1400	04	228	17	1628
3	West Zone	13	1589	22	2176	35	3765
4	South Zone	69	13767	44	4059	113	17826
5	Central Zone	06	1097	18	3022	24	4119
	Total	116	19255	99	10682	215	29937

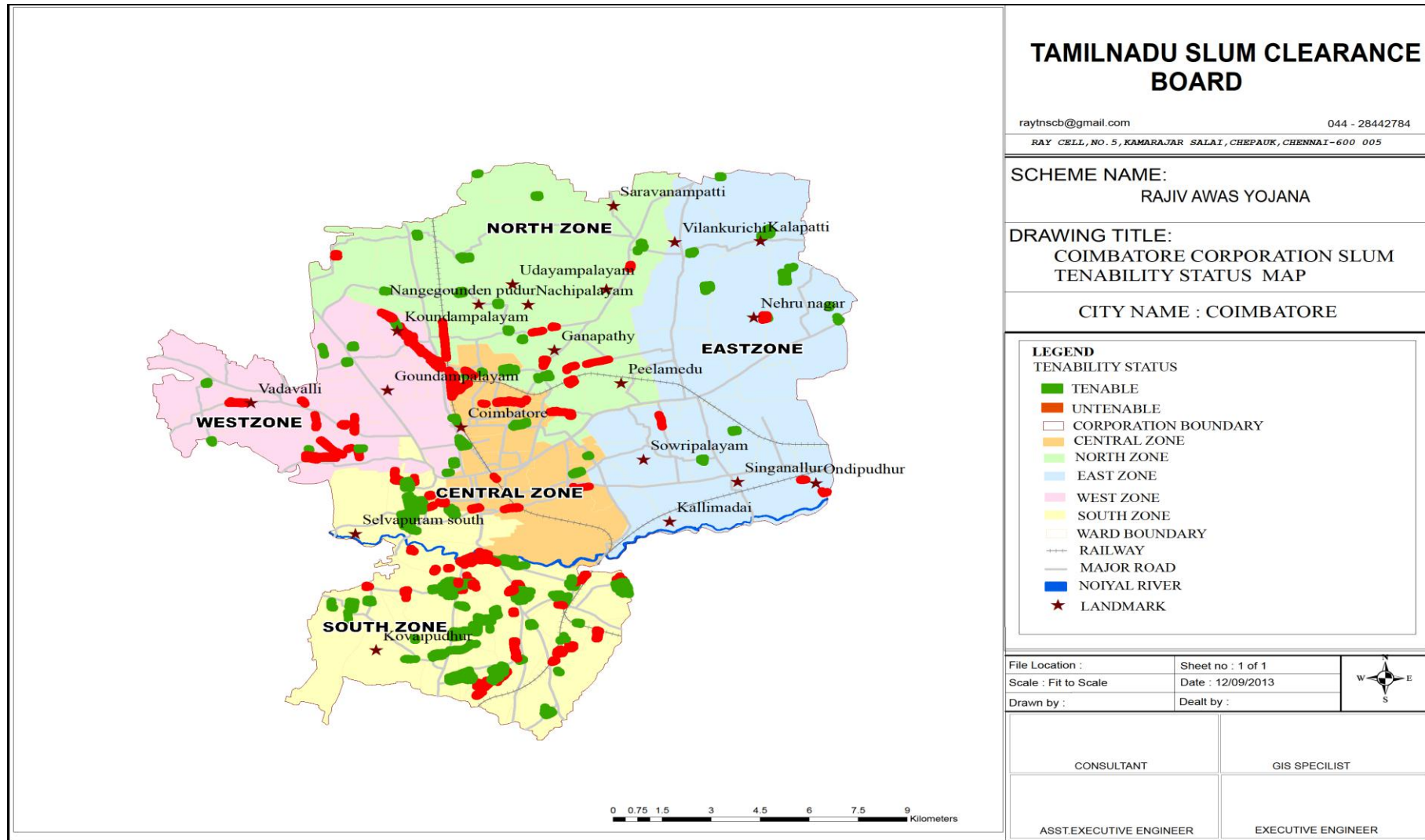


Fig.2.15 Map of Tenability Status of Slums in Coimbatore Corporation

2.9 Tenure

Land tenure refers to the rights of individuals or groups in relation to land. The exact nature and content of these rights, the extent to which people have confidence that they will be honoured, and their various degrees of recognition by the public authorities and communities concerned, will all have a direct impact on how land will be used. Tenure often involves a complex set of rules. Some users may have access to full use and transfer rights.

Other users may be more legally limited in their use of these resources, which illustrates

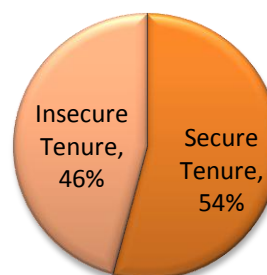


Fig. 2.16 Tenure of Coimbatore slums

both the diversity of rights to land and the existence of a wide range of options, from full ownership to less singular forms of possession and use. In Coimbatore corporation, 54 % of the (111 slums) slum dwellers are living in secure tenure. Fig. 2.16 is showing the tenure of Coimbatore corporation slums.

Tenure status is one of the key elements in the poverty cycle. In most developing country cities, empirical observations show that the map of slums and informal settlements coincides with that of urban poverty. As underlined by John Turner nearly three decades ago, interactions between poverty and insecure tenure contribute to further deteriorate the economic situation of the urban poor. More specifically, lack of secure tenure discourages household investments aiming to improve their environment and investments in home-based activities, with major impact on poverty alleviation. Further, in most tenure upgrading and regularization projects, security of tenure has a direct positive impact on the mobilization of household resources at the settlement level. Fig. 2.17 represents the tenure status of slums.

Lack of security of tenure hinders most attempts to improve shelter conditions for the urban poor, undermines long-term planning, and distorts prices for land and services. It has a direct impact on access to basic urban services and on investment at settlement level, and reinforces poverty and social exclusion. It impacts most negatively on women and children. From the point of view of governments, insecure tenure also has a negative impact on the rate of tax recovery through local taxation on property and on economic activities. In addition, without proper identification of urban services beneficiaries, cost recovery for services and infrastructures is made difficult or impossible. Secure tenure (*patta*) encourages urban poor families to invest and upgrade their housing. It also encourages

them to connect and pay for municipal services inside their homes, i.e., metered water connections, toilets with sewerage, metered power supply, etc. From Fig. 2.18 to Fig. 2.21 represents the facilities available in the Coimbatore corporation slums. The details of analysis of present status of slums is discussed in the chapter 3.

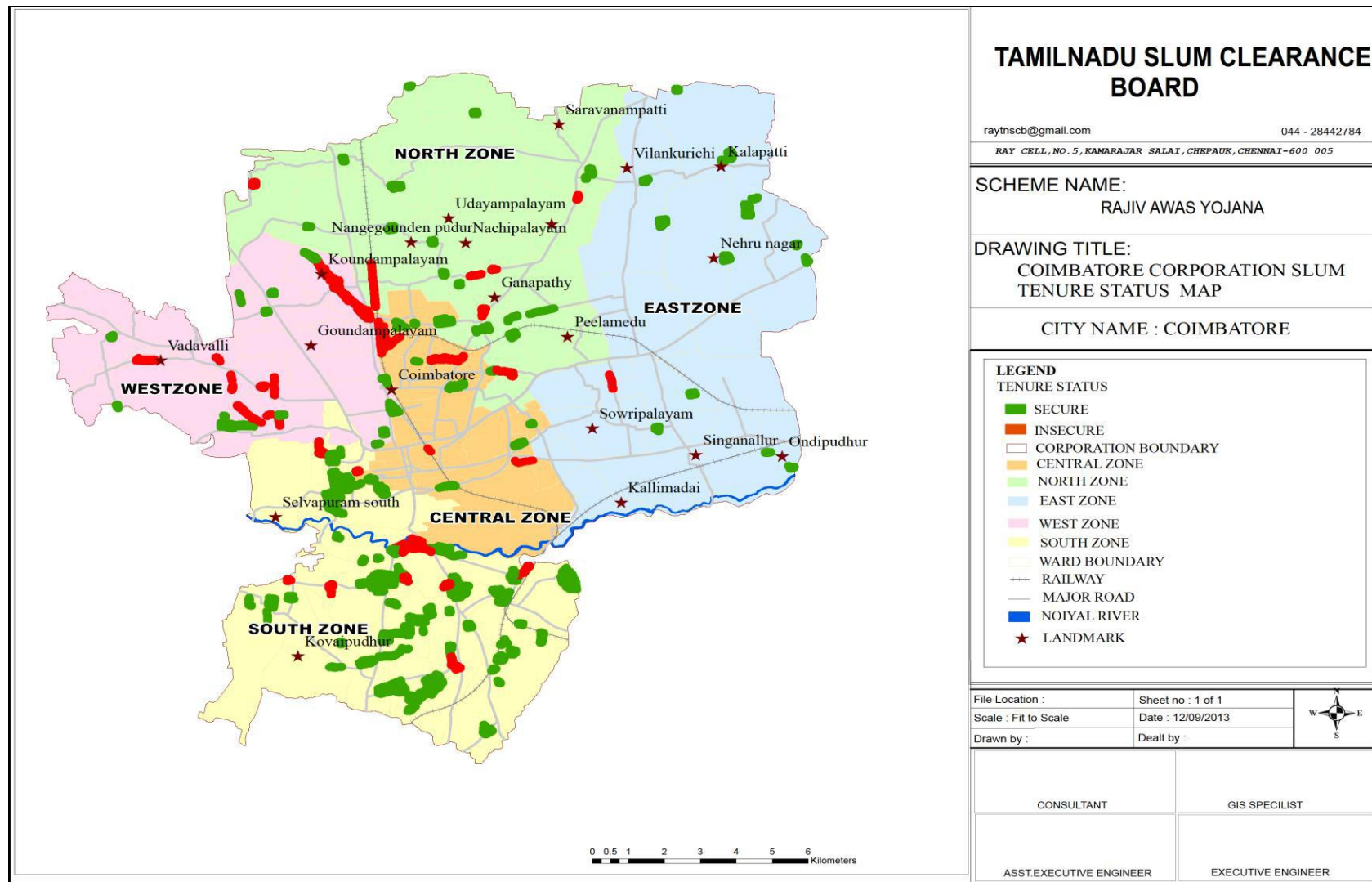


Fig.2.17 Map of Tenure Status of Slums in Coimbatore Corporation

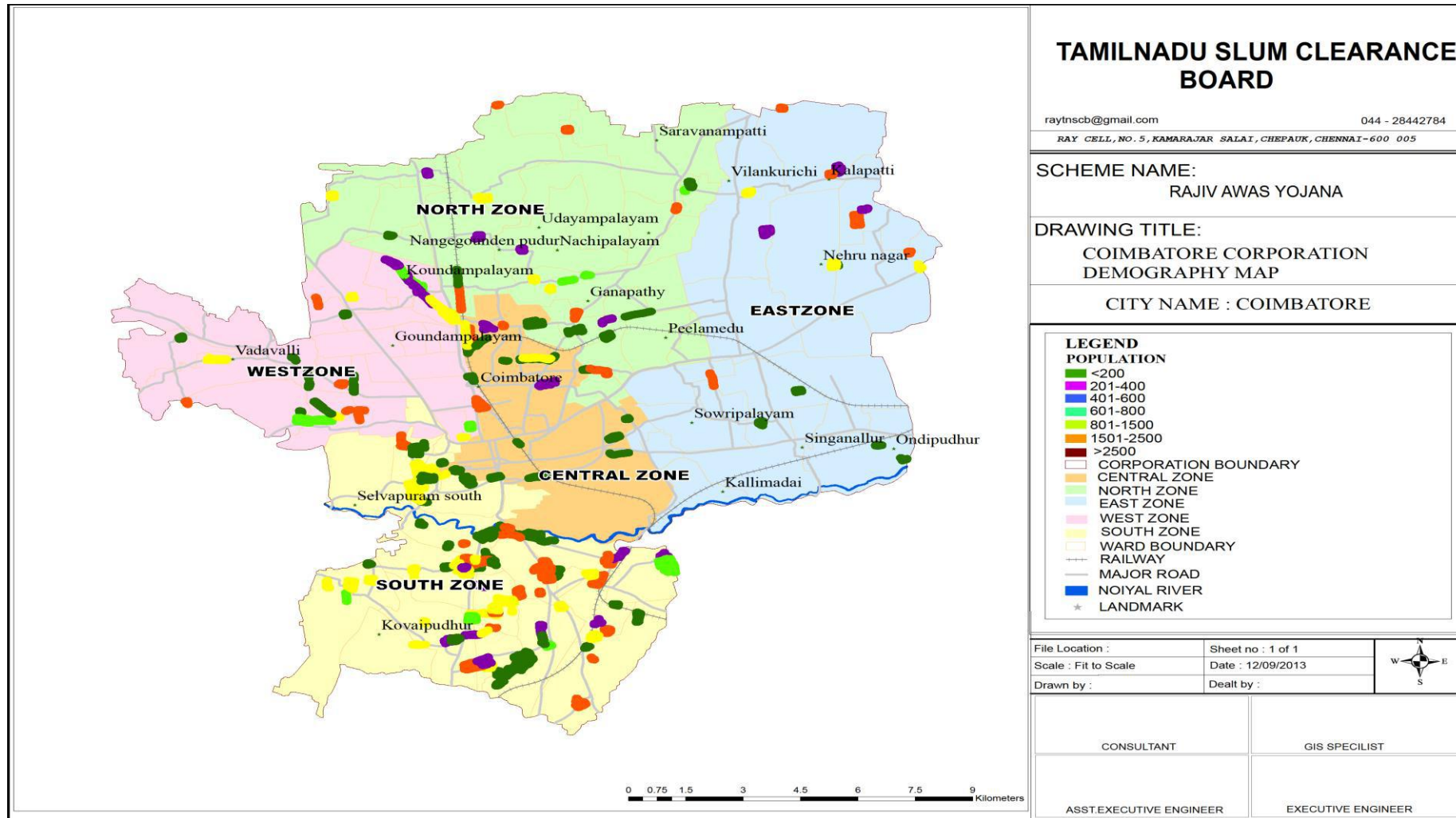


Fig.2.18. Demography of Slums in Coimbatore Corporation

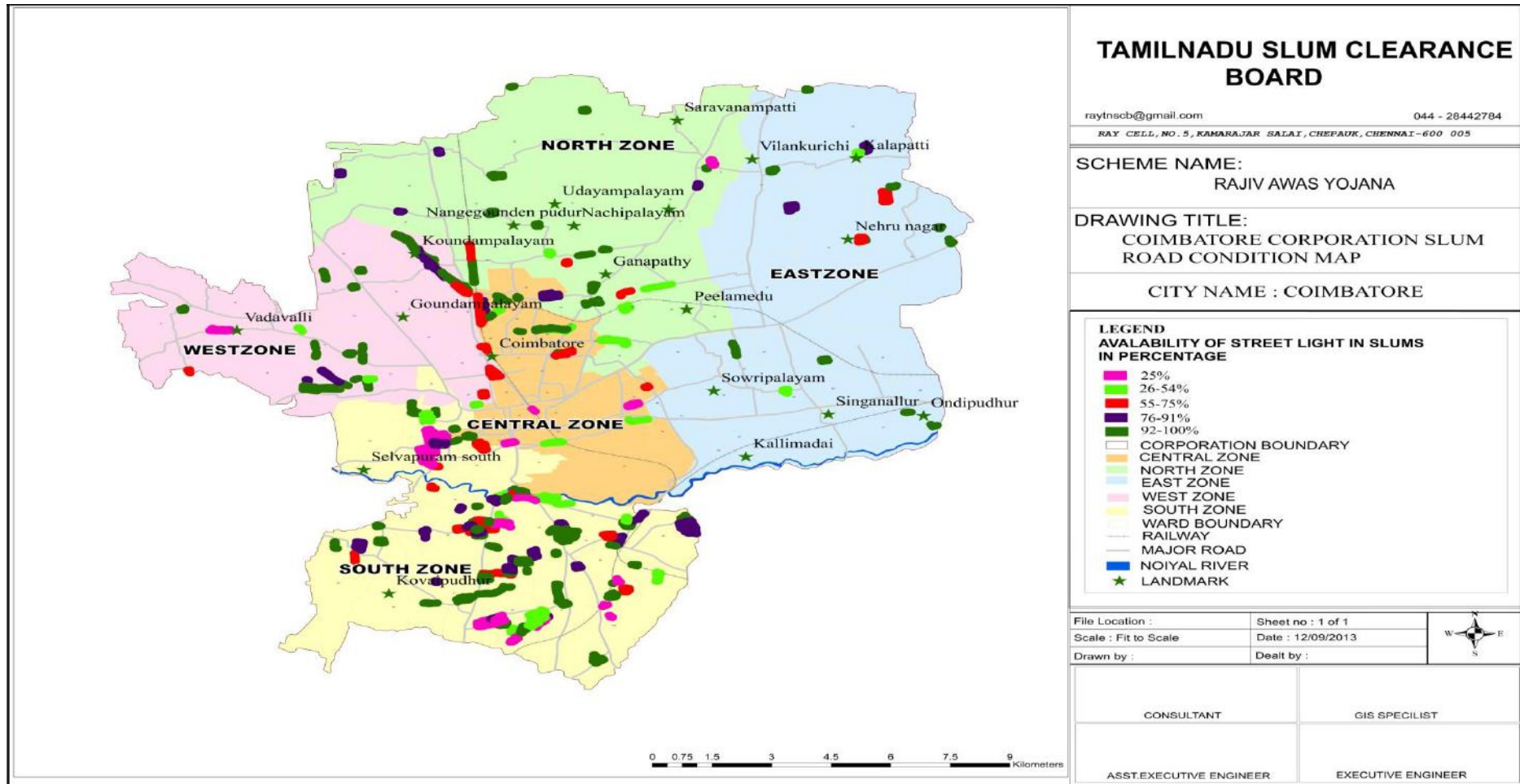


Fig.2.19. Map representing percentage of availability of Street lights in slums

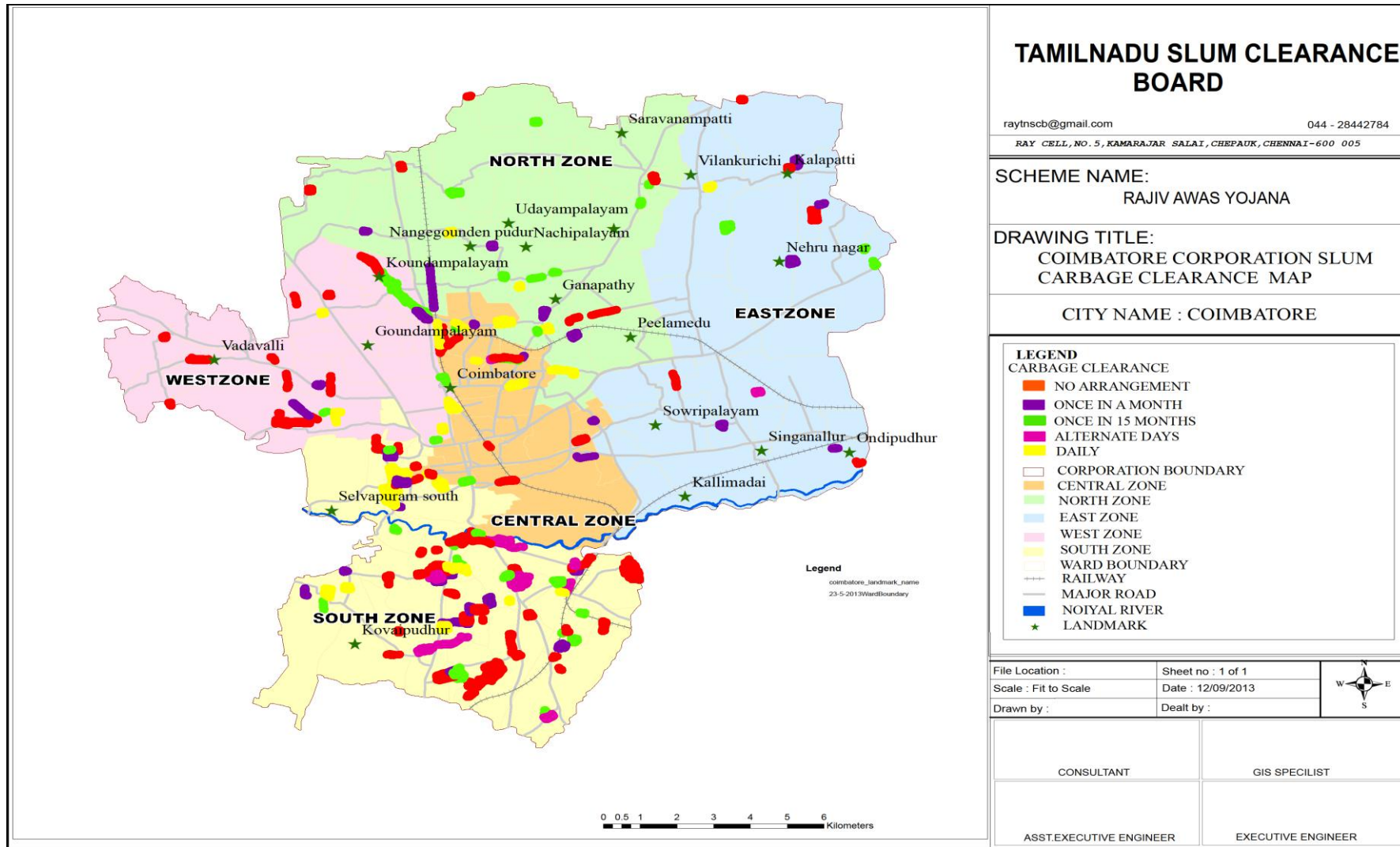


Fig.2.20. Map representing Garbage clearance frequency in slums

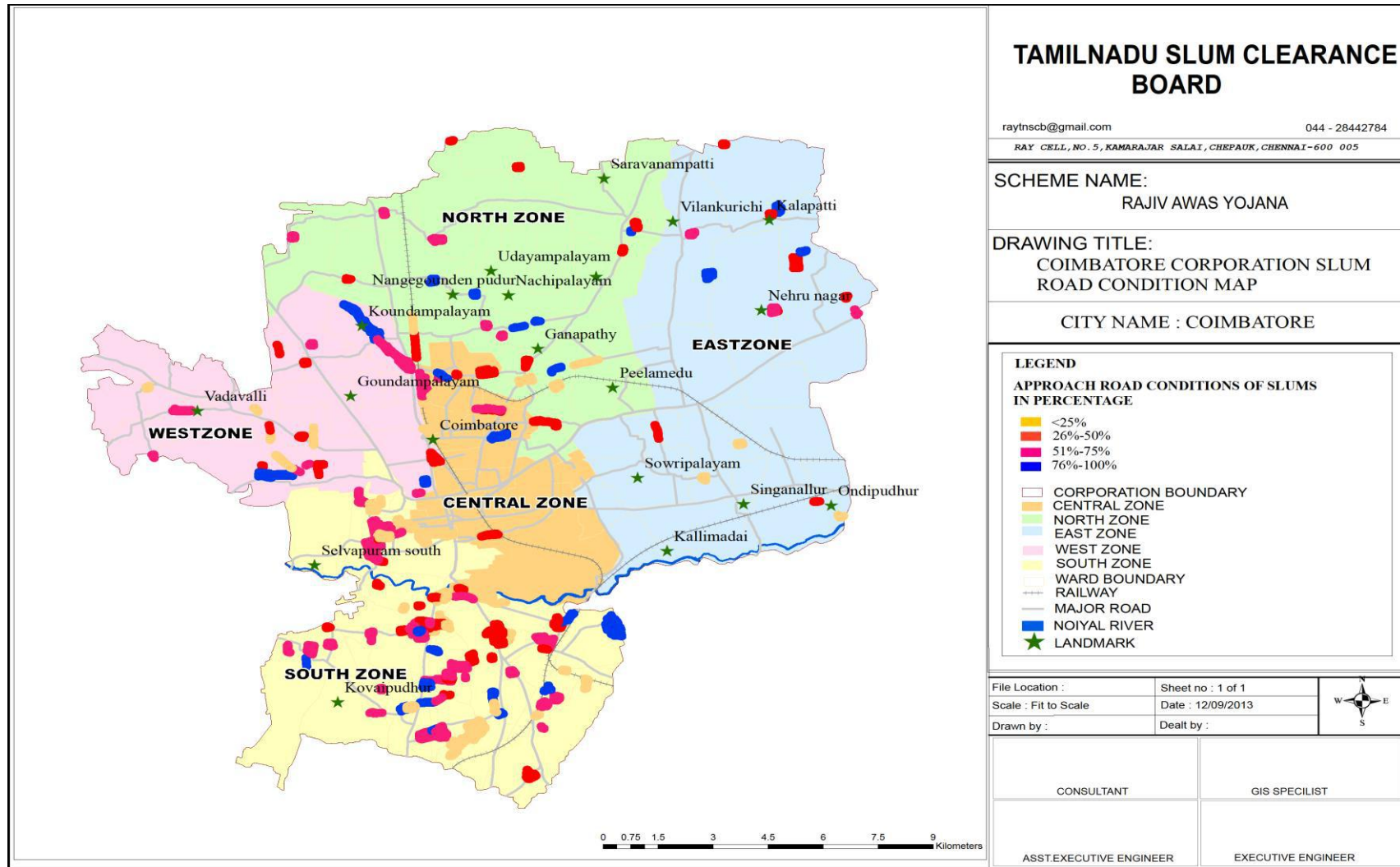


Fig.2.21. Map representing approach road condition in slums

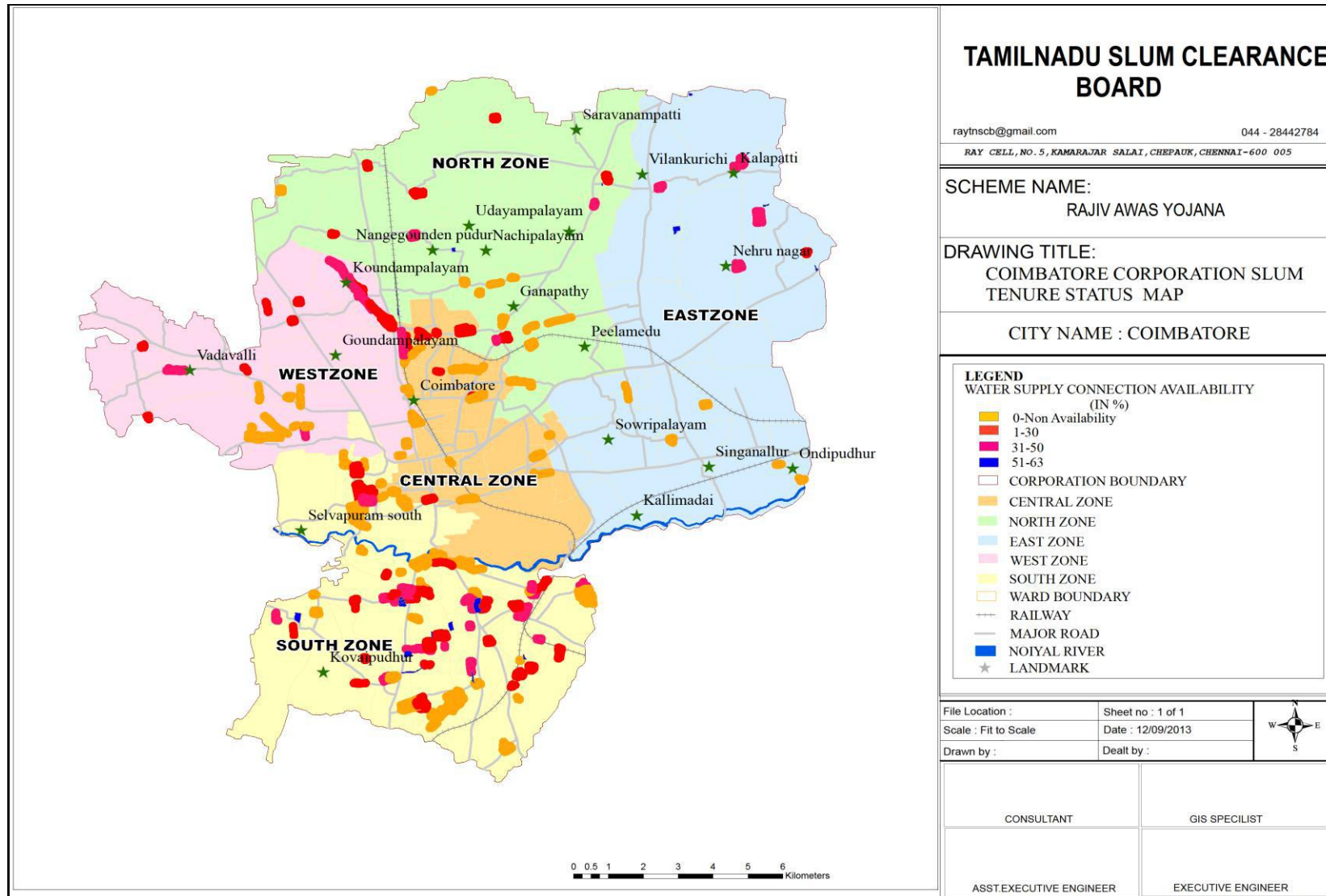


Fig.2.22. Availability of water supply connection for individual household in slums

CHAPTER 3 ASSESSMENT OF PRESENT STATUS OF SLUMS

3.1 INTRODUCTION

As discussed in the earlier chapter the Coimbatore city is having 215 surveyed slums. Present status of the slums needs to be analysed to prioritize these slums for housing/ infrastructure development. The poorest and the most deprived slums have to be given priority for upgrading or resettlement. Slums located in heart of the city are the most critical hindrance for urban development today. In Coimbatore, the slums namely Macrikan road, Sidhaputhur part 2, Hosimin Nagar, Old Sathy road and Ukkadam slaughter house are identified in the heart of the city which are encroaching the highly valuable land, needed for future development of the city.

The various dimensions of poverty and infrastructure of slums have been discussed in detail in this chapter and the deficiency analysis has been carried out as per the stipulated is divided into three sections. The first section discusses the poverty profile of the slums; the second section discussed the infrastructure facilities in the settlements and in the third section, the deficiency matrix to prioritize the settlement has been highlighted.

As per the RAY guidelines the slums of the Coimbatore Corporation are addressed by the three interrelated parameters namely (i) Poverty, (ii) Vulnerability of housing and (ii) Infrastructure deficiency. During the field survey the enumerators collected socio-economic data of each slum dweller and slum profile data for each slum through respective questionnaire. Based on these field data, poverty, housing vulnerability and infrastructure deficiency for all tenable and untenable slums have been worked out and discussed in detail.

3.1.1 Vulnerability Parameters

Poverty is a multidimensional phenomenon. The urban poor live with many deprivations. Their daily challenges may include

- limited access to employment opportunities and income
- inadequate and insecure housing and services
- brutal and unhealthy environments

Poverty parameter is not just a collection of characteristics; it is also a dynamic condition of vulnerability to risks. In order to arrive a broader understanding of urban poverty the following parameters have been considered.

- (i) Population of Below Poverty Line (BPL)
- (ii) Population of SC/ST
- (iii) Housing condition based on structural condition

3.1.2 Infrastructure Deficiency

The most needed basic facility for the urban poor is housing. Next to the housing, the essential infrastructure services and other related civic amenities are drinking water sources, access to drainage, sources of lighting, sanitation and solid waste disposal need to be provided for the healthy environment to urban poor. The infrastructure deficiency indicators help to prioritise and categorise the slums. The following parameters are considered to arrive at the infrastructure deficiency:

- (i) Individual water supply connection to the household
- (ii) Individual toilets
- (iii) Coverage of length of storm water drains
- (iv) Deficiency of pucca road or slums having narrow access
- (v) Road length without street lights
- (vi) Frequency of solid waste collection and disposal facility

3.2 VULNERABILITY ANALYSIS

3.2.1. BPL Analysis

Below Poverty Line (BPL) is an economic benchmark and poverty threshold used by the Government of India to indicate economic disadvantage and to identify individuals and households in need of government assistance and aid. As per the Tenth Five – Year Plan BPL for urban area is based on degree of deprivation in respect of seven parameters: roof, floor, water, sanitation, education level, type of employment and status of children in a house. The Planning Commission calculates the poverty line every year based on income of person per month.

It has been observed from the collected data that, the leading industrial city Coimbatore is having totally 22.70 % of households Below Poverty Line in slums. The details of BPL households for various zones in the city corporation are given in Table 3.1. It can be seen from this table that among the different zones of the city corporation, the south zone is having maximum of 24.55 % of BPL households.

Table 3.1 Percentage of BPL households of Coimbatore Corporation

S.No.	Zone	Total No. of Households	No. of BPL Households	% of BPL Households
1	North	2599	508	19.54
2	East	1628	303	18.61
3	West	3765	724	19.23
4	South	17826	4376	24.55
5	Central	4119	886	21.50
	Total	29937	6797	22.70

In the slum wise data, the percentage of BPL Households are varying from 0% to 80.95%. Thannir thottam slum in the south zone is having lowest percentage (0%) of BPL household and Kadalakara sandhu slum in the North zone is having the highest percentage (80.95%) of BPL household. The BPL household ranking is done by dividing the difference between the highest and lowest values into three ranges as shown in Table 3.2

Table : 3.2 – BPL Classification

Range	BPL Households	Score
1 st	From 0.00 % to 27.00 %	1
2 nd	From 27.01 % to 54.00 %	2
3 rd	From 54.01 % to 81.00 %	3

3.2.2 SC/ST Population Analysis

In general, population belonging to Scheduled caste / Scheduled tribe is more in slum areas than in other areas (45.14 %). In Coimbatore Corporation, five slums are having 100% of SC/ST population. The details of zone wise distribution of population under major caste wise classification are listed in Table 3.3.

Table 3.3 Zone wise community distribution

S. No.	Zone	Total House holds	Total Population	Households belongs to					SC/ST Households	% of SC/ST House holds
				OC	BC	MBC	SC	ST		
1	North	2599	9175	59	306	170	1965	46	2031	77.38
2	East	1628	5792	40	123	41	1413	11	1424	87.47
3	West	3765	13570	216	1242	450	1832	25	1857	49.32
4	South	17826	66785	1416	8645	1373	6124	183	6303	35.38
5	Central	4119	12093	150	1128	290	1891	24	1895	46.49
	Total	29937	107415	1881	11444	2324	13225	289	13514	45.14

The highest population of SC/ST is found to be existing in south zone whereas the percentage of SC/ST population among the total population of slums in that slum is maximum in the east zone(87.47%).

In the SC/ST population, the lowest value in 0% is in two slums namely Noorbath Colony and Nehru Street, Veerampalayam. The scoring of SC/ ST population is arrived which is shown in Table 3.4.

Table 3.4 SC /ST Classification

Range	SC/ST Population	Score
1 st	From 0.00 % to 33.33 %	1
2 nd	From 33.34 % to 66.67 %	2
3 rd	From 66.68 % to 100.00 %	3

However, interestingly it is noted that the SC.ST population lives peacefully in all the slums without any discrimination.

3.2.3. Structural Type Analysis

The housing structure of the slums is classified as pucca, semi-pucca and katcha. The number of pucca, semi pucca and katcha houses are given in Table 3.5 for each zone. The highest percentage of semi pucca and katcha houses is 94.32 % in West zone of the City. The lowest percentage of semi pucca and katcha houses is 75.01% in South zone.

Table 3.5. Zone wise distribution of housing structure

S.No.	Zone	Total Households	Pucca	Semi Pucca	Katcha	Semi Pucca & Katcha Hhs	% of Semi Pucca & Katcha Hhs
1	North	2599	304	2130	165	2337	88.30
2	East	1628	141	1431	56	1487	91.34
3	West	3765	214	3446	105	3551	94.32
4	South	17826	4455	12974	397	13371	75.01
5	Central	4119	325	3708	86	3752	92.11
	Total	29937	5439	23689	809	24498	81.83

The zone wise distribution of housing status is shown in percentage in the Fig. 3.1.

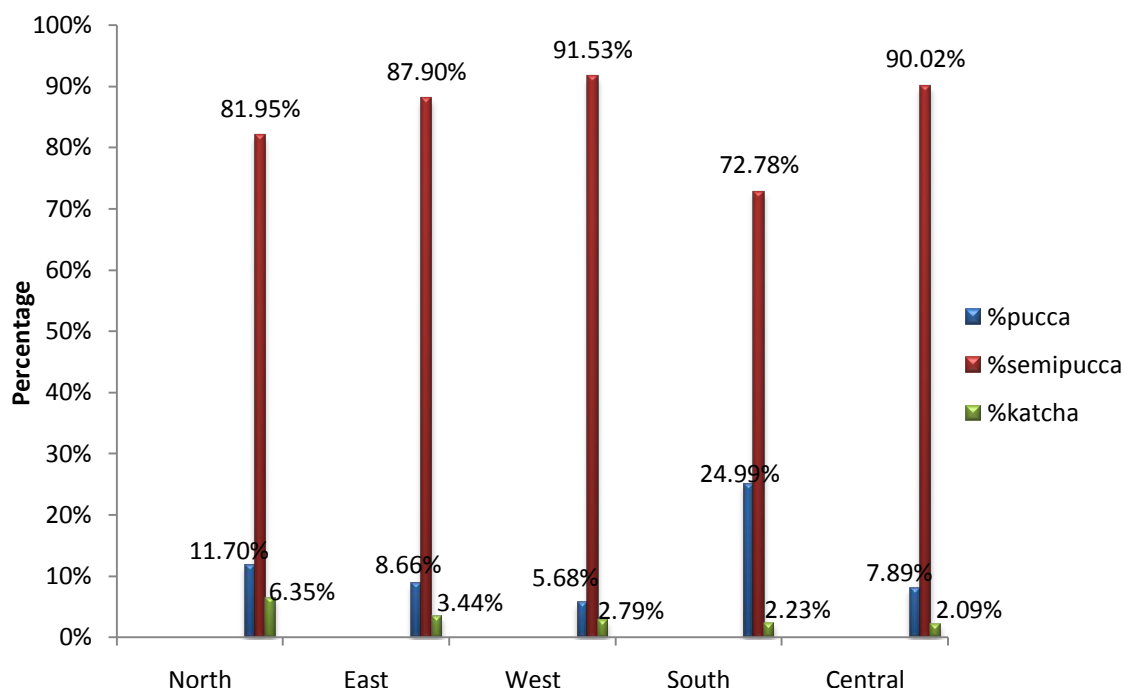


Fig. 3.1. Housing status in Coimbatore corporation slums

It can be seen from Table 3.5 that the south zone is having more number of households when compared to other zones. One of the south zone slums namely, Nanjundapuram Iteri is having more than 1000 nos. of semi pucca and katcha households. The percentage of semi pucca and katcha is varying from 19.44% to 100%. Totally 33 slums are having 100% of semi pucca and katcha households. The ranges of the housing status are given in the Table 3.6.

Table 3.6. Housing status classification

Range	Percentage of semi pucca and katcha HH	Score
1st	From 19.44 % to 46.30 %	1
2nd	From 46.31 % to 73.15 %	2
3rd	From 73.15 % to 100.00 %	3

Total vulnerability score for each slum has been arrived based on the BPL population, SC/ST and Housing status for the deficiency matrix. The vulnerability scores are varying from 3 to 9 which is given in Table 3.7. The ranking for the vulnerability index is done by dividing the vulnerability scores into three ranges.

Table 3.7. Vulnerability index

Range	Vulnerability score	Rank
1st	From 3 to 5	1
2nd	From 6 to 7	2
3rd	From 8 to 9	3

3.3 INFRASTRUCTURE DEFICIENCY ANALYSIS

The percentage variation of each parameter is divided into five ranges, to assign a score. The scores are further divided into three ranges for the infrastructure deficiency index. The details of the different ranges of each parameter and the scores categorization for each of the above parameters are discussed in the next section.

3.3.1 Water supply

Every household should get individual water supply connections, irrespective of the legality of their land ownership. But in the Coimbatore Corporation most of the slums are depending upon the public water tap connection only.

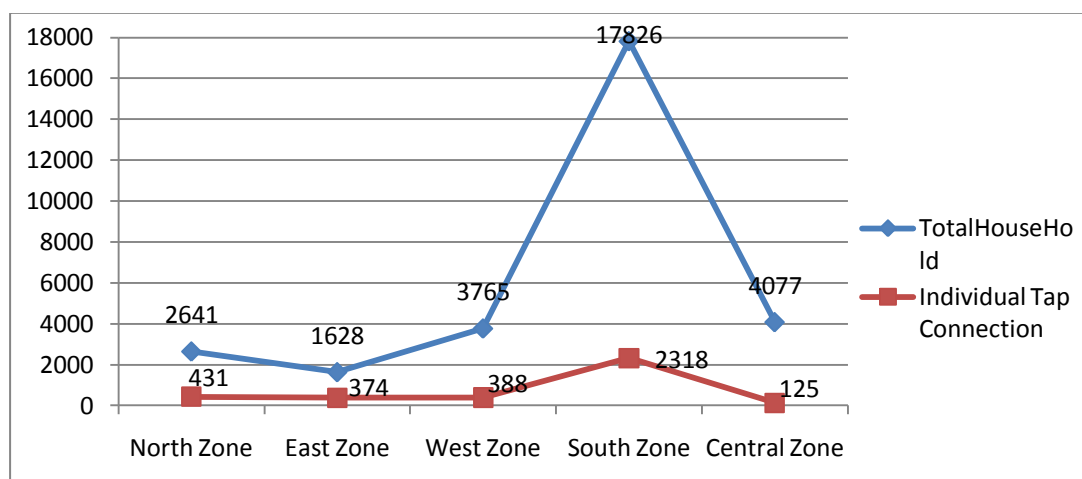


Fig.3.2. Zone wise number of House hold with individual water tap connection

Access to water supply is an important priority of slum dwellers. It is observed from the socio economic survey data that overall 87.85% of households are not having individual water supply facility in Coimbatore slums. There is a highest demand for the water supply connection in the Central zone, only 0.42% of households are having connection. The zone wise status of individual water supply connection is shown in the Fig. 3.2. The percentage of

households not covered with individual water supply connection is varying from 36.7% to 100%. The ranges of the water supply connection are given in the Table 3.8.

Table 3.8. Ranges of Households not covered with Water Supply Connection

Range	Water supply Status	Score
1 st	From 36 % to 49 %	1
2 nd	From 49 % to 62 %	2
3 rd	From 62 % to 75 %	3
4 th	From 75 % to 88 %	4
5 th	From 88 % to 100 %	5

3.3.2 Individual Toilet facility

Due to space constraints, most of the slum dwellers are not giving importance for the toilet which leads to the unhygienic environment and also origin to the illness.

Table 3.9. Zone wise distribution of % of HHs without individual toilet

S.No.	Zone	Total Households	No. of households not having individual toilet connection	% of households not having individual toilet connection
1	North	2599	2126	81.80
2	East	1628	1475	90.60
3	West	3765	2905	77.16
4	South	17826	9761	54.76
5	Central	4119	2402	58.32
	Total	29937	18669	62.36

Table 3.9 indicates that overall 62.36 % of households are not having the individual toilet facility in the Coimbatore corporation slums. The percentage of households not covered with individual toilet for slums is varying from 11% to 100% which is ranked in the Table 3.10.

Table: 3.10 – Ranges of Households not having Toilet facility

Range	Toilet Facility Status	Score
1	From 11 % to 28 %	1
2	From 29 % to 45 %	2
3	From 46 % to 64 %	3
4	From 65 % to 82 %	4
5	From 83 % to 100 %	5

The above ranges are divided into five categories and the score have been arrived. Individual toilets facility for the urban poor is vital to reduce incidence of ill health, improve safety for women and girls, and enhance human dignity.

3.3.3 Storm water Drainage facility

Improper wastewater disposal causes worst environmental sanitation in slum communities. In Coimbatore slums the drainage facility varies from the lowest value of 0 % to the highest value of 90%. The range difference is 18%. The classification of the drainage facility is given in Table 3.11.

Table: 3.11 Ranges of Non availability of Drainage

Range	Drainage status classification	Score
1	From 01 % to 18 %	1
2	From 19 % to 36 %	2
3	From 37 % to 54 %	3
4	From 55 % to 72 %	4
5	From 73 % to 90 %	5

3.3.4. Solid waste disposal facility

Solid waste disposal arrangement has a great impact on the environment and consequently on health of the people. In Coimbatore Corporation the corporation made facility to collect the solid waste from the slums in different frequency namely daily, alternate days, once in fortnight. Totally 85 slums are not having the facility to dispose the solid waste.

Table: 3.12 f Solid Waste Facility

Range	Solid waste disposal	Score
1	Daily	1
2	Once in Two Days	2
3	Once in a Week	3
4	Once in 15 Days	4
5	No Collection	5

The Table 3.12 is showing the solid waste disposal facility is varying from 0% to 100%

3.3.5. Street Light Facility

In Coimbatore Corporation, the street Light facility varies from 0% to 100%. The range varies with the value of 20%. The ranges for the street light facility are given in Table 3.13.

Table: 3.13 Ranges of Street Light Deficit

Range	Street Light Coverage Classification	Score
1	From 01 % to 20 %	1
2	From 21 % to 40 %	2
3	From 41 % to 60 %	3
4	From 61 % to 80 %	4
5	From 81 % to 100 %	5

3.3.6. Road facility

In Coimbatore Corporation, most of the slums are not having proper road facilities for the emergency access. It is observed from the socio economic survey data that the motorable pucca and motorable katcha is 34.35% and 26.90% respectively which is shown in Fig 3.3.

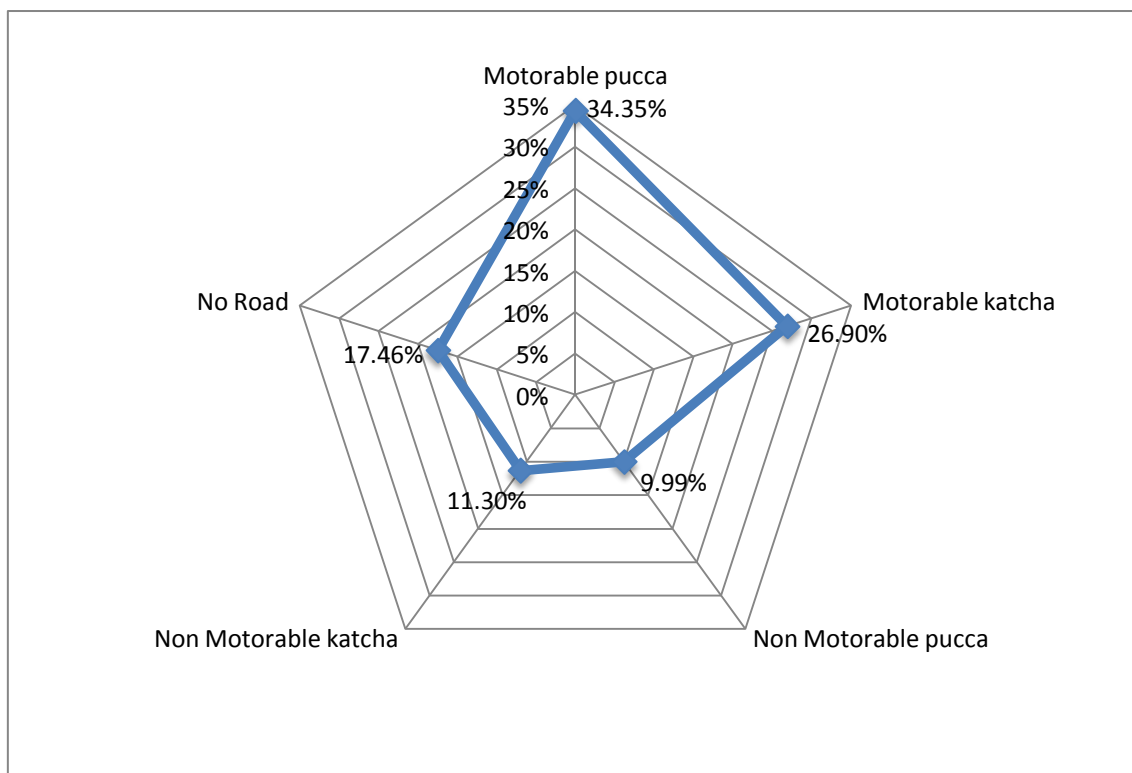


Fig.3.3. Road condition in the slums

Based on the present road condition in front of the slum households, the deficiency of road and narrow access percentage is calculated. This deficiency range is varying from 0% to 100% which is shown in the Table 3.14.

Table: 3.14 – Percentage of Road deficit

Range	Road Coverage	Score
1	From 0 % to 20 %	1
2	From 21 % to 40 %	2
3	From 41 % to 60 %	3
4	From 61 % to 80 %	4
5	From 81 % to 100 %	5

Cumulative Infrastructure score for each slum has been arrived based on the above six criteria. The infrastructure deficiency scores are varying from 8 to 30 which is given in Table 3.15. The ranking for the infrastructure index is done by dividing the scores into three ranges.

Table: 3.15 Infrastructure index

Range	Infrastructure score	Rank
1st	From 8 to 15	1
2nd	From 16 to 23	2
3rd	From 24 to 30	3

3.4. DEFICIENCY MATRIX

Based on the ranking of vulnerability index and infrastructure index, the 3x3 Deficiency matrix are arrived. This matrix facilitates in getting clear perception about each slum. Matrix are playing major role in the prioritizing slums for future improvement. From the matrix, a diagonal traversal starts from right bottom to top left (Fig. 3.4). Based on the traversal, the facilities in the slums are observed. Slums with 3x3 scoring need immediate attention for the lack of facilities.

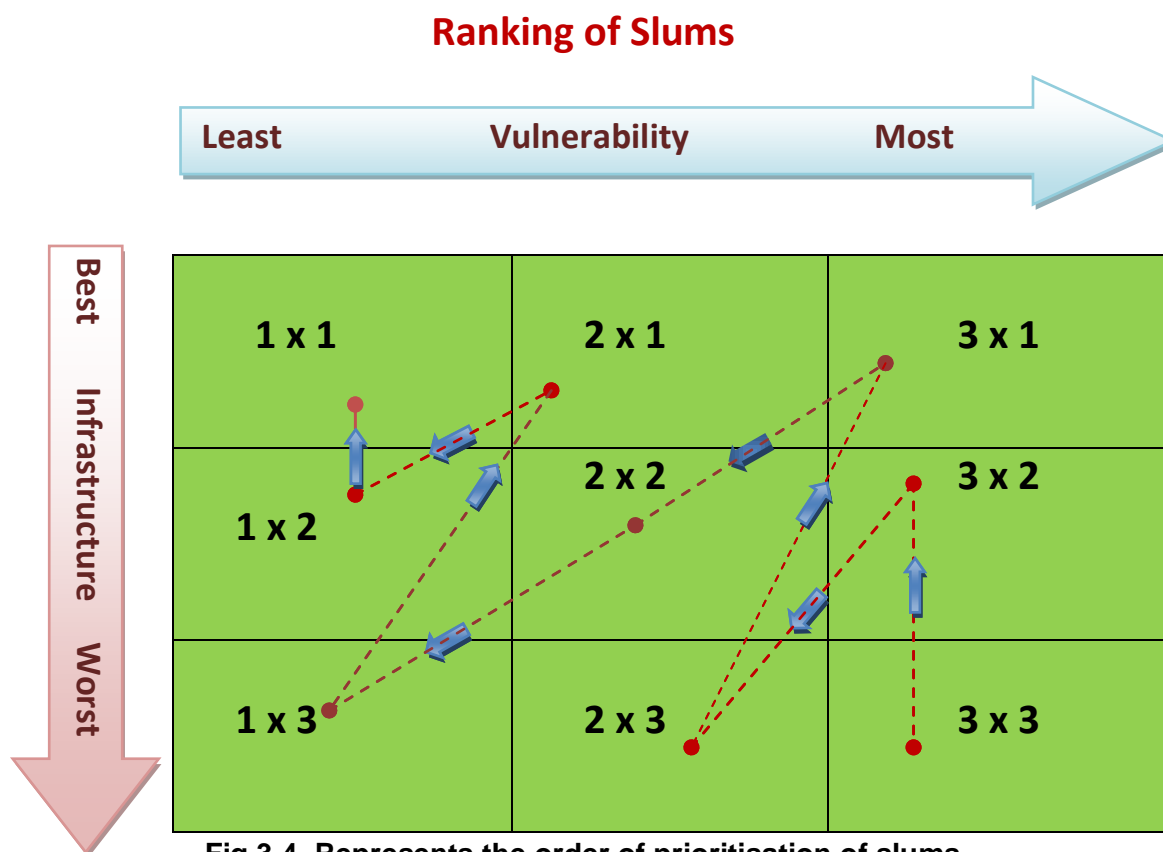


Table 3.16. Deficiency Matrix for Tenable slums

		Vulnerability		
		1x1 (Nil)	2x1 (11 Slums)	3x1 (Nil)
Infrastructure	1x2 (33 Slums)	2x2 (55 Slums)	3x2 (6 Slums)	
	1x3 (3 Slums)	2x3 (7 Slums)	3x3 (1 Slum)	

Based on the tenability analysis, it is estimated that the total number of tenable and untenable slums in Coimbatore city are 116 and 99 respectively. The developed deficiency matrix for tenable slums with priority ranking is shown in Table 3.16. The tenable slums deficiency classification has been carried out as shown in Table 3.17.

Table: 3.17 Slums Distribution based on deficiency Matrix – for Tenable Slums

Developed slum is falling in this category which is having better infrastructure and livelihood condition. It may be recommended for delisting. (Nil)	Considerable development needs to be given for livelihood improvement of the slum dwellers (11 Slums)	An immediate care is needs to reduce the vulnerability index by providing in house training to the slum dwellers to improve their livelihood. (Nil)
Moderate attention needs to be given on infrastructure to provide access to all amenities, similar to the urban people. (33Slums)	Immediate attention needs to be given to facilitate the infrastructure service to the slum and livelihood of the slum dwellers. (55 Slums)	Special attention is needed to develop the status of the slum dwellers by providing skill development training to enhance them for their betterment and also an immediate attention needed for improvement of the infrastructure of the slum. (6 Slums)

<p>An immediate measures needs to be taken to reduce the infrastructure deficiency by providing basic amenities to the slum dwellers. (3 Slums)</p>	<p>Special attention is needed to provide infrastructure facilities for better environment and care to be taken for the livelihood improvement through better employment. (7 Slums)</p>	<p>An immediate attention is required to improve the infrastructure as well as livelihood condition. (1 Slum)</p>
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Remaining 99 slums are falling in the untenable category. Fig. 3.5 represents the location of slums with deficiency matrix analysis.

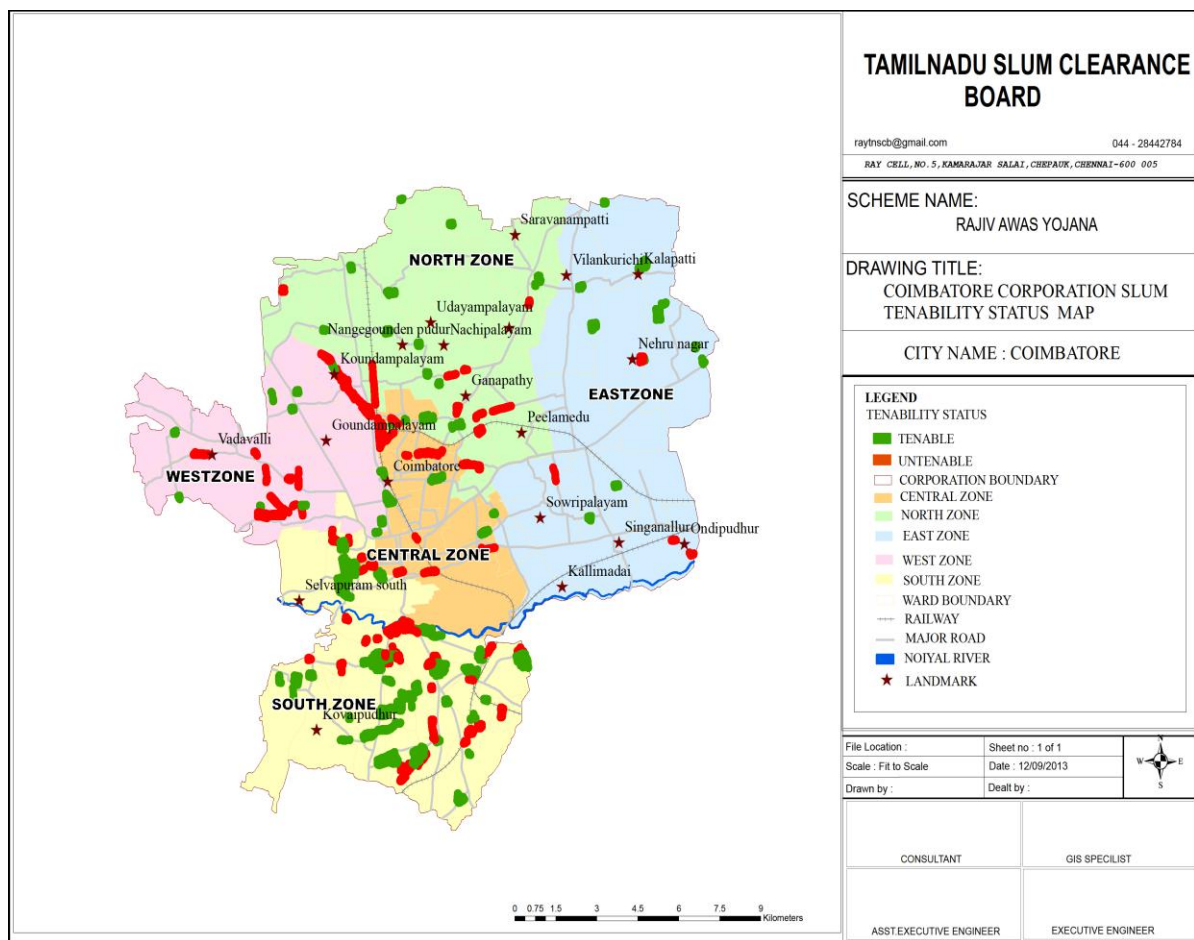


Fig. 3.5 Map Representing the Deficiency Analysis of slums

The overall analysis for the Tenable slums classified and the deficiency value is calculated which is shown in Table 3.18 for Coimbatore city.

Table 3.18 Deficiency Matrix Analysis for Tenable slums

S.No.	Zone	(3x3)	(3x2)	(2x3)	(3x1)	(2x2)	(1x3)	(2x1)	(1x2)	(1x1)	Total
1	North Zone	1	1	1	0	10	0	2	0	0	15
2	East Zone	0	2	2	0	8	0	0	1	0	13
3	West Zone	0	0	2	0	8	0	0	3	0	13
4	South Zone	0	3	1	0	26	3	7	29	0	69
5	Central Zone	0	0	1	0	3	0	2	0	0	06
	Total	1	6	7	0	55	3	11	33	0	116

It is observed that 47% and 28% of tenable slums are falling under the 2 x 2 matrix and 1x2 matrix respectively which are having moderate infrastructure facility and medium vulnerability. The deficiency matrix of Tenable slums is shown in Fig. 3.6

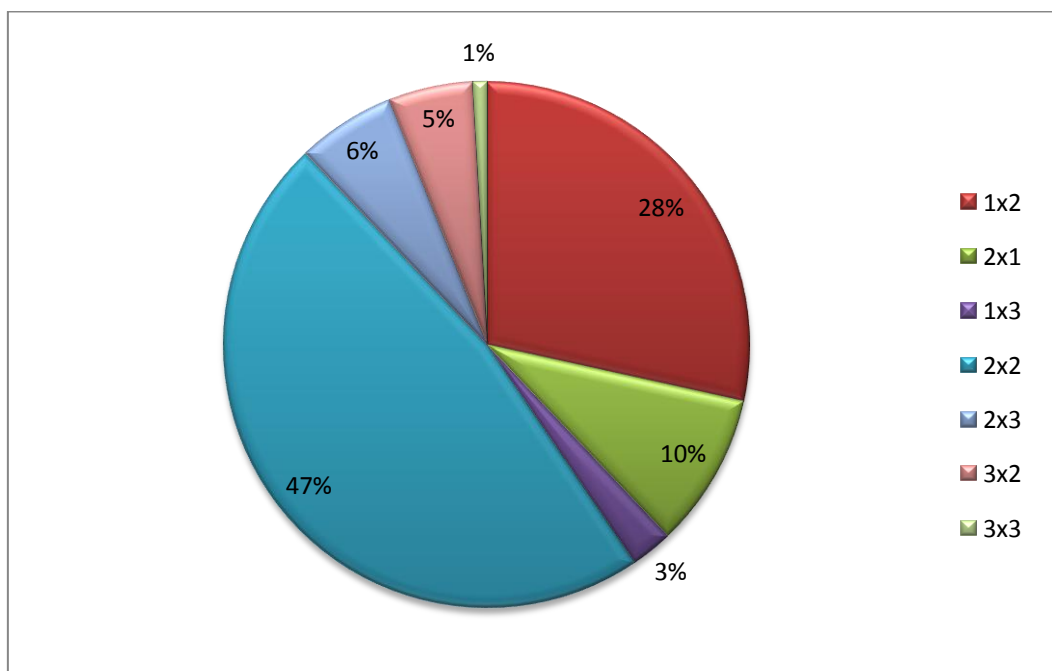


Fig. 3.6 Tenable slum distribution with deficiency Matrix

3.4.1 Tenable Slum Classification based on Deficiency Matrix

As envisaged by the Government of India, the identified cities under RAY shall become slum free in future. The city would use the following principles and a broad and comprehensive range of options and solutions to achieve this goal. The deficiency matrix traversed diagonally from bottom right to top left. The slums falls under the each cell in the traversal is listed separately in each Table (vide Table 3.19 to 3.26). Totally 33 slums are falling in 1x2 category. There is no slum in 3x1 category.

Table: 3.19 Tenable Slums with Deficiency Matrix (v3xi3)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	North Zone	31	Periyar Nagar	148	An immediate attention is required to improve the infrastructure as well as livelihood condition.

Table: 3.20 Tenable Slums with Deficiency Matrix (v3xi2)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	North Zone	028	Chinnametupalayam AD Colony	38	Special attention is needed to develop the status of the slum dwellers by providing skill development training to enhance them for their betterment and also an immediate attention needed for improvement of the infrastructure of the slum.
2	East Zone	033	Rathinagiri Veethi	21	
3		035	Kallimedu	43	
4	South Zone	095	Kurchi Gandiji Road	480	
5		099	Supparayan Muthali Street	127	
6		095	Kurchi Silver Jubilee Street Part - I	180	

Table: 3.21 Tenable Slums with Deficiency Matrix (v2xi3)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	North Zone	041	Kakkan Veethi	204	Special attention is needed to provide infrastructure facilities for better environment and care to be taken for the livelihood
2	East Zone	033	Shastri Veethi Kalapatti	85	
3		064	CMC	260	

			Colony_Vardharajapuram		improvement through better employment.
4	West Zone	018	Ajunur_Harijan Colony	25	
5		024	SundaramVeethi	56	
6	South Zone	100	Carmel Nagar – Part - I	10	
7	Central Zone	071	Kallukuzhi	252	

Table: 3.22 Tenable Slums with Deficiency Matrix (v2xi2)

S.No	Zone	Ward No.	Slum Name	House Hold	Remarks	
1	North Zone	002	Anna Colony_Thudiyalur	154	Immediate attention needs to be given to facilitate the infrastructure service to the slum and livelihood of the slum dwellers.	
2		003	Pattathu Arasimman Kovil Veethi–Part I	30		
3		026	Gandhi Veethi_Vattamalai Palayam			38
4			Meenatchi Amman Koil_Veethi Ambedkar Nagar			279
5		028	Anna Nagar	53		
6		041	Ambedkar Veethi			53
7			Iyyavu Veethi			52
8			Rajarathinam Veethi			41
9		042	Udayampalaym - Harijan Colony	105		
10		047	Arthanur Amman Koil Veethi	131		
11	East Zone	032	Ambedkar Nagar	239		
12			Lenin Veethi	90		
13		033	Pudhu Colony	180		
14		034	Kalappatti Nehru Nagar			11
15			Veeriampalayam Gandhi Veethi			152
16			Nehru Nagar PalliVeethi– Part - II			100
17		035	Stalin Nagar	37		
18		062	CMC Colony - Neelikkonampalayam	156		
19	West Zone	007	Edaiyar Palayam - Harijan Colony	80		
20		006	Kamaraj Nagar - Harijan Colony	66		
21		008	Edaiyar Palayam Meenakshi Amman Kovil Veethi	103		
22			Arunthathiyar Veethi_Veerakeralam	50		

23		017	Vinayagar Kovil Veethi Kalveerampalayam	47		
24		020	Tank Bed Line	122		
25		022	Kamarajapuram	639		
26			Muthumariamman Koil Street	249		
27	South Zone	077	Jeeva Lane	351		
28			Karupannan Lane -1	57		
29		078	Devendirar Veethi North	299		
30			Kempatty Colony	388		
31			Ponni Veethi	27		
32		087	Part of ward 21	245		
33		088	Grosscut - 1	40		
34		089	Harijana Colony 89	116		
35			Kamarajar Colony	51		
36			Pajani Koil Veethi	108		
37			Vaikkal Palayam	104		
38		091	Nethaji Nagar	53		
39			Parvathi Nagar	105		
40		092	Anna Nagar	38		
41			Senthamzhail Nagar	295		
42		093	Bagavathi Nagar_Periyar	135		
43		093	Amman Colony Part - I	36		
44			Gnanapuram	91		
45			Maduraiveeran Street_Periyar	122		
46			Periyar Nagar	256		
47		095	Najundapuram Ittery Part - II	695		
48			Planiyappa Gounder Street_Pudu Street	31		
49			Polachi Main Road	144		
50			Vannara Pettai	68		
51		100	Echanari_Harijan Colony	92		
52			Madurai Veeran Koil Street_ Metur	57		
53		Central Zone	071	Damu Nagar		52

54		045	Kamarajapuram – Part - I	100	
55		052	Siddaputhur– Part - I	509	

Table: 3.23 Tenable Slums with Deficiency Matrix (v1xi3)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	South Zone	078	Selvapuram_Perur Main Road	16	An immediate measures needs to be taken to reduce the infrastructure deficiency by providing basic amenities to the slum dwellers.
2		092	Sugunapuram Hills	399	
3		097	Pillayarapuram	714	

Table: 3.24 Tenable Slums with Deficiency Matrix (v2xi1)

S.No	Zone	Ward No.	Slum Name	House Hold	Remarks
1	North Zone	031	Kumaran Nagar	31	Considerable development needs to be given for livelihood improvement of the slum dwellers
2		043	JeevaVeethi_Urumandampalayam	141	
3	South Zone	092	Madurai Veeran Kovil Veethi	22	
4		093	Marriyamman Koil Veethi	260	
5		094	Kurchi Boyer Veethi	154	
6			Mariamman Koil Street (Machampalayam Road)	347	
7			Machampalayam_(Harijan Colony)	316	
8		098	Panchayath Office Road – Part - I	30	
9		100	J.J. Nagar_Ganesspuram	26	
10	Central Zone	045	Kannappa Nagar	26	
11		052	Siddaputhur Part_2	158	

Table: 3.25 – Tenable Slums with Deficiency Matrix (v1xi2)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	East Zone	034	Veeriampalayam Nehru Veethi	26	Moderate attention needs to be given on infrastructure to provide access to all amenities, similar to the urban people.
2	West Zone	006	Gandhji Nagar Near Vivekandha Nagar Part - I	28	
3		009	Mariyamman Kovil Veethi	34	
4		024	Macrikan Road_R.SPuram	90	
5		South Zone	078	SoliyaVellalar Street North	
6	South Zone	085	South of Perur TNSCB Scheme & Road Slum	1439	
7		086	North of Perur TNSCB Scheme & Road Slum	2171	
8		088	Allagasi Thottam	96	
9			Muventhar Nagar	120	
10			Upplithidu	34	
11			Boer Street	362	
12			Dalfactory Street	131	
13			Kaliyappa Gounder Street	49	
14			Vellaler Street	94	
15			089	Anna Nagar	
16		091	Thotta Rayan Koil Line	72	
17		092	Sugunapuram East	310	
18			Sugunapuram Vinayakar Koil Street	147	
19		093	Sriram Nagar	23	
20		095	Bhajanai Koil Street	64	
21		097	Bharathi Nagar	21	
22		100	Echanari Padaslai Veethi	57	
23			Kattu Nayakkan Part (Part – I)	25	
24	South Zone	085	MGR Nagar_Sundamuthur Road	62	
25		088	Manikara Street	43	
26		089	NTP_Street	257	

27		091	Sathya Nagar	21	
28		092	Batharakaliyamman Koil Street	35	
29	Narasimmapuram		170		
30	Vinayakar koil Street		127		
31		096	Kurchi Round Road_Kuriappan Palli Veethi	252	
32		098	Noorpath Colony	219	
33			Uthami Nagar	98	

3.4.2 Untenable Slum Prioritization

The prioritization of untenable slums have been done based on the following parameters.

- Based on the environmental risk
- Proportion of women population
- SC/ST population
- Minority population and
- BPL family

Cumulative score for each slum have been arrived based on the above five criteria. The ranking for the untenable slum is done by dividing the scores into three ranges. The zonewise distribution of untenable slums with ranking is shown Table 3.26.

Table 3.26 Ranking for untenable slums

S.No.	Zone	Rank 1	Rank 2	Rank 3	Total
1	North	5	4	2	11
2	East	3	1	0	04
3	West	3	9	10	22
4	South	21	14	9	44
5	Central	3	9	6	18
	Total	35	37	27	99

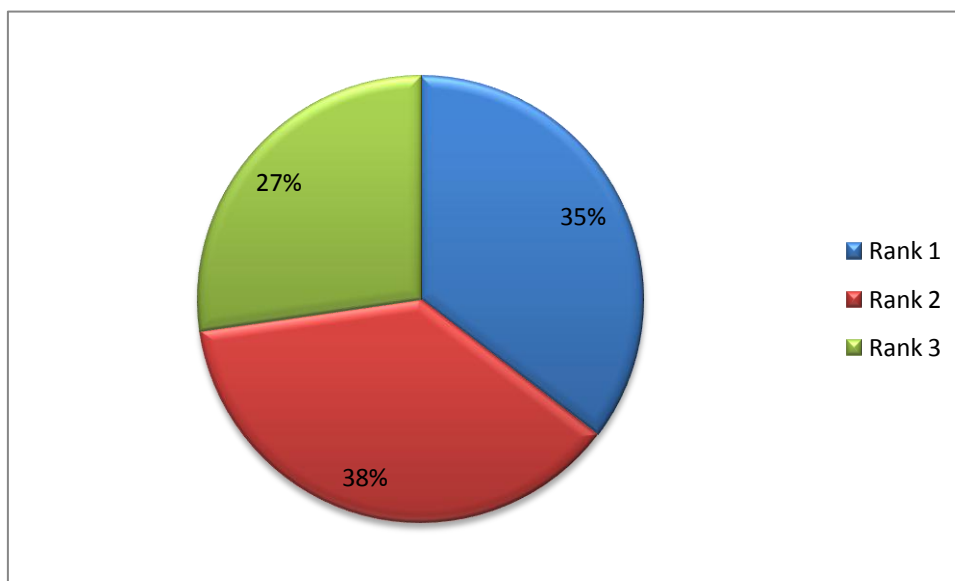


Fig. 3.7 Untenantable slum distribution with ranking

Based on the ranking of untenantable slums, the relocation have to be prioritised. It is inferred from the Fig. 3.7, 35% of slums are falling in the Rank 1, which needs immediate measures to improve the livelihood of the slum dwellers and the slum may be relocated to have decent housing. The ranking assigned for the each untenantable slum is tabulated from Table 3.27 to Table 3.29

Table 3.27 Untenantable Slums with Rank 1

S.No	Zone Code	Ward No	Slum	Total House holds	Ranking
1	1	040	Avarampalayam - Pattalamman Koil Street	266	1
2	1	004	Kalaingar Nagar	128	1
3	1	046	Old Sathy Road	44	1
4	1	041	Rabindranath Tagore Street - Part I	57	1
5	1	041	Rabindranath Tagore Street - Part II	62	1
6	2	061	Noyyal Bannari Amman Nagar- Ondipudur	30	1
7	2	056	Anna Nagar Peelamedu	59	1
8	2	061	Anna Nagar - Ondipudur	25	1
9	3	015	Mullai Nagar Palla Salai	30	1

10	3	015	Balan Nagar Palla Salai	26	1
11	3	017	Balaji Nagar Pallam	55	1
12	4	077	Chokkanpudur Selvapuram Masaniamman Koil Veethi	112	1
13	4	087	Gandhi Nagar	100	1
14	4	100	Carmel Nagar Part - II	51	1
15	4	087	Periyasamy Street	261	1
16	4	077	Chokkanpudur Selvapuram E.B. Colony	31	1
17	4	085	KuppannanThottam	50	1
18	4	088	Kottamedu	33	1
19	4	095	Balusamy Naidu Street	206	1
20	4	095	Pollachi Road 1. Anna Nagar West	81	1
21	4	097	Gandhi Nagar Lower - KelPakuthi	88	1
22	4	097	Gandhi Nagar Upper - MelPakuthi	90	1
23	4	097	J.J. Nagar East - Kolapadi Pakuthi	71	1
24	4	097	J.J. Nagar West - Kolapadi Pakuthi	334	1
25	4	100	Thannir Thottam	32	1
26	4	087	Quiad-E- Millath Street	104	1
27	4	089	Periyar Nagar	43	1
28	4	095	Kurchi Silver Jubilee Street Part - II	180	1
29	4	087	Bharathi Nagar	13	1
30	4	087	Jeeva Nagar	90	1
31	4	095	AnaiMedu Dharka Line	31	1
32	4	095	Anaimedu	386	1
33	5	072	Kadalakara Sandhu	42	1
34	5	071	Majeed Colony	343	1
35	5	084	Ukkadam	779	1

Table 3.28 Untenable Slums with Rank 2

S.No.	Zone Code	Ward No	Slum	Total House holds	Rank
1	1	003	Pattathu Arasimman Kovil Veethi Part - II	7	2
2	1	031	KVK Nagar	55	2
3	1	040	Chinnasamy Nagar Pallam	62	2
4	1	040	Vivekananda Nagar	94	2
5	2	034	Nehru Nagar Palli Veethi Part -I	100	2
6	3	010	Gokulam Colony 7 th Street Pallam	60	2
7	3	016	New Thillai Nagar - Slum Area	45	2
8	3	015	Valliammal Koil Street - Maruthamalai	35	2
9	3	017	Indira Nagar	135	2
10	3	005	Mullai Nagar	136	2
11	3	009	Prabhu Nagar	393	2
12	3	018	Ajay Mugarji Street	47	2
13	3	009	Ambedkar Nagar	57	2
14	3	005	Ashok Nagar East	22	2
15	4	093	Amman Colony Part - II	12	2
16	4	095	Najundapuram Ittery Part - I	356	2
17	4	085	Pomman Chetti Veethi	27	2
18	4	087	Kurunchi Nagar	66	2
19	4	085	KardikoilVeethi	66	2
20	4	097	Thirumurugan Nagar	8	2
21	4	097	Gandhi Nagar Middle	25	2
22	4	100	Echanari Railway Gate	27	2
23	4	087	Adisakthi Nagar	45	2
24	4	087	Satham Nagar	100	2
25	4	087	Thiruvalluvar Extension	227	2
26	4	087	Thiruvalluvar Nagar - Thirumoorthy Nagar	231	2
27	4	094	Uppiliar Thittu	220	2
28	4	097	Indira Nagar	25	2
29	5	045	Kamarajapuram Part - II	105	2
30	5	070	Kulathumedu Vaikkal	67	2
31	5	048	Ex.Serviceman Colony	41	2
32	5	051	Sastri Nagar	294	2
33	5	045	Balusamy Nagar	113	2
34	5	045	Teachers Colony	26	2
35	5	049	Anna Nagar	89	2
36	5	050	7 th St Bridge Near Slum	36	2
37	5	053	Dhanalakshmi Nagar	254	2

Table 3.29 Untenable Slums with Rank 3

S.No.	Zone Code	Ward No	Slum	Total House holds	Rank
1	1	044	V.O.C Nagar Ext & Velusamy Nagar	114	3
2	1	044	Karuppusamy Nagar	212	3
3	3	007	Gandhiji Nagar Near Vivekandha Nagar Part-II	20	3
4	3	020	Ex Servicemen Colony	34	3
5	3	009	PN Pudur Kuttai	37	3
6	3	020	Anna Nagar Sugar Cane Main Road	104	3
7	3	020	MGR Nagar	83	3
8	3	005	Ashok Nagar West	198	3
9	3	009	Driver Colony	193	3
10	3	009	Kamarajar Nagar	109	3
11	3	010	Karunanidhi Nagar	312	3
12	3	019	Kalaingar Karunanidhi Nagar	45	3
13	4	100	KattuNayakkan Part (Part - II)	11	3
14	4	100	KalluKuli	43	3
15	4	085	Chetti Vidhi Main Road	90	3
16	4	085	Vaishiyaal Veethi	26	3
17	4	095	Podanur Fish Market	54	3
18	4	100	MuthuMariyamman Kovil Street	27	3
19	4	098	Panchayath Office Road Part - II	71	3
20	4	087	Palakad Main Road	17	3
21	4	097	Karuppurayan Kovil Veethi	8	3
22	5	045	Narayana Gounder Street	28	3
23	5	050	Hosimin Nagar	437	3
24	5	048	V.O.C Nagar	66	3
25	5	049	Chinnaraj Nagar	92	3
26	5	049	Sampath Street	26	3
27	5	055	KarupakalThottam	184	3

The deficiency matrix facilitates to rank the slums with high, medium and low vulnerability and having high, medium or low access to physical infrastructure. The poorest and most vulnerable groups with least access to basic amenities falling into the lowest category get preference for upgrading.

Slum up-gradation will involve the provision of basic services such as water and sanitation, drainage, roads, street lighting, footpaths, and community facilities. Based on the ranking of deficiency matrix, the development options for the curative and preventive measures are carried out which are discussed in detail in chapter 4 and 5.

CHAPTER – 4 CURATIVE MEASURES BASED ON THE DEFICIENCY MATRIX

4.1 INTRODUCTION

The detailed analysis of Socio Economic Survey data has been carried out to prepare the deficiency matrix. Based on the deficiency matrix, the slum development strategies have to be arrived in accordance with the RAY directives.

The Slum Free City Plan for Coimbatore city has been prepared by using different strategies, tenability analysis, slum location, notified and un-notified of slums. An analysis is performed based on the existing status of the slum and the slum dwellers on objectionable locations, Unstable land tenure, Infrastructure up-gradation, employment status, financial status of slum dwellers and male-female heads of household.

i. Objectionable Slums

Out of 215 slums only 99 slums are found to be located in hazardous zone requiring their re-location. This constitutes 10586 of the households in all zones. The 39% of untenable households are falling in the South zone. Table 4.1 shows the zone wise number of households, need to be relocated.

Table 4.1. Distribution of households in Untenable Slums

S.No.	Zone	No. of Slums	No. of HHs
1	North	11	1101
2	East	04	0214
3	West	22	2176
4	South	44	4169
5	Central	18	3022
Total		99	10682

The Number of households in untenable slums of Coimbatore Corporation is 10682 which consist of 36% of total households of slums. Densification of low density slums will also help in creation of land vacated by resettled slums. Option of relocation depends upon the availability of land and number of slum dwellers. Residential density and FSI to analyse whether the slum would be able to take additional population that may be shifted in case of

necessary resettlement of nearby untenable slums/ high density slums. Fig. 4.1 Shows percentage of households needs to be relocated

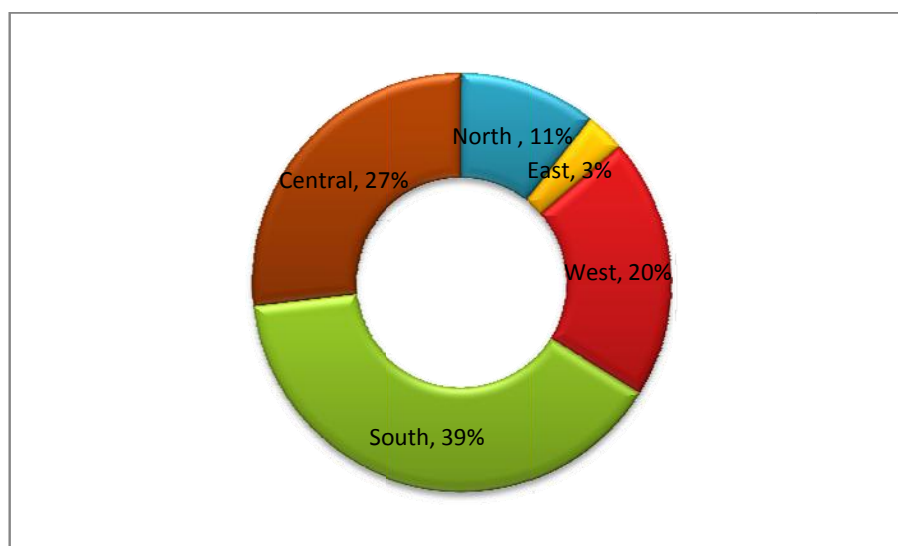


Fig. 4.1 Percentage of households needs to be relocated

ii. Unstable Land Tenure

Land tenure is the legal regime in which land is owned by an individual, who is said to "hold" the land. The sovereign monarch, known as the Crown, held land in its own right. All private owners are either its tenants or sub-tenants. The term "tenure" is used to signify the relationship between tenant and lord, not the relationship between tenant and land.

Only 99 slums are falling under the unstable land tenure. The remaining 116 slums are mostly possessing patta. This aspect will ensure that the slum free city development plan will not be derailed due to delay in award of pattas by the Government to these slum dwellers or it is a pre-requisite of RAY for taking up their development.

iii. Educational Qualification

Education is not a problem especially in Coimbatore Corporation. The no. of educational institutions are quite high. However, only the supply of educational facility does not ensure the education of the children in the slum area. The socio economic survey result declares that the population of uneducated people in slum is varying from 20% to 30%. Only 10% of slum dwellers are having diploma and higher qualification. Figure 4.2 shows the educational status of slum dwellers for each zone.

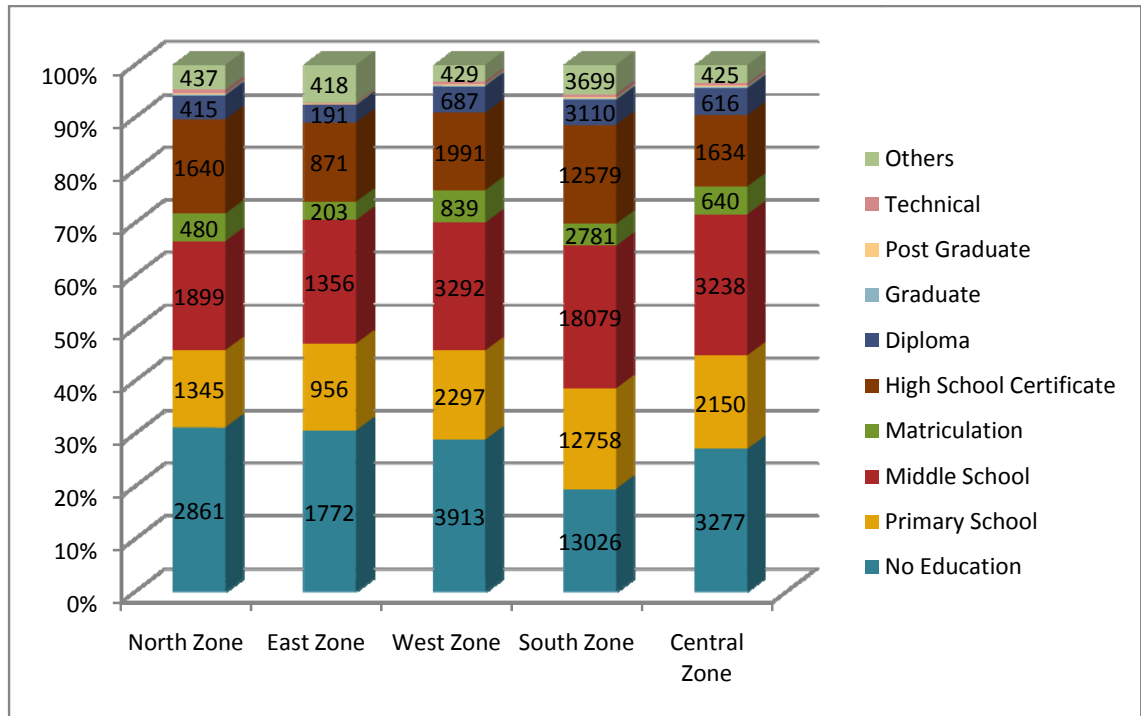


Fig. 4.2 Zone wise Educational Status

Due to the vulnerable and weak socio-economic status, school dropouts are more in Coimbatore slums. The slum children are in need of special attention during their primary education. It is very difficult to provide good education to the children of slum without improving livelihood condition.

iv. Financial Status

Most of the slum dwellers are uneducated and unskilled. Due to this real fact the slum dwellers are getting low income. Coimbatore city is one of the hubs of industries like automobile, textile, agriculture pumps etc. These industries need only skilled labours. Figure 4.3 shows that 40% of households in slum area of Coimbatore city getting income of less than Rs. 5000 which is inadequate to fulfil their day to day requirements. Hence to meet out the day to day expenditure and other expenditure towards Medical, Marriage, Education, house construction, etc., the slum dwellers are forced to get loan from the local financiers. Figure 4.4 shows the debt outstanding of slum dwellers of Coimbatore Corporation.

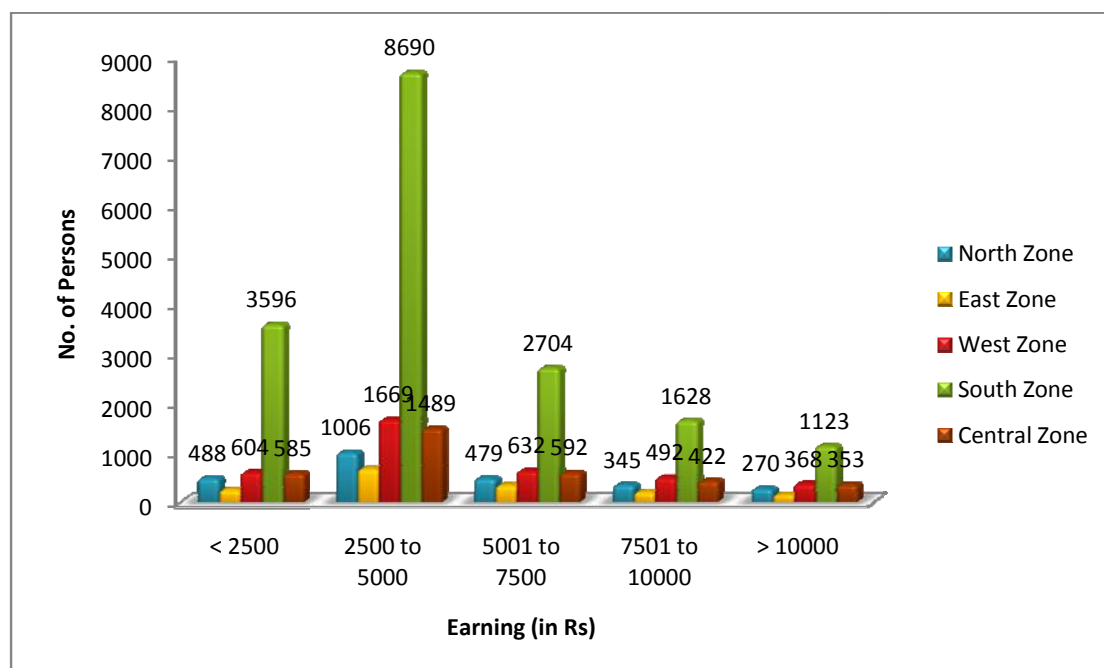


Fig. 4.3 Earning Status of Slum dwellers

Living standard reflects the income of the family. It is also helpful for improvement of good life. The slum dwellers of Coimbatore city try to improve their living standard as per their skills and education.

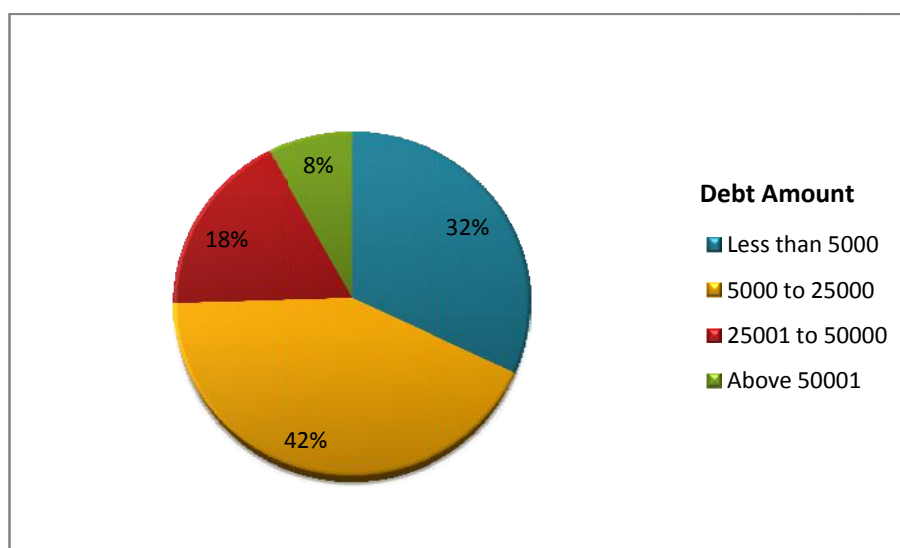


Fig. 4.4 Debt outstanding of Slum dwellers

4.2 TYPE OF DEVELOPMENT STRATEGIES

From the results of the deficiency matrix, the following facts have emerged which play a key role in formulating the strategies for slum development. The following curative strategies are employed to enhance the entire slum environment to meet the basic amenities without any complexity.

- Improvement of livelihood of the slum dwellers.
- Infrastructure development.

To improve the livelihood of the slum dwellers, the data from the socio economic survey at Coimbatore city, further helped to evolve different schemes that would be needed to improve their livelihood income, living-environment, and their education. Based on the discussion with the slum community, the following three schemes have been evolved and proposed for implementation.

1. Community development Training Institute
2. Employment Web portal

Further, the infrastructure development was analysed with the following parameters like

- Development of infrastructure without housing like roads, street lights, sewerage systems, storm water drainage and Toilet facility.
- Development options of in-situ development of housing
- Remodelling of housing units, and
- Resettlement.

The parameters in the livelihood improvement and infrastructure development, improvement are represented with different schemes in curative measures for the formulation of slum development.

4.3 SCHEMES IN LIVELIHOOD IMPROVEMENT

The primary scheme in the livelihood improvement is Community Development Training Institute (CDTI). The CDTI focuses on instilling the necessary attitudes, skills and knowledge into individuals for career success in this new era of work. The main objectives of the proposed institutes are as follows: Learning Resource Section, Computer labs for Information Technology training, Career Counselling, Soft Skills and Technical Vocational Skills training, Job training and Placement. The target group includes displaced farmers, school dropouts, teenage mothers as well as youth at risk whom the CDTI is mandated to

impact on their lives, socially, through their personal development and transforming their lifestyles.

The underlying aim is twofold. One is to prevent the school or college dropouts involving the threats such as crime which will be major bottleneck in improvement of the Coimbatore city. The second is to provide a platform and train them become skilled workers such as carpenter, electrician, plumber and mason, to improve their income/livelihood.

4.3.1 Community Development Training Institute

The proposed Community Development Training Institute (CDTI) is an Institute under the Tamilnadu Slum Clearance Board, for the purpose of development of slum community through proper training on skills required to make them self sufficient to live a moderate life. This transformation will enable them to move from BPL to the higher level and also provide them an opportunity to get the good education for their wards. This needs to be done as an ambitious state level programme for upgrading their skills and secure the land tenure. It is well recognized that there is an urgent need to develop more participatory models of support for low-income groups and of the possibilities of doing so through supporting skill development programmes, 254 community-based savings and credit groups. Various local NGOs working in the state could also take part in the CDTI and help to evolve possibilities of improving housing and other infrastructure requirements by working with low-income communities and networks of communities.

Community Development Training Institutes (CDTIs) has to be established in each zone of Coimbatore corporation with adequate capital base, to make arrangements for the training of youths or school dropouts or adults from slums, and also to allow it to make loans available to organized communities to undertake a range of activities relating to water supply, sanitation works, housing construction, housing improvement, and income generation. It has also been reiterated in international arena that for pro-poor development to take place, relations between low-income groups and the state had to change. Critical to that change was the establishment of skilled manpower and accountable local citizen organizations. Many focus of the institute is to provide skill based training to the slum dwellers and facilitate them in improving their earning through paradigm shift approaches. Dedicated staff in CDTI will be headed by the CDO/Engineer to facilitate quick decisions. The CDTI will be managed by a Community Development Officer (CDO) drawn from State Services and of senior rank with experience of slum upgrading work in other cities. The CDO will be responsible for implementing slum upgrading activities.

CDTIs are expected to develop links with a wide range of community organizations, savings groups, NGOs and government organizations. Loans had much lower interest rates than the other loan sources that urban poor households could turn to, although they were also high enough to allow the initial fund to be sustained and to cover administrative costs. CDTIs support for community networks.

CDTIs should be envisaged as an establishment under the TNSCB umbrella, not only to provide support to individual groups, but also to a community network, and to be the centre of the entire problem solving, for problem cases. The emergence of large-scale community networking would bring immense change to community-led development processes in general and to CDTIs in particular. Community organizations in a particular city or province join together to form a network to work together and negotiate with city or corporation authorities, or to influence development planning, or simply to work together on shared problems of housing, skill development, livelihoods or access to basic services. There can be networks based around occupations (for instance a taxi cooperative), pooled savings and cooperative housing. There could also community networks based on shared land tenure problems (for instance, networks of communities living along railway tracks or under bridges who have shared tenure or landlord problems). As community networks manage loans, this also decentralizes the decision-making process so it is closer to 29937 individual communities and better able to respond rapidly and flexibly to opportunities identified by network members. CDTIs will get the both logistical and financial supports for the slum development programmes but it has its own legal entity as an organization under TNSCB. This would provide CDTIs with greater possibilities (for instance, being able to apply for funds to the annual government budget, facilitation of submission of Infrastructural projects etc), greater flexibility, wider linkages and new possibilities for supporting collaboration between urban and rural groups. CDTI is also the responsible for implementing the government programme to support upgrading the slums through projects like RAY, TNUDP etc.

It is well recognized that projects cannot be ended within themselves; they need to be part of a more comprehensive plan that is driven by the slum community. Conventional development systems and processes are not designed for the conditions of the poor people in slums nor, they are appropriate to the needs of the slum dwellers. There are almost always problems when the poor try to fit into these systems. What is required is that the slum dwellers determine the conditions attached to projects – thereby enabling plans and processes to be better suited to their needs and capacities. At the same time, the poor cannot resolve their problems on their own. What is needed is an open and inclusive

process that engages the many other groups that are relevant to development within a process that is determined and controlled by the slum dwellers.

CDTI will be responsible for appointment of consultants for development of DPRs; inviting proposals from the private sector for housing and other infrastructure development; undertaking SWOT analyses of local NGOs and getting into partnership agreements with them for social mobilization, ensuring micro-finance arrangements with local banks and micro-finance institutions; obtaining financial and administrative approvals for land, housing, infrastructure development, etc., releasing timely resources to concerned agencies for upgrading works and overseeing community inclusion, mobilization and development progress, setting up voice and grievance redressal systems; developing a baseline database with MIS, using GIS-based slum maps to monitor progress, and develop/modify action plans based on ground progress. PIU will keep track of land earmarked for housing in various housing projects and prepare plans for resettlement of slum dwellers on developed sites/houses. TNSCB will synergize its implementation strategy with various departments of education, health, welfare, food and civil supplies, social welfare, etc., to ensure convergence and coordinated action.

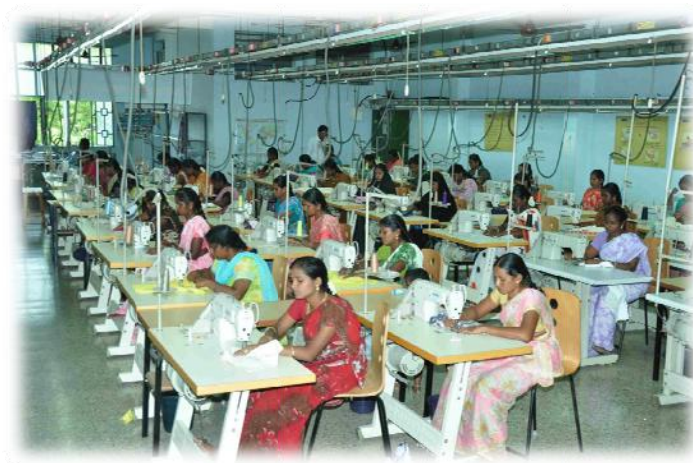
Thus, major activities envisaged of CDTI are listed below:

- Poverty Alleviation (Supporting communities in savings, credits and loans and community development plan, etc.)
- Community Welfare
- Assisting in setting up of Community Development Organization Councils throughout the State
- Promoting Skill Development, Sustainable livelihood and Environmental Management
- Solving land and housing disputes in slums to the extent possible.
- Citywide slum upgrading

The strategies or principles of CDTI are given below:

- To play supporting role in community development process in Slums
- Slum Dwellers, not CDTI, are the owners and key actors of the process
- To coordinate with govt. agencies, NGOs, other civic groups
- To promote Skill up-gradation, and community-based savings
- To use finance as a tool for development

Tailoring
Training
for slum
dwellers



Tailoring Training
for slum dwellers

Computer
Training



Fig.4.5 Skill development Training proposed by CDTIs for Slum Dwellers to improve their livelihood

Many of these activities are governance related, involving organization, planning and changes in attitude, and these alone can result in considerable improvements in the situation and quality of life of slum dwellers. The political will, organization and inclusiveness that

constitute the foundation of good urban governance are very much a precondition for the successful adoption and implementation of CDTI and subsidy programmes of any kind. Without a refocusing of governance, the failures of the past will simply be repeated. Fig.4.5 shows the community training activities carried out by polytechnics under the guidance of NITTTTR Chennai. Similar model is proposed through CDTI for improving the livelihood of slum dwellers.

Seven values and principles that need to be underpinned in CDTI as shown in Fig.4.6 for effective and successful functioning are:

- Nurturing and mobilizing cooperative, responsible and active communities of men and women for the purpose of mutual aid, self-help, problem solving, social integration and social action.
- Fostering the ideal of participatory democracy at all levels of society in order to counter apathy, frustration and resentment, which arise from feelings of powerlessness and oppression in the face of unresponsive power structures.
- Relying upon the capacity and initiative of relevant groups and local communities to identify needs, define problems, and plan and execute appropriate courses of action, increasing leadership competency and reducing dependence on the state and professional interventions.
- Mobilizing and deploying resources from within the community and outside (through partnerships with governments, NGOs, etc) in such a way as to ensure balanced, sustainable forms of development.
- Promoting community integration around two sets of relations: social relations among diverse groups whose differing characteristics may cause conflict; and structural relations among those institutions (government, private, NGO and CBO) that address social challenges at the community level in order to avoid competition and duplication.
- Organizing activities such as circles of solidarity that empower marginal or excluded population groups by linking them with the progressive forces in different social sectors and classes.
- Giving the marginalized excluded or oppressed the essential tools to enable them to critically analyze and become conscious of their situation in structural terms, so that they can envisage possibilities for change.

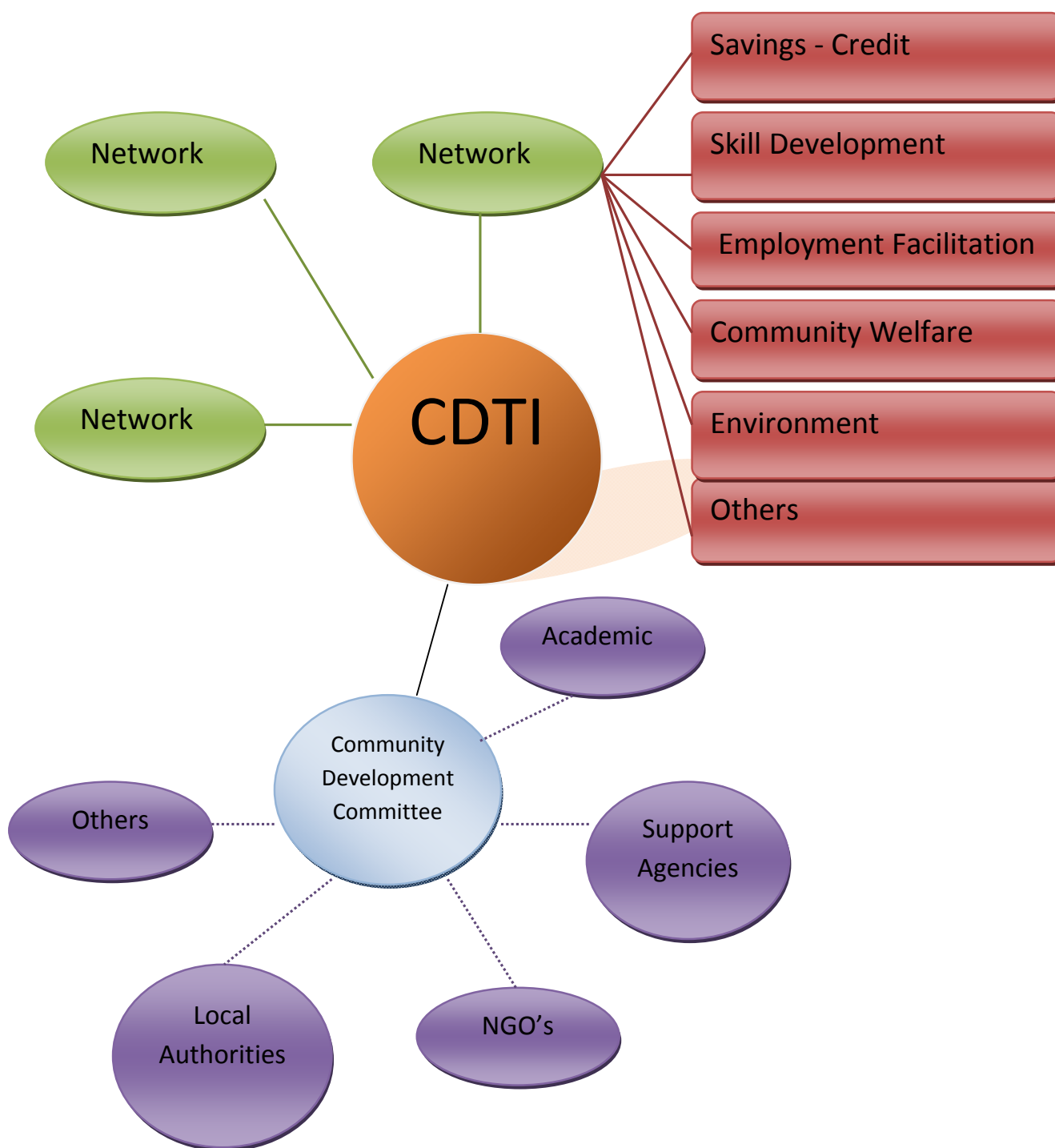


Fig. 4.6 Model of Community Development Institute

In slum areas, there is no available formal education facility and slum people were found to be engaged in day labourer, petty business, small job services etc. At the individual level, the women were benefited in terms of mobility and skill, self confidence, widening of interests, access to financial services, build own savings, competence in public affairs and status at home and in the community that lead a better awareness for enhancing women's empowerment. However, there is a need for proper training for sustainable result in the long run.

In Coimbatore, more than 25,000 small, medium, large scale industries and textile mills are situated. Coimbatore is also famous for the manufacture of motor pump sets and varied engineering goods. The major industries include textiles, textile machinery, automobile spares, motors, electronics, steel and aluminium foundries. These industries require fully trained skilled labours to operate.

Many numbers of software and IT industries are also established in Coimbatore like TIDEL Park, CODISSIA etc. Large numbers of such industries in BPO sector are operating their offices in Coimbatore which needs lot of front end officer. Already Tamil Nadu Slum Clearance Board is giving training for the slum dwellers in the area of Automobile service, Computer service, Mobile service for male and DTP operator, Nursing, Front office assistant for female as shown in Fig 4.7. The same kind of training may be continued to the slum dwellers to improve their livelihood.



Fig. 4.7 Skill development training in Tailoring and Four Wheeler Mechanic

Because of the IT boom in Coimbatore Corporation, more number of infrastructure development projects are under progress. Civil construction, warehousing and logistics Industries require fully trained Mason, Carpenter, Plumber, Electrician, Tiles laying worker

and earth moving machine operators. So, the training may be extended to the slum dwellers in the area of Mason, Carpentry, Plumbing, Electrical, tile laying work and Driving. Fig. 4.8 shows skill development training in Earth moving equipments and Construction.



Fig. 4.8 Skill development training in Earth moving equipments and Construction

Training on earth moving equipments and driving of cars will provide very employment opportunities to the youth living in slums.

4.3.2 Employment Web Portal

Technology has changed the way for job seekers search for jobs and employers find appropriate employees. While employers still advertise job openings through traditional advertising mediums, such as local newspapers and magazines, today employers and job seekers turn to online job portals to find employment matches.

The Tamil Nadu (TN) Government is having the facility of the employment portal for various sections of people and qualifications. The portal provides online registration, renewal and updation for jobs seekers online data base of 65 Lakhs jobseekers for prospective employers facilitates manpower planning and analysis through effective implementation of Employment market Information and promotes coordination between manpower supply and demand by rendering assistance to job seekers through Vocational guidance.

Though TN government is having an employment portal, It is observed that, many young people living in the slums are not aware of the government portal and it is not well used by slum dwellers who have adequate qualification. Moreover, slum dwellers stated that providing job opportunity within ward or zone will help to improve their livelihood. In the social economic survey, NITTTTR found that many young people are looking for a job which is not properly streamlined. The streamlining of their job requirement ultimately reduces the vulnerabilities in slum regions. Hence, NITTTTR is proposing a Job portal for upliftment of

slum dwellers called “Empowering Slum Dwellers through Employment Web Portal” as shown in Fig.4.9.

The majority of job portals allow job seekers to sign up for a free account, which allows them to search job openings posted by employers and post their resumes for employers to review.

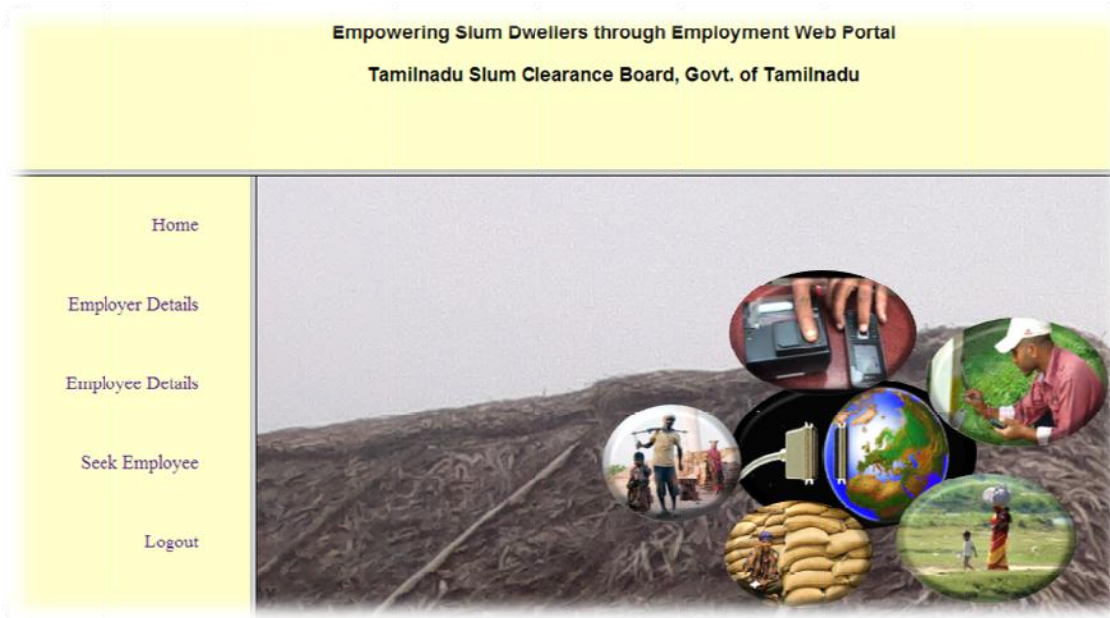


Fig.4.9 Empowering Slum Dwellers through Employment Web Portal

Portals offer resume posting services, allowing job seekers to copy and paste resume information from a word processing document or build a new resume with online tools. In this web portal, NITTTR demonstrated a web-portal for a typical slum in Coimbatore.

4.3.3 Infrastructure Development

Slum upgrading consists of physical, social, economic, organizational and environmental improvements to slums undertaken cooperatively and locally among citizens, community groups, businesses and local authorities. The main objective of slum upgrading is to alleviate the poor living standards of slum dwellers. Many slums lack basic local authority services such as provision of safe drinking water, sanitation, wastewater and solid waste management. Slum upgrading is used mainly for projects inspired by or engaged by the World Bank and similar agencies. It is considered by the proponents a necessary and important component of urban development in the developing countries. However, many people do not believe that slum upgrading is successful. They point to the difficulties in providing the necessary resources either in a way that is beneficial to the slum-dwellers or in

a way that has long-term effectiveness. Alternatives to slum upgrading include the construction of alternative tenements for people living in slums (rather than fixing the infrastructure itself) or the forced removal of slum dwellers from the land. TNSCB will set up a Technical Advisory Group (TAG), which act as the nodal agency for slum development project implementation in the City and its agglomeration and will have members as MLAs, State Secretary- Finance, experts and civil society representatives. TAG will provide an enabling framework for proper development action based on ground realities, review progress against time goals, pursue sanctions with Gol and ensure smooth flow of funds for implementation. The TNSCB has formed distinct committees under the chairmanship of the district collector.

Shelter is the basic human requirement that needs to be met on priority basis. It is much broader concept than housing. Investments in shelter not only improve and expand the available stock of housing units, but also improve both the working and living environment. While it may be difficult to prove, there are impressionistic links between improvements in housing and increased productivity, health, and other measures of well being. Housing sector is employment intensive; it generates employment during its construction period and also during its life for proper maintenance. The United Nations Centre for Human Settlements (UNCHS) uses a broader term "Settlement conditions" because it extends to all those components of the physical environment with which an individual or a community comes into contact and which are used on a regular basis for a whole range of human activities - the individual dwelling and its related services, the dwelling's immediate surroundings, community facilities, transportation and communications network and so on. The National Housing Policy as advocated by the Global Shelter Strategy seeks to facilitate provision of affordable shelter for all by creating an enabling environment for housing by the State public agencies. Food, clothing and housing are required in that order for fulfilling the aspirations of the people. The demand for housing increases due to growth of population, rapid pace of industrialization and urbanization.

4.4 STATUS OF SLUMS IN COIMBATORE CORPORATION

While collecting the Slum profile information and socio-economic survey data, the formal and non-formal interactions with slum dwellers, Councillors and the community leaders, many valid points are brought out for improvement of slums. Some of the important points need to be focused during the planning of an effective slum improvement, slum rehabilitation and slum development programmes:

1. One of the basic amenities for the day to day life is water. It is found that 43 slums in Coimbatore Corporation do not have the individual water supply connection to

the households. Out of which 18 slums are located in south zone which consists of 1682 households. Socio economic survey conducted in 16 slum pockets in the east zone, in which only 3 slums are not having individual water connection facility. Even though, all the slums in Coimbatore corporation having the public fountain facility.

2. Majority of the households in slums of Coimbatore Corporation not at all having individual toilet facility (62%). Totally 12 slums are not having public toilet facilities in the slum as well as individual toilet facility.
3. From our socio economic survey, it is observed that, 10 slums are not having inner roads for the emergency access.
4. It is observed that most of the slums are having the street light facilities. But, only nine slums are not having the street light facility.
5. In Coimbatore few slums are located in heart of the city with higher densities. The land encroached by these slums are highly valuable which are needed immediately for the feature development of the city. It is observed that slums use upto 95% of the land as ground-coverage for their housing. Even in tenement constructed by the TNSCB, it is observed that, the encroachment of slum dwellers as well as the tenements of area constructed shelters and shops without gap between shelters and utilize the space available to the maximum extent possible. In fact, in some houses, more than one family (sometimes 3 families) stays in the same house.
6. In Coimbatore, it is observed that many higher education institutions especially engineering and arts/science are available. Even though, the graduates in the slums are very nominal. Hence, the efforts have to be initiated to provide awareness among the slum dwellers. Also it is observed that the yearly age marriage is more in the slums which contribute more in the dropouts of girl students from the schools before completion of the study.
7. It is interesting to note that the central core of the slums is a concept of sustainable development. The slum community makes the conscious decisions for every individual, group or community action through a critical analysis for its necessity, viability and priority as a sustainable development action. This enables the slums to sustain its development and consolidate its existence in an urban area.

8. It is found that environmental concern among the people is exceptionally good. However, they are unable to improve the condition of unhealthy surrounding area due to the financial and spatial constraints faced by the slum dwellers. There is no sanitation measure for the slum people. Table 4.2 furnish the curative measures for housing development.

Table 4.2 Curative measures for Housing development

Sl. No	Problem	Solutions
1	<p>Land & Housing</p> <p>Flooding due to river water rise near the banks of the river & canals. Dwelling units near railway lines may face problem due to the expansion of railway project. Slums near national highways may face problem due to frequent accidents</p>	<ul style="list-style-type: none"> • Shifting of houses from the river / canal banks to higher elevated areas. • Provide freehold land rights. TNSCB/Coimbatore Corporation to assist in reworking the lease/freehold agreements. • Slums near National highways should be avoided.
2	<p>Environment</p> <p>Breeding of mosquitoes near canals & Pond, Open defecation due to shortage of toilets. Waste water from house hold units and washer man area are mixed with canal/ river water. Accumulation of garbage due to improper collection/ absence of dustbin.</p>	<ul style="list-style-type: none"> • Mosquito repellent should be frequently sprayed by the City. • More public toilet facilities to be provided. • Coimbatore Corporation could build new Community Toilets also help build household toilets in houses where People can afford to build these. • Community toilet need to be charged with affordable rates and maintained by slum community themselves.
3	<p>Sewerage</p> <p>Absences of proper sewer line in turn encourage open defecation by slum dwellers. Leakage in the exiting drainage line. Sewage flows through the open drains, water logging/water overflows on the streets.</p>	<ul style="list-style-type: none"> • Depth of drains needs to be increased with proper slopes. • Inner drains need to be connected to the bigger drains. • Sewer lines need to extended to all slums

Sl. No	Problem	Solutions
4	<p>Water Supply</p> <p>Overall 87.85% of households are not having individual water supply connection. During the survey following points had been observed.</p> <ul style="list-style-type: none"> • Water supply through public tap is in adequate. • The water supply is inconsistent • In few slums pipe line is not provided. 	<ul style="list-style-type: none"> • Water pipelines should be charged and supply timings increased and pipelines repaired. • Damaged hand pumps may be repaired or replaced. Water supply pipe lines need to be increased.
5	<p>Drainage</p> <p>None of the slums are having 100% pucca drainage facility.</p> <ul style="list-style-type: none"> • Drains are open in every settlement, leading to health risks. • Drains become blocked or clogged, causing water logging. 	<ul style="list-style-type: none"> • Coimbatore Corporation/District Urban Development Authority (DUDA) should ensure regular cleaning of drains. • More DEWATs should be developed to treat Waste water.
6	<p>Solid Waste</p> <p>Out of 215 slums, 85 slums not having facility to dispose the garbage.</p> <ul style="list-style-type: none"> • Inadequate placement of dust bins • Dumping of solid waste in to drains and road sides leads clogging and unhygienic conditions. 	<ul style="list-style-type: none"> • Private sector participation is to be encouraged for waste collection and transportation. • Dustbins to be provided by City of Coimbatore

To formulate the strategies for the slum development, the two parameters such as livelihood improvement and infrastructure development are analyzed and the curative measures are proposed. In the analysis, the finance estimation is made and discussed in the following sections.

4.5 AFFORDABLE HOUSING IN CURATIVE MEASURES

4.5.1 Background

Since the onset of recession in the real estate market, real estate developers have been announcing launch of Affordable Housing projects. Affordable Housing gets defined purely in terms of what households in different income ranges can afford and housing is provided by the market within that price range irrespective of the quality of housing. The same pertains to housing for the urban poor. Since their affordability levels are very low, the

market provides them with housing which is characterized by insecure tenure, small size, unhygienic environment and non-existent infrastructure.

Non-availability of Affordable housing is as much a problem of the middle income groups as it is of the lower income groups. In their inability to find appropriate abode many a higher (not high) income groups (belonging to middle and lower middle income groups) are constrained to opt for sub-standard housing. Many invade cheaper/subsidized housing provided by the state for the poor thus negating government efforts. The issue of Affordable Housing (AH) thus has to be looked at in an integrated manner.

4.5.2 Concept of Affordability

Affordability is generally viewed as a ratio of price/rent of housing to income of household. The ratio differs for different income groups. Lower income groups can afford to pay much less proportion of their income for housing than that of higher income groups. Deepak Parekh Committee report (2009) defines the affordability ratio for different income groups as follows:-

Table 4.3 Affordability Ratio of Different Income Groups

Income Groups	Size	EMI/Rent Income Ratio	Cost of Housing to Income Ratio
EWS-LIG	300-600 sq.ft.	>30% of household's gross monthly income	> 4 times households gross annual income
MIG	> 1200 sq.ft.	> 40% of household's gross monthly income	> 5 times households gross annual income

Source: MoHUPA report on Affordable housing for poor, July 2009

We would like to separate out the EWS and LIG since in most Government and Institutional programs these are taken as separate categories. Table 4.3 shows the affordability ratio of different income groups. While keeping the affordability ratio for LIG and MIG as given by the Parekh Committee, the ratio for EWS is lowered to not more than 20 per cent for EMI/rent and 3 times household's gross annual income for cost of house.

4.5.3 India's Urban Housing Problem, Policies and Programs

In the past 60 years (1950 onwards) Government of India has adopted a plethora of policies and programs to solve burgeoning housing problem of the country. The cumulative impact of these policies has been quite limited as is evident from the continuing worsening of

housing situation especially for the poor. The Technical Group constituted for assessment of housing shortage at the end of 10th Five Year Plan (2007) estimated the total (urban) housing shortage in the country to be 24.7 million dwelling units. Approximately 98 to 99 per cent of this shortage pertains to EWS-LIG. In terms of quality of structure (defined as permanent) housing 79 per cent of housing stock was permanent (in 2001). A mere 5.3 per cent was temporary and within that even a smaller portion (2 per cent) was unserviceable temporary. The situation was more critical in terms of large sized families living in small house. Only 12 per cent of households were 1-2 members but 37 per cent lived in one or less room. 48 per cent of married couples did not have independent room. 68 per cent lived in 2 or less rooms including a significant percentage of large sized families. Comparing the number of households living in permanent / semi permanent /temporary housing with the number of housing units in each category, the excess of number of households over number of housing units in three categories is 3 million, 1 million and 0.8 million respectively. Thus, a larger proportion of households living in permanent housing shares accommodation with other households. Congestion factor was higher in permanent housing than in non permanent. This is understandable since a large number of non-pucca houses would be too small in size to accommodate more than one household. The problem however is not only of number of liveable housing units equalling or exceeding number of household. Unless the supply responds to requirement in different segments, we might have surpluses in some segments and shortage in others. This is evidenced by high vacancy rate (at 9 per cent) in urban housing.

A clear understanding of the nature of housing problem is an essential pre-requisite for formulating appropriate policies. Even though the need for housing is the highest at the lower end, it is not to say that need for housing for MIGs/HIGs has been exhausted. The housing policies thus have to be directed towards meeting requirements of all sections of population. The Government of India has adopted a dual policy for providing Affordable Housing for all. The fiscal incentives and housing sector reforms mainly target the middle and upper income groups who will be provided housing through the market processes. Special housing programs had been devised for the poor both at the centre and state level. In fact there has been a succession of such programs. In the beginning of the planning period, social housing schemes were devised for EWS-LIG-MIGs. Later programs however have been directed towards the poor only. These included Integrated Subsidised Housing Scheme for Industrial workers and economically weaker sections (1952); Low Income Group Housing Scheme (1956); Slum improvement/Clearance Scheme (initiated in 1956 and discontinued in 1972 at national level). Environmental Improvement of Urban Slums (1972); National slum development Program (1996), Scheme for Housing and Shelter Up gradation

(SHASHU as part of Nehru Rozgar Yojna, introduced in 1989 and discontinued in 1997); the Shelter Up gradation Scheme under PMIUPEP (Prime Minister's Urban Poverty and Employment Program had even a shorter life span 1996-97); Night shelter (1988-89). Two Million Housing Programs, VAMBAY (Valmiki Ambedkar Awas Yojna (launched in 2001-02) and the latest JNNURM (Jawaharlal Nehru National Urban Renewal Mission). In addition various ministries have had their own programs targeted towards their constituencies. Ministry of Textile launched work shed-cum-housing scheme for artisans and handloom weavers. Ministry of Labour launched housing scheme for workers engaged in 'beedi' industry, for HAMALS (persons engaged in carrying head load at public places such as railway stations, bus terminals, market places etc.) and for Mathadi workers. The fisherman housing scheme was promoted by Ministry of Agriculture.

Apart from the above centrally sponsored programs, state governments had their own state-level programs. Many of the above programs have been launched with much fanfare as the final answer to the housing problems of the poor and replaced by other programs at times coinciding with the installing of different political set up. The low success rate could be also another reason. The reasons for the low success rate have seldom been critically and rigorously explored. Many of the subsequent programs would thus suffer from the same shortcomings and will have to be jettisoned. Offhand one could summarise two major reasons for their limited success; One, the programs were generally fully funded by Government of India initially and later on shifted to state government and local bodies. Lack of funding constrained the states to discontinue these programs. Inefficient implementation due to absence of requisite skills/capacities at the local level could be another reason. The short life span of most of these programmes has acted as a serious constraint to exploitation of full potential of these. Their substitution by subsequent programs would also be quite costly. The institutional setup to operationalise the programs will have to be substituted by a different mechanism devised for the new program. Further, hardly would have the administrators acquired the requisite skills for operationalising the program that they have to unlearn these and learn new skills. It is therefore very important that any new policy/program is well thought of and carefully designed. The experience from the old programs should be a definite input while designing any new program. Same holds for housing policies.

In the following paragraphs we take a look at India's National Urban Housing and Habitat Policy 2007, housing policies of selected states; a few state housing programs and the latest ambitious programs launched by the Government of India namely the JNNURM, BUSP and IHSDP.

4.5.4 National Urban Housing and Habitat Policy 2007

Housing being a state subject the NUHHP plays only an advisory role. Concrete steps to operationalise the policy are to be taken by the state governments. For the same reason the NUHHP does not put a time-frame to achieve the aims of Housing Policy. Setting the goal of Affordable Housing for All, the NUHHP, as noted above adopts dual policy. For the MIG-HIGs the suggestions include, among others, fiscal incentives (even though these fall in the domain of Central Government, no concrete suggestions have been made); development of innovative financial instruments like Mortgage based securities to increase flow of finance to the housing market; reform of rent control act, rationalization of stamp duties and promotion of rental housing.

The section on Legal and Regulatory reforms lists sixteen reform areas to be taken up by the state governments. Important among these are reform of rent control acts, repeal of ULCRA, single window approach for approval of building plans. For the poor, the policy seeks to assist poorest of the poor who cannot afford to pay the entire price of a house by providing them access to reasonably good housing on rental and ownership basis with suitable subsidization (GOI: 2007 p.11). At another place, the policy stance is different. It emphasises shifting to a demand driven approach and from subsidy based housing schemes to cost recovery-cum-subsidy schemes for housing through a proactive financial policy including micro-finance and self help groups (GOI: 2007 p.14). The two statements taken together point towards a limited subsidy approach towards housing the urban poor. Other recommended policy instruments include land reservation for the poor and higher FAR in lieu of that, capital and interest subsidies; setting up of a National Shelter Fund for providing subsidy support to EWS-LIG; spatial and financial incentives for slum redevelopment schemes and in-situ slum upgradation. It is also suggested that the states/UTs prepare 10 year Perspective Housing Plans with emphasis on EWS-LIG sectors'.

Most of the suggestions are worded in general terms—specifics being left for the states to work out. In two cases however specific suggestions are given. (i) reservation of 20-25 per cent of the FAR to be reserved for EWS-LIG (relaxation of FAR to facilitate the same) and (ii) proposed outline of reform in the Model Rent Act.

4.5.5 State Housing Policies and Programs

4.5.5.1 State Housing Policies

It is stated that the aim of housing policy is to have slumless cities and programs for relocation, rehabilitation, slum upgradation and mandatory provision of staff housing by employers is provided for. Even though, the government has prepared a comprehensive housing policy responding to major housing issues in the state, no time frame is set for achieving the objectives of Housing Policy. The focus of Maharashtra Housing Policy, as per its statement, is providing affordable housing for EWS-LIG and MIGs. In that, the state has taken an integrated view of the housing problem. The mechanism to achieve would be mainly through simplification of rules/regulations, incentives and cross subsidization. It is clearly stated that the government will act as an enabler and facilitator (and not provider).

1. Providing security of tenure either on ownership or rental basis is not necessarily an assurance against transfer of occupancy/ownership rights. Security of tenure is normally provided at much below market rate (in most cases it is provided free of charge). The secure tenure increases the market value of property and may work as an inducement to sell. The provision of security of tenure supplemented with active community participation has had better success rate.
2. The poor are not a homogeneous group. To define them only in terms of income level of the households and formulate a program based on affordability (calculated as percentage of income) alone can lead to wrong conclusion about their housing preferences. Other important elements which need to be taken into account are length of stay in the city, stability of job, type of job, composition of family, consumption/expenditure pattern etc.
3. An important/significant component of demand for land and housing in the Indian context is speculative or investment demand. This leads not only to failure of many programs but also is majorly responsible for continuous increase in prices of land and housing.

4.5.5.2 SUBSIDIES

Since a very large section of population lives in abysmal housing conditions, the government effort must be directed towards making available minimal standard of housing for most of the population. With limited resources, it is important to prioritise the elements in the housing package. There can be no two opinions that infrastructure will score over

permanent housing. If all the funds available could be utilized for providing better infrastructure in all habitats, housing conditions will improve on their own over time. Whereas individuals are not averse to invest in improving their house, they are quite reluctant to spend any money for infrastructural improvement. Within infrastructure, highest importance needs to be given to provision of water and sanitation facilities. These have significant external economies attached to them. Provision of these will have multiple benefits in terms of better health, higher productivity and income. A graduated scale of subsidy may be applied with highest rate of subsidy being provided for water and sanitation and lowest for shelter structure.

A key component to provision of Affordable Housing would be a more efficient functioning housing market which can respond to changes in demand as quickly as possible and with the least cost. Easing of government regulation has to be a first step in this direction. Improved mobility of households by reducing transaction cost of moving house (sale/purchase/renting) will be another. It is important that there are a multiple of options available to match the distinct requirements of different categories of population and there is mobility between different types and sizes of housing. It is not necessary to think of individuals/households only in terms of income categories and then plan to provide (say) larger sized houses for MIGs as compared to those for EWS-LIG. Non availability of preferred housing leads to suboptimal (read wasteful) choices. Thus single male/female or newly married couples (belonging to MIGs) may be satisfied with studio apartments or one-and half room apartments but be forced to opt for 2 bedroom houses. Similarly, old retired people may prefer to live in congenial environment of retirement or old-age homes rather than be constrained to continue to live in congested cities. This artificial increase in demand (in the first case) and freeze on supply (in the second case) results in artificial increase in prices. There is need to think of creating housing for special groups. This will be a more cost effective housing solution not only for these groups but also for the society as a whole.

4.6 CRITERIA FOR SITE SELECTION FOR AFFORDABLE HOUSING SCHEMES

In Coimbatore city, TNSCB identified around 32.02 acres for constructing dwelling units for the people living in un-tenable and poor infrastructure environment. It is estimated that around 10682 household units are required to meet the demand in the phasing of the un-tenable slums.

Site to be selected / approved should preferably be in the vicinity of existing infrastructure, so as to minimize delay and cost in extending various services to the scheme area.

- Proper Approach.
- Availability of Local Transport.
- Availability of Water and Electricity.
- Primary School to be in near vicinity.
- Primary Health Centre facility nearby.

4.7 FACILITIES IN THE SCHEME

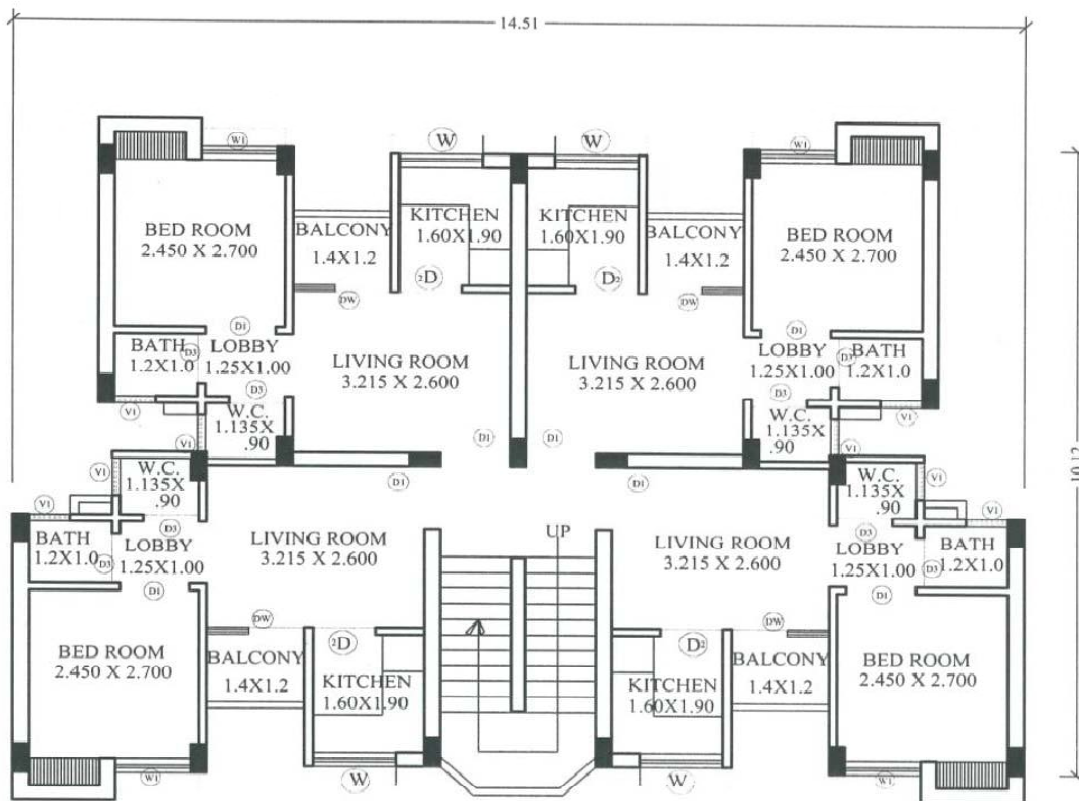
The newly constructed slum units must have the following facilities to create better living conditions for the slum people in Coimbatore Corporation.

- Sewerage Treatment Plant
- Waste Water Recycling Plant
- Park – 10 % of the Total land
- Parking for Two Wheelers in EWS/LIG and Four Wheelers in MIG-A Area
- Gated Community/Security
- Livelihood Centre – 1% of Total Built Area is to be Constructed by the Developer
- Self Help Groups.

The general guidelines for implementing the project are as follows.

- EWS/LIG flats 200 nos. – 01 year
- EWS/LIG flats 400 nos. – 02 years
- EWS/LIG flats 600 nos./above – 03 years

Figure 4.10 represents the typical building plan for the proposed housing of slum dwellers.



TYPICAL FLOOR PLAN

AREA FOR FLATS (PER UNIT)

BUILT-UP AREA	= 26.30 SQ. M.
BALCONY (50%)	= 0.85 SQ. M.
CORRIDOR & STAIRCASE	= 2.70 SQ. M.
AREA PER FLAT	
TOTAL SUPER BUILT-UP AREA	= 29.85 SQ. M.

Fig 4.10 Typical Building Plan

4.8 Schemes implemented by TNSCB Coimbatore Division From 1987-88

4.8.1 Tamil Nadu Urban Development Project

The Tamil Nadu Urban Development Project was implemented by Tamil Nadu Slum Clearance Board with World Bank Assistance from 1988-89 onwards. This scheme envisages providing basic amenities like roads, access pathways, P.C. units, drainage, street lights, Water supply etc., are provided. After the transfer of land to TNSCB, sale deeds are being given to the beneficiaries. As on date 3878 families are benefited under this scheme which is shown in table 4.4.

Table 4.4 Tamil Nadu Urban Development projects

Sl. No.	Name of Scheme	No. of Units
1	Gandhi Nagar Sivanandha Colony	400
2	Anna Nagar Sivananda Colony	106
3	Thair Itteri	71
4	Narayansamy Gounder Street	70
5	Shanmugagounder Street	92
6	Ganesh Nagar	150
7	Anna Nagar Jawahar Nagar	119
8	Ammankulam South	304
9	Ammankulam South	109
10	LML Colony Bharathipuram	56
11	Jothi Nagar	70
12	Balasubramaniam Nagar Patta TNUDP	73
13	Ammankulam Channel	200
14	Gandhi Nagar Uppilipalayam	63
15	Ammankulam South Extension	259
16	Bye pass Road	66
17	Periar Nagar	92
18	Dr. Ambedkar Nagar Phase II	85
19	Ambedkar Nagar – Thudiyalur	52
20	Jallikorai	67
21	Anna Nagar Goundampalayam	93
22	Ashok Nagar East	200
23	Dr. Ambedkar Nagar, Goundampalayam	130
24	Annai Colony Karumbukkadai	102

25	Vadavalli Nagar	152
26	Linga Nagar	35
27	Venkatapuram	149
28	Bhuvaneshwari Nagar	55
29	Gandhi Nagar Seeranaickenpalayam	99
30	Rajiv Nagar	242
31	K.K.pudur	117
Total		3878

4.8.2 Cash Loan scheme Rs. 8,000/

Under this scheme a sum of Rs.8,000/- as loan assistance for construction of house by the beneficiary was provided. The loan was recovered in easy monthly instalment at Rs 86/- over a period of 20 years. Under this scheme 1456 families were benefited which is furnished in (Table 4.5).

Table 4.5 TNSCB – Cash Loan Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Gandhi Nagar Sivananda Colony	192
2.	Anna Nagar Sivananda Colony	53
3.	Thair Itteri	12
4.	Narayanasamy Gounder street	3
5	Shanmuga Gounder Nagar	5
6	Ganesh Nagar	12
7	Anna Nagar Jawahar Nagar	7
8	Anna Nagar Chinnavedampatti	3
9	Kallimedu Colony	42
10	Ondipudur North	2
11	Anjanaya Colony	4
12	Gandhi Nagar Part II	5
13	Amman Kulam South	50
14	Jothi Nagar	6
15	Balasubramaniam Nagar	10

16	Amman Kulam Channel	101
17	Masala colony	33
18	Anna Nagar Sowripalayam	8
19	Vinobaji Nagar	40
20	Ammankulam South Extn	13
21	Bye-pass Road	40
22	Indira Nagar Kurichi	3
23	Bk Pudur	47
24	Annai Satya Nagar	41
25	Rotti Gounder Pudur	2
26	Kaliyapuram-p	14
27	Pichanoor-P	20
28	Ettimadai-p	24
29	MGR Nagar, Chettipalayam	43
30	Ashok nagar west	2
31	Ambedkar- Thudiyalur	1
32	Jallikorai	4
33	Anna Nagar Goundampalayam	5
34	Anna Nagar MGR Nagar	19
35	Ashok Nagar East	10
36	Dr.Ambedkar Nagar, Goundampalayam	50
37	Annai Indra Nagar	44
38	Anna Colony Karubukkadai	7
39	Muthu Nagar- Thidiyalur	9
40	Vedapatti Road	1
41	Subramaniyampalayam	2
42	Vadavalli Nagar	18
43	Linganoor	13
44	Sivagami Nagar	20
45	Thilagar Veethi	10
46	Venkatapuram	94
47	Bhuvaneshwari Nagar	33
48	Gandhi Seeranaickenpalayam	30
49	Rajiv nagar	53

50	Vivekankanda Square	113
51	Nagarajapuram	6
52	KPR colony	13
53	Kk Pudur	11
54	Poosaripalayam	5
55	Jeevan Nagar	34
56	Gnananapuram	14
Total		1456

4.8.3 Nehru Rozgar Yojana

Under this scheme an amount of Rs. 4000/- was given to the beneficiaries for improving their dwelling units, which includes government grant of Rs 1000 and balance is repayable by the beneficiary in EMI over a period of 10 Years. Under this scheme 1228 families were benefited (Table 4.6).

Table 4.6 Nehru Rozhar Yojana Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Gandhi Nagar Sivananda Colony	45
2.	Anna Nagar Sivananda Colony	9
3.	Thair Itteri	13
4.	Narayanasamy Gounder Street	33
5	Shanmuga Gounder Nagar	40
6	Ganaesh Nagar	42
7	Anna Nagar Jawahar Nagar	44
8	Anna Nagar Chinnavedampatti	16
9	Mettur Annapuram	32
10	Anjaneyaer Colony	35
11	Kallimedu Colony	3
12	Ondipudur North	44
13	Sundakkamuthur Road	2
14	Ammankulam South	38
15	Ammankulam Road	42
16	LML Colony Bharathipuram	17

17	Jothi Nagar	14
18	Balasubramaniam Nagar	21
19	Ammankulam Channel	19
20	Vinobaji Nagar	1
21	Masala colony	5
22	Anna Nagar Sowripalayam	36
23	Indira Nagar-Sowripalayam	3
24	Amman Kulam South extn.	39
25	Bye pass road	4
26	Periar Nagar	15
27	Indira Nagar Kurichi	19
28	Annai Satya Nagar	18
29	Damu Nagar	13
30	Ashok Nagar West	3
31	Ambedkar Nagar- Thudiyalur	41
32	Jallikorai	51
33	Anna NagarGoundampalayam	5
34	Ashok nagar east	64
35	Dr.Ambedkar Nagar, Goundampalayam	39
36	Annai Indira Naar	17
37	Anna Colony Karumbukkadai	44
38	Saramedu- Anuparapalayam	8
39	Vadavalli Nagar	72
40	Linganoor	31
41	Sivagami Nagar	9
42	Thilagar Veethi	1
43	Vankadapuram	1
44	Bhuvaneshwari Nagar	1
45	Gandhinagar Seeranaickenpalayam	9
46	Nallampalayam	2
47	Thiru.Vi.Ka Nagar	40
48	Rajiv Nagar	20
49	Poosaripalayam	11
50	Kuppanaickenthottom	14

51	Jeevanagar	25
52	KK Pudur	11
53	Gnanapuram	47
Total		1228

4.8.4 Land Bank Scheme

5% of lands from approved layout of Tamilnadu Housing Board schemes were allotted to Tamilnadu Slum Clearance Board as per Government order. Developed plots for EWS category were provided under Land Bank Scheme and allotted to the eligible beneficiaries. Totally 171 families are benefited under this.(Table 4.7)

Table 4.7 TNSCB – Land Bank Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Singanallur	124
2.	Ganapathy	47
Total		171

4.8.5 Tamil Nadu Slum Clearance Board Tenement Scheme

Under this Scheme, multi-storeyed tenements were constructed and allotted to the people who were residing in huts at the same area. The tenements are allotted under Hire Purchase scheme and the allottees are required to pay a sum of Rs. 150/- per month over a period of 20 years. A total of 407 tenements have been constructed in Coimbatore.

4.8.6 11th Finance Commission Scheme

Under this scheme in Coimbatore corporation 916 beneficiaries were benefited.

4.8.7 Basic Services for Urban Poor's Programme (BSUP)

The Government of India launched the scheme as part of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) project to improve housing facilities for the urban poor. Under JNNURM, Basic Services to the Urban Poor (BSUP) is one the project through which the urban poor people will shelter, basic services and other related civic amenities. The basic objective of Basic Services for Urban Poor Programme is the holistic slum development with a healthy and enabling urban environment by providing adequate shelter

and basic infrastructure facilities to the slum dwellers who do not possess adequate shelter and reside in dilapidated conditions as identified by ULB. The scheme will cover to all cities / towns, excepting cities / towns included under JNNURM.

Under the project, the Coimbatore Corporation was asked to identify 2,707 beneficiaries under Phase I of the scheme. The Corporation identified the beneficiaries, and after ensuring that they were eligible applicants, disbursed the money. Under Phase II of the scheme, the Corporation was supposed to help 9,923 beneficiaries go in for concrete houses. So far under Phase I and Phase II, 11,736 beneficiaries were benefited under this scheme. The cost per unit is Rs 1,44,000 per house.

4.9 VACANT LAND DETAILS AND RESETTLEMENT

Around 32 acres of vacant lands are identified by TNSCB, Coimbatore for the resettlement of the untenable slums. The details of the vacant lands are given in the following Table 4.8.

Table 4.8 Vacant Land Details

S.No	Name of the Location	Extent of land in (Acres)	Classification
1	Vellalore	2.00	Corporation land
2	Variety Hall Road	6.89	Corporation land
3	Bilichi Coimbatore North	2.85	Assessed Waste
4	Perur Chettipalayam Coimbatore South	20.28	ULC
	Total	32.02	

As per the already existing TNSCB guideline, approximately 100 housing units can be built in one acre land. Hence the requirement of the land for the curative measures is around 18 acres. The remaining land will be used for the preventive measure at Coimbatore Corporation. As per the deficiency matrix and due consultation with TNSCB Coimbatore, the phasing have been prepared. The year wise phasing from 2014 to 2022 for tenable & untenable slums is provided from Table 4.9 to 4.18.

Table 4.9 Phasing of the tenable slums for the year 2014 -2015

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	1	31	Periyar Nagar	148	9	129	10	139	3x3
2	4	99	Supparyan Muthali Street	127	6	120	1	121	3x2
3	4	93	Madurai veeran Street	122	18	101	3	104	2x2
4	4	94	Kurchi Boyer Veethi	154	30	124	0	124	2x1
5	4	94	Mariamman Koil Street (Machampalayam Road)	347	37	309	1	310	2x1
6	4	93	Mariyamman Kovil street	260	43	214	3	217	2x1
7	4	98	Noorpath Colony	219	85	133	1	134	1x2
8	4	93	Gnapuram	91	18	72	1	73	2x2
9	3	24	Macrikan Road_R.S Puram	90	0	90	0	90	1x2
Total				1558	246	1297	20	1312	

Table 4.10 Phasing of the tenable slums for the year 2015 -2016

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	1	028	Chinnametupalayam AD Colony	38	2	32	4	36	3x2
2	4	095	Kurichi Silver Jubilee street Part-I	70	20	48	2	50	3x2
3	2	033	Rathinagiri Veethi	21	4	17	0	17	3x2
4	5	071	Kallukuzhi	252	0	234	18	252	2x3
5	4	100	Carmel Nagar Part - I	10	0	10	0	10	2x3
6	2	064	CMC Colony_Vardharajapuram	260	14	240	6	246	2x3
7	3	018	Ajunur_Harijan Colony	25	8	16	1	17	2x3
8	3	024	Sundaram Veethi	56	0	56	0	56	2x3
9	1	002	Anna Colony_Thudiyalur	154	14	133	7	140	2x2
10	1	026	Gandhi Veethi_Vattamalai Palayam	38	13	25	0	25	2x2
11	1	003	Pattathu Arasimman Kovil Veethi Part - I	30	2	28	0	28	2x2
12	1	026	Meenatchi Amman Koil_Veethi Ambedkar Nagar	279	28	217	34	251	2x2
13	1	042	Udayampalayam_Harijan Colony	105	9	88	8	96	2x2
14	1	041	Iyyavu Veethi	52	27	20	5	25	2x2
15	2	034	Kalappatti Nehru Nagar	11	1	10	0	10	2x2
16	2	062	CMC Colony_Neelikkonampalayam	156	0	154	2	156	2x2
17	3	017	Arunthathiyar Veethi_Veerakeralam	50	7	41	2	43	2x2
18	3	020	Tank bed line	122	1	121	0	121	2x2
19	4	077	Jeeva Lane	351	94	249	8	257	2x2
Total				2080	244	1739	97	1836	

Table 4.11 Phasing of the tenable slums for the year 2016 -2017

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	katcha	Household (SP+K)	Matrix
1	4	095	Kurichi Gandhiji Road	480	46	430	4	434	3x2
2	4	095	Najundapuram Ittery - I	695	27	665	3	668	2x2
3	5	071	Damu Nagar	52	0	51	1	52	2x2
4	3	020	Muthumariamman Koil Street	249	7	242	0	242	2x2
5	4	077	Karupannan Lane-1	57	8	49	0	49	2x2
6	4	100	Echanari_Harijan Colony	92	16	76	0	76	2x2
7	2	034	Nehru Nagar Palli Veethi - I	114	3	108	3	111	2x2
8	1	041	Ambedkar Veethi	53	5	41	7	48	2x2
9	3	017	Vinayagar Kovil Veethi_Kalveerampalayam	47	11	35	1	36	2x2
10	4	078	Kempatty Colony	388	14	349	25	374	2x2
11	4	087	Part of ward 21	245	8	235	2	237	2x2
Total				2472	145	2281	46	2327	

Table 4.12 Phasing of the tenable slums for the year 2017 -2018

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	katcha	Household (SP+K)	Matrix
1	2	035	Kallimedu	43	6	33	4	37	3x2
2	2	33	Shastri Veethi Kalapatti	85	4	77	4	81	2x3
3	4	93	Periyar Nagar	256	35	218	3	221	2x2
4	4	95	Planiyappa Gounder Street_Pudu Street	31	7	24	0	24	2x2
5	2	33	Pudhu Colony	180	11	165	4	169	2x2
6	2	34	Veerampalayam Gandhi Veethi	152	16	132	4	136	2x2
7	3	8	Edaiyar Palayam_Meenakshi Amman Kovil Veethi	103	49	49	5	54	2x2
8	4	88	Grosscut_1	40	0	38	2	40	2x2
9	4	78	Devendirar Veethi North	299	44	252	3	255	2x2
10	4	89	Harijana Colony 89	116	59	53	4	57	2x2
11	4	91	Nethaji Nagar	53	6	44	3	47	2x2
12	4	92	Anna Nagar	38	5	28	5	33	2x2
13	1	47	Arthnur Amman Koil Veethi	131	21	110	0	110	2x2
14	2	35	Stalin Nagar	37	2	33	2	35	2x2
15	3	6	Kamaraj Nagar_Harijan Colony	66	3	63	0	63	2x2
16	4	89	Kamarajar Colony	51	22	26	3	29	2x2
17	4	92	Senthazhail Nagar	295	33	236	26	262	2x2
18	4	93	Bagavathi Nagar_Periyar	135	33	100	2	102	2x2
19	1	28	Anna Nagar	53	1	34	18	52	2x2
Total				2164	357	1715	92	1807	

Table 4.13 Phasing of the tenable slums for the year 2018 -2019

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	katcha	Household (SP+K)	Matrix
1	1	41	Kakkan Veethi	204	46	154	4	158	2x3
2	1	041	RajarathinamVeethi	41	5	34	2	36	2x2
3	2	032	Ambedkar Nagar	239	49	173	17	190	2x2
4	2	032	Lenin Veethi	90	22	64	4	68	2x2
5	3	007	Edaiyar Palayam_Harijan Colony	80	16	59	5	64	2x2
6	3	021	Kamarajapuram	639	47	590	2	592	2x2
7	4	100	Madurai Veeran Koil Street_Metur	57	7	49	1	50	2x2
8	4	078	Ponni Veethi	27	5	22	0	22	2x2
9	4	089	Pajani Koil Veethi	108	24	84	0	84	2x2
10	5	045	Kamarajapuram Part - I	100	6	94	0	94	2x2
11	4	089	Vaikkal Palayam	104	19	74	11	85	2x2
12	4	091	Parvathi Nagar	72	15	57	0	57	2x2
13	4	093	Amman Colony Part - I	36	6	30	0	30	2x2
14	4	095	Vannara Pettai	68	12	55	1	56	2x2
15	5	052	Siddaputhur Part 1	509	225	270	14	284	2x2
Total				2374	504	1809	61	1870	

Table 4.14 Phasing of the tenable slums for the year 2019 -2020

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	katcha	Household (SP+K)	Matrix
1	4	094	Machampalayam Harijan Colony	316	39	267	10	277	2x1
2	1	043	Jeeva Veethi_Urumandampalayam	141	19	112	10	122	2x1
3	4	100	J.J. Nagar_Ganesspuram	26	3	23	0	23	2x1
4	5	045	Kannappa Nagar	26	2	22	2	24	2x1
5	5	052	Siddaputhur Part - II	158	8	147	3	150	2x1
6	1	031	Kumaran Nagar	31	10	16	5	21	2x1
7	4	092	Madurai Veeran Kovil Veethi	22	6	16	0	16	2x1
8	4	097	Pillayarapuram	714	121	574	19	593	1x3
9	4	078	Selvapuram_Perur Main Road	16	1	15	0	15	1x3
10	4	092	Sugunapuram Hills	399	30	361	8	369	1x3
11	3	007	Gandhji Nagar Near Vivekandha Nagar Part - I	28	1	27	0	27	1x2
12	4	088	Muventhar Nagar	120	36	84	0	84	1x2
13	4	091	Thotta Rayan Koil Line	21	0	17	4	21	1x2
14	4	100	Kattu Nayakkan Part (Part - I)	25	7	18	0	18	1x2
Total				2043	283	1679	61	1760	

Table 4.15 Phasing of the tenable slums for the year 2020-2021

S. No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	katcha	Household (SP+K)	Matrix
1	4	088	Upplithidu	34	4	29	1	30	1x2
2	4	092	Sugunapuram East	310	30	277	3	280	1x2
3	4	097	Bharathi Nagar	21	0	21	0	21	1x2
4	3	009	Mariyamman Kovil Veethi	34	1	32	1	33	1x2
5	4	100	Echanari Pada Sala Veethi	57	18	39	0	39	1x2
6	2	034	Veeriampalayam Nehru Veethi	26	0	26	0	26	1x2
7	4	078	Soliya Vellalar Street North	67	35	32	0	32	1x2
8	4	089	Anna Nagar	46	1	44	1	45	1x2
9	4	088	Allagasi Thottam	96	19	76	1	77	1x2
10	4	095	Bhajanai Koil Street	64	15	49	0	49	1x2
11	4	092	Sugunapuram Vinayakar Koil Street	147	15	131	1	132	1x2
12	4	093	Sriram Nagar	23	4	19	0	19	1x2
13	4	085	South of Perur TNSCB Scheme & Road Slum	1439	873	538	28	566	1x2
14	4	086	North of Perur TNSCB Scheme & Road Slum	2171	1749	392	30	422	1x2
Total				4535	2764	1705	66	1771	

Table 4.16 Phasing of the tenable slums for the year 2021 -2022

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	katcha	Household (SP+K)	Matrix
1	4	095	Polachi main road	144	1	143	0	143	2x2
2	4	098	Panchayathu office road part-I	30	9	21	0	21	2x1
3	4	088	Boer Street	362	95	266	1	267	1x2
4	4	088	Dalfactory Street	131	39	92	0	92	1x2
5	4	088	Vellalar Street	94	25	69	0	69	1x2
6	4	088	Kaliyappa Gounder Street	49	13	36	0	36	1x2
7	4	085	MGR Nagar_Sundamuthur Road	62	28	32	2	34	1x2
8	4	091	Sathya Nagar	105	6	99	0	99	1x2
9	4	098	Uthami Nagar	168	44	124	0	124	1x2
10	4	088	Manikara Street	43	4	39	0	39	1x2
11	4	092	Batharakaliyamman Koil Street	35	4	31	0	31	1x2
12	4	096	Kurchi Round Road_Kuriappan PalliVeethi	252	72	178	2	180	1x2
13	4	089	NTP_Street	257	59	197	1	198	1x2
14	4	092	Vinayakarkoil Street	127	41	86	0	86	1x2
15	4	092	Narasimmapuram	170	50	118	2	120	1x2
Total				2029	490	1531	8	1539	

Phasing of Untenable Slums

Prioritization of untenable slums have been done based on the following parameters

- (i) Environmental risk
- (ii) Proportion of women population
- (iii) SC/ST population
- (iv) Minority population and
- (v) BPL family

As per our survey 99 untenable slums are having 10682 households. Slums (12 Nos.) not covered under RAY, due to non cooperation are containing 4589 households. Totally 15271 households need to be relocated. At present Tamil Nadu slum clearance board is constructing 13440 tenements for the slum dwellers under JNNURM scheme. These tenements will be sufficient to accommodate 10682 households of 99 untenable slums and 2758 households of non surveyed slums. Hence the remaining 1831 households only considered to prepare estimation for curative measure which is shown in table 4.19. In addition 60 slums with 10749 households are yet to be surveyed due to non cooperation from the slum dwellers. Hence, the investment is planned only for the surveyed slums.

**Table 4.17 Proposed List of untenable slums
Under JNNURM scheme**

S.No	Zone Code	Ward No	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	1	040	Avarampalayam_Pattalaam man Koil Street	266	44	216	6	1
2	1	004	Kalaingar Nagar	128	5	105	18	1
3	1	046	Old Sathy Road	44	0	44	0	1
4	1	041	Rabindranath Tagore Street_Part I	57	11	45	1	1
5	1	041	Rabindranath Tagore Street_Part II	62	0	59	3	1
6	2	061	Noyyal Bannari Amman Nagar_Ondipudur	30	7	23	0	1
7	2	056	Anna Nagar Peelamedu	59	0	55	4	1
8	2	061	Anna Nagar_Ondipudur	25	0	25	0	1
9	3	015	Mullai Nagar PallaSalai	30	0	29	1	1
10	3	015	Balan Nagar PallaSalai	26	4	20	2	1
11	3	017	Balaji Nagar Pallam	55	0	47	8	1
12	4	077	Chokkanpudur Selvapuram Masaniamman KoilVeethi	112	0	110	2	1

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13	4	087	Gandhi Nagar	100	3	97	0	1
14	4	100	Carmel Nagar Part - II	51	2	49	0	1
15	4	087	Periyasamy Street	261	4	254	3	1
16	4	077	Chokkanpudur Selvapuram E.B. Colony	31	2	29	0	1
17	4	085	Kuppannan Thottam	50	1	47	2	1
18	4	088	Kottamedu	33	2	26	5	1
19	4	095	Balusamy Naidu Street	206	1	205	0	1
20	4	095	Pollachi Road 1. Anna Nagar West	81	2	77	2	1
21	4	097	Gandhi Nagar Lower_KelPakuthi	88	1	51	36	1
22	4	097	Gandhi Nagar Upper_MelPakuthi	90	4	70	16	1
23	4	097	J.J. Nagar East_Kolapadi Pakuthi	71	6	60	5	1
24	4	097	J.J. Nagar West_Kolapadi Pakuthi	334	19	280	35	1
25	4	100	Thannir Thottam	32	2	30	0	1
26	4	087	Kaidha Millath Street	104	1	103	0	1
27	4	089	Periyar Nagar	43	1	33	9	1
28	4	095	Kurchi Silver Jubilee Street Part - II	180	14	165	1	1
29	4	087	Bharathi Nagar	13	0	13	0	1
30	4	087	Jeeva Nagar	90	0	90	0	1
31	4	095	AnaiMedu Dharka Line	31	0	31	0	1
32	4	095	Anaimedu	386	1	376	9	1
33	5	071	Majeed Colony	343	23	308	12	1
34	5	084	Ukkadam	779	0	779	0	1
35	5	072	Kadalakara Sandhu	42	0	42	0	1
36	1	003	Pattathu Arasimman Kovil Veethi Part - II	7	0	6	1	2
37	1	031	KVK Nagar	55	0	49	6	2
38	1	040	Chinnasamy Nagar Pallam	62	1	61	0	2
39	1	040	Vivekananda Nagar	94	3	83	8	2
40	2	034	Nehru Nagar PalliVeethi Part -II	100	2	96	2	2
41	3	010	Gokulam Colony 7th Street. Pallam	60	0	58	2	2
42	3	016	New Thillai Nagar_Slum Area	45	0	44	1	2
43	3	015	Valliammal Koil Street_Maruthamalai	35	1	32	2	2
44	3	017	Indira Nagar	135	2	132	1	2
45	3	005	Mullai Nagar	136	2	130	4	2
46	3	009	Prabhu Nagar	393	5	352	36	2
47	3	018	Ajay Mugarji Street	47	0	46	1	2
48	3	009	Ambedkar Nagar	57	0	44	13	2
49	3	005	Ashok Nagar East	22	0	22	0	2
50	4	093	Amman Colony Part - II	12	4	7	1	2

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51	4	095	Najundapuram Ittery Part - II	356	4	348	4	2
52	4	085	Pomman Chetti Veethi	27	0	27	0	2
53	4	087	Kurunchi Nagar	66	1	61	4	2
54	4	085	Kardi Koil Veethi	66	1	65	0	2
55	4	097	Thirumurugan Nagar	8	1	7	0	2
56	4	097	Gandhi Nagar Middle	25	1	24	0	2
57	4	100	Echanari Railway Gate	27	1	16	10	2
58	4	087	Adisakthi Nagar	45	1	41	3	2
59	4	087	Satham Nagar	100	3	94	3	2
60	4	087	Thiruvalluvar Extension	227	0	221	6	2
61	4	087	Thiruvalluvar Nagar_Thirumoorthy Nagar	231	2	229	0	2
62	4	094	Uppiliar Thittu	220	32	187	1	2
63	4	097	Indira Nagar	25	0	25	0	2
64	5	045	Kamarajapuram Part - II	105	2	102	1	2
65	5	070	Kulathumedu Vaikkal	67	1	66	0	2
66	5	048	Ex.Serviceman Colony	41	4	37	0	2
67	5	051	Sastri Nagar	294	2	292	0	2
68	5	045	Balusamy Nagar	113	6	104	3	2
69	5	045	Teachers Colony	26	0	26	0	2
70	5	049	Anna Nagar	89	5	70	14	2
71	5	050	7th St Bridge Near Slum	36	2	33	1	2
72	5	053	Dhanalakshmi Nagar	254	17	232	5	2
73	1	044	V.O.C Nagar Ext & Velusamy Nagar	114	15	99	0	3
74	1	044	Karuppusamy Nagar	212	15	171	26	3
75	3	007	Gandhji Nagar Near Vivekandha Nagar Part-II	20	1	18	1	3
76	3	020	Ex Servicemen Colony	34	1	33	0	3
77	3	009	PN Pudur Kuttai	37	1	35	1	3
78	3	020	Anna Nagar Sugar Cane Main Road	104	4	99	1	3
79	3	020	MGR Nagar	83	1	78	4	3
80	3	005	Ashok Nagr West	198	5	191	2	3
81	3	009	Driver Colony	193	5	185	3	3
82	3	009	Kamarajar Nagar	109	6	100	3	3
83	3	010	Karunanidhi Nagar	312	23	287	2	3
84	3	019	Kalaingar Karunanidhi Nagar	45	2	43	0	3
85	4	100	Kattu Nayakkan Part (Part - II)	11	5	6	0	3
86	4	100	KalluKuli	43	3	35	5	3
87	4	085	ChettiVidhi Main Road	90	19	68	3	3
88	4	085	Vaishiayal Veethi	26	0	26	0	3
89	4	095	Podanur Fish Market	54	7	45	2	3
90	4	100	MuthuMariyamman Kovil Street	27	10	16	1	3
91	4	098	Panchayath Office Road Part - II	71	13	58	0	3

92	4	087	Palakad Main Road	17	1	16	0	3
93	4	097	Karuppurayan Kovil Veethi	8	1	7	0	3
94	5	045	Narayana Gounder Street	28	0	28	0	3
95	5	050	Hosimin Nagar	437	7	426	4	3
96	5	048	V.O.C Nagar	66	1	65	0	3
97	5	049	Chinnaraj Nagar	92	0	91	1	3
98	5	049	Sampath Street	26	2	24	0	3
99	5	055	Karupakal Thottam	184	12	165	7	3
			Total	10682				

Table 4.18, Table 4.19 and Table 4.20 show the Curative strategy and Financing plan for tenable and untenable slums for the next eight year period

Table 4.18 Detailed Investment Plan - Curative Strategy (Tenable)
Name of the City: Coimbatore

SI .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	9	19	11	19	15	14	14	15	116
	No of Households	1558	2080	2472	2164	2374	2043	4535	2029	19255
	No of Households Proposed for intervention	1312	1836	2327	1807	1870	1760	1771	1539	14222
	Cost per Unit	5.5	6.05	6.66	7.33	8.06	8.87	9.76	10.74	
A	Land Cost									
B	Housing & Infrastructure									
	(i) Physical Infrastructure	10.82	16.66	23.25	19.87	22.61	23.42	25.93	24.79	167.35
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	72.16	111.08	154.98	132.45	150.72	156.11	172.85	165.29	1115.64
	(iii) Social infrastructure	5.41	8.33	11.62	9.93	11.30	11.71	12.96	12.40	83.66
	Subtotal B	88.39	136.07	189.85	162.25	184.63	191.24	211.74	202.48	1366.65
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.66	1.02	1.42	1.22	1.38	1.43	1.59	1.52	10.24
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.66	1.02	1.42	1.22	1.38	1.43	1.59	1.52	10.24
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.44	0.68	0.95	0.81	0.92	0.96	1.06	1.01	6.83
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.22	0.34	0.47	0.41	0.46	0.48	0.53	0.51	3.42
	Subtotal C	1.98	3.06	4.26	3.66	4.14	4.30	4.77	4.56	30.73
D	Overheads/Administrative costs (at 5% of A+B+C)	4.52	6.96	9.71	8.30	9.44	9.78	10.83	10.35	69.89
E	Tender Excess @ 10 % of B	8.84	13.61	18.99	16.23	18.46	19.12	21.17	20.25	136.67
F	Total(A+B + C+D+E)	103.73	159.70	222.81	190.44	216.67	224.44	248.51	237.64	1603.94
G	Physical contingencies (@ 2.5% of F)	2.59	3.99	5.57	4.76	5.42	5.61	6.21	5.94	40.09
H	Total Investment Cost H = (F+G)	106.32	163.69	228.38	195.20	222.09	230.05	254.72	243.58	1644.03
I	Operation and Maintenance cost (at 4% of B)	3.54	5.44	7.59	6.49	7.39	7.65	8.47	8.10	54.67
	Total Investment Cost (H+I)	109.86	169.13	235.97	201.69	229.48	237.70	263.19	251.68	1698.70

Table 4.19 Detailed Investment Plan - Curative Strategy (Untenable)
Name of the City: Coimbatore

SI .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums									
	No of Households									
	No of Households Proposed for intervention	0	320	320	320	320	320	231	0	1831
	Cost per Unit	5.5	6.05	6.66	7.33	8.06	8.87	9.76	10.74	
A	Land Cost									
B	Housing & Infrastructure									
	(i) Physical Infrastructure (at 15% of B (ii))	0	2.9	3.2	3.52	3.87	4.26	3.38	0	21.13
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	0	19.36	21.31	23.46	25.79	28.38	22.55	0	140.85
	(iii) Social infrastructure (at 7.5 % of B (ii))	0	1.45	1.60	1.76	1.93	2.13	1.69	0	10.56
	Subtotal B	0	23.71	26.11	28.74	31.59	34.77	27.62	0	172.54
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0	0.18	0.20	0.22	0.24	0.26	0.21	0	1.31
	(ii) Design and Consultancy charges (at 0.75 % of B)	0	0.18	0.20	0.22	0.24	0.26	0.21	0	1.31
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0	0.12	0.13	0.14	0.16	0.17	0.14	0	0.86
	(iv) Social audit 0.5% of ACA (0.25% of B)	0	0.06	0.07	0.07	0.08	0.09	0.07	0	0.44
	Subtotal C	0	0.54	0.60	0.65	0.72	0.78	0.63	0	3.92
D	Overheads/Administrative costs (at 5% of A+B+C)	0	1.21	1.34	1.47	1.62	1.78	1.41	0	8.83
E	Tender Excess @ 10 % of B	0	2.37	2.61	2.87	3.16	3.48	2.76	0	17.25
F	Total(A+B + C+D+E)	0	27.83	30.66	33.73	37.09	40.81	32.42	0	202.54
G	Physical contingencies (@ 2.5% of F)	0	0.70	0.77	0.84	0.93	1.02	0.81	0	5.07
H	Total Investment Cost H = (F+G)	0	28.53	31.43	34.57	38.02	41.83	33.23	0	207.61
I	Operation and Maintenance cost (at 4% of B)	0	0.95	1.04	1.15	1.26	1.39	1.10	0	6.89
	Total Investment Cost (H+I)	0	29.48	32.47	35.72	39.28	43.22	34.33	0	214.50

Table 4.20 Detailed Investment Plan - Curative Strategy (Tenable & Untenable)
Name of the City : Coimbatore

SI .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	9	19	11	19	15	14	14	15	116
	No of Households	1558	2080	2472	2164	2374	2043	4535	2029	19255
	No of Households Proposed for intervention	1312	2156	2647	2127	2190	2080	2002	1539	16053
	Cost per Unit									
A	Land Cost									
B	Housing & Infrastructure									
	(i) Physical Infrastructure	10.82	19.56	26.45	23.39	26.48	27.68	29.31	24.79	188.48
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	72.16	130.44	176.29	155.91	176.51	184.49	195.4	165.29	1256.49
	(iii) Social infrastructure	5.41	9.78	13.22	11.69	13.23	13.84	14.65	12.40	94.22
	Subtotal B	88.39	159.78	215.96	190.99	216.22	226.01	239.36	202.48	1539.19
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.66	1.20	1.62	1.44	1.62	1.69	1.80	1.52	11.55
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.66	1.20	1.62	1.44	1.62	1.69	1.80	1.52	11.55
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.44	0.80	1.08	0.95	1.08	1.13	1.20	1.01	7.69
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.22	0.40	0.54	0.48	0.54	0.57	0.60	0.51	3.86
	Subtotal C	1.98	3.60	4.86	4.31	4.86	5.08	5.40	4.56	34.65
D	Overheads/Administrative costs (at 5% of A+B+C)	4.52	8.17	11.05	9.77	11.06	11.56	12.24	10.35	78.72
E	Tender Excess @ 10 % of B	8.84	15.98	21.60	19.10	21.62	22.60	23.93	20.25	153.92
F	Total(A+B + C+D+E)	103.73	187.53	253.47	224.17	253.76	265.25	280.93	237.64	1806.48
G	Physical contingencies (@ 2.5% of F)	2.59	4.69	6.34	5.60	6.35	6.63	7.02	5.94	45.16
H	Total Investment Cost H = (F+G)	106.32	192.22	259.81	229.77	260.11	271.88	287.95	243.58	1851.64
I	Operation and Maintenance cost (at 4% of B)	3.54	6.39	8.63	7.64	8.65	9.04	9.57	8.10	61.56
	Total Investment Cost (H+I)	109.86	198.61	268.44	237.41	268.76	280.92	297.52	251.68	1913.20

CHAPTER 5: STRATEGIES FOR SLUM PREVENTION

5.1 INTRODUCTION

The UN-Habitat, 2003 reported that 40-70% of urban dwellers in developing countries live in slums and the trend does not show any sign of slowing down. The government policies and programs will do little to control the expansion of slums. In the current scenario, the slum population has reached 1 billion mark, where every 3rd dwellers in urban areas in the world is living in slum settlements (UN-HABITAT), is not only changing the urban form and structure, but also is exacerbating poverty, housing problems, inequality and social exclusion in most cities specially in developing nations.

After independence of our country, ambitious housing programs for the poor were launched by the Central Government and State Government. Rental Housing scheme is a good way to overcome the acute housing shortage that prevails in our country. Under the Rental Housing Scheme, it was proposed to provide two room houses to the poor on subsidized rent. Huge difference between the market price and rent payable by the allotted acted as an inducement to 'sell' the occupancy rights. Most such housing changed hands in the first few years itself. The program was not successful due to the high quantum of subsidy involved. Maintenance cost, which was to be borne by the Government, was much higher than the rent. Many allottees defaulted even on the low rent payments. Unable to bear the heavy subsidy burden, the program was shelved and existing units were 'sold' to the occupants. Same was the fate of housing provided on ownership basis. It was realized that given the magnitude of housing problem, it will not be possible for the government to provide subsidized housing to all the poor. The next set of programs hit upon Cross-subsidization as the solution wherein the burden of subsidized housing for the poorer sections was to be borne by the middle and high income groups.

India's total housing demand was pegged at 24.71 million at the end of the 11th five year plan (2007-2012). While Maharashtra topped the list with a shortage of 3.72 million houses, Tamil Nadu emerged second with 2.82 million units short. Andhra Pradesh has a shortage of 1.95 million units, Karnataka 1.63 million units while Kerala 0.76 million units.

The state government initiated different housing programs to meet needs of different groups. The success of such a program would depend upon the number of dwelling units constructed for different income groups, the quantum of subsidy required for EWS-LIG housing and the viable price for MIG-HIG housing units. Given the fact that the requirement

for EWS-LIG units was much higher, and subsidy needed per unit quite-high, the MIG-HIG housing would have to be priced very high.

Those who live on streets are not completely homeless. Most of them live in huts and kutcha houses, which need to be converted to pucca ones to meet the housing standards. The shortage is expected to touch 26.53 million for the country and to fulfil this demand the government needs to spend Rs. 3,61,318 crore, about 39% of India's estimated total tax receipts for the current financial year. Tamil Nadu also has the highest number of homeless, about 7.3% of the total homeless population in the country. Fig.5.1 indicates that the strategy to be followed for Prevention of Slums in Urban Area

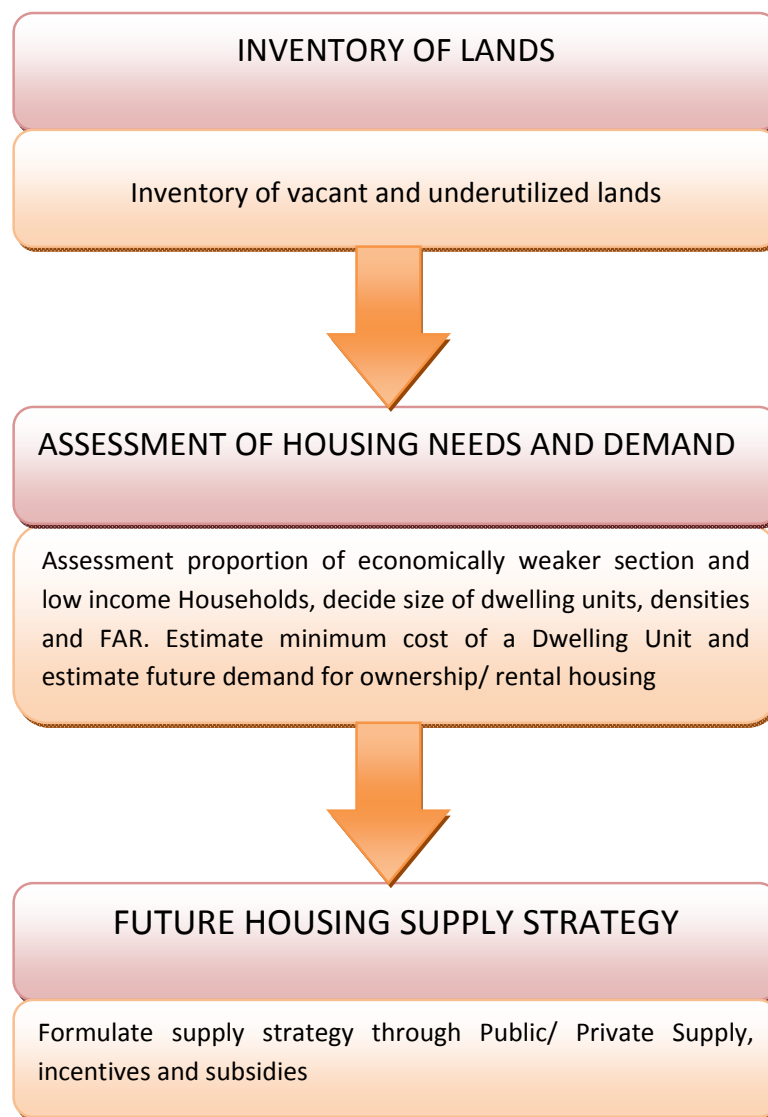


Fig. 5.1 Preventive Strategy for Slums

[Source : Rajiv AwasYojana]

5.2 LAND AVAILABILITY FOR HOUSING IN COIMBATORE

In Coimbatore, TNSCB identified around 32.02 acres for constructing dwelling units for the people living in un-tenable and poor infrastructure environment. It is estimated that around 6186 household units are required to meet the demand in the phasing of the un-tenable slums.

5.3 HOUSING NEEDS AND DEMAND ASSESSMENT

Housing is not an obligatory duty of the local body though planning of city is highly influenced by the housing sector and regulation mechanism. Housing reflects the economy & quality of life of any urban area. Poor planning mechanism leads to slums and illegal growth. Though, there exists an elaborate Regulatory Mechanism to promote, guide and control the building activities, it is often claimed that its procedure is restrictive and difficult to comply with. Such rigidity in regulation mechanism has minimized its scope. Almost 25 to 28 percent additions to the housing stock are estimated to be made informally without obtaining necessary permissions and sanctions. On one side, a lot of financial agencies and Govt. offer incentives and encourage the development of housing sector where as on the other side the regulation mechanism creates hurdle to the development due to its complexity. Therefore it is necessary to form housing strategy for better city and reduce the proliferation of slums and other illegal developments.

5.3.1 Affordable Housing

Urban areas are prone to development of pockets of habitats which are characterized by poverty, katcha houses, unsecured land tenure, lack of adequate physical infrastructure like water supply, sewerage, drainage, roads, electricity etc. They are also known to have inadequate social infrastructure like education, health care, and community centres. These habitats are referred to as slums. Another worrying fact about slums is their high population densities which impose tremendous pressure on the already stressed civic infrastructure.

The Central Government designated as Rajiv Awas Yojna (RAY) for the upliftment of slums by providing housing and physical / social infrastructure or par with the existing facilities in the city. With the commissioning of household poverty and livelihood survey for profiling the slums, the Coimbatore City has established its intention of making Slum Free under RAY.

The people who are living in the slum areas are being deprived by the affordable housing. It is the responsibility of the government to provide affordable housing to the slum dwellers. The demand forecasting for this purpose is to be done by considering the ever increasing economic growth, employment opportunities and the rise in land and property market, since all these factors make the city attractive for the immigrants, which is clearly visible in the graph of slum population growth.

Consequently, to calculate the demand for affordable housing, the percentage of population that is living in slums is considered over the last few decades, which has been taken as the basis to find out the affordable housing demand till the target year. Table 5.1 shows affordable level for different income categories of people.

Table 5.1 Affordability levels and Income Categories

Sl. No.	Income Category (in Rs.)	Affordability to pay EMI/Rent (% of income)	Affordability to Pay Cost of House (multiple of Annual Income)
1.	BPL ≤ 2690	≤134	≤64500
2.	EWS 2690 – 3300	538 – 660	96840 – 118800
3.	LIG 3301 – 7300	990 – 2190	158448 – 350400
4.	MIG 7301 – 14500	2920 – 5800	438000 – 870000

Source :Dr.KiranWadhwa, Affordable Housing for Urban Poor, National Resource Centre, SPA, 2009

5.3.2 Population Growth in Coimbatore

A critical factor in estimating the requirement of the urban infrastructure for future planning, project formulation and capital investment estimation and outlay is the projection of population. Projection of future population for Coimbatore City is based on the following factors: Past census population and relevant details;

- Decadal growth and growth rates of the country, state (TN) and the ULB;
- Population density pattern and availability of land for the future development;
- Socio-economic characteristics and economic base with employment generating potential Development (Master) Plan for the region considering the contextual issues stated and growth pattern in terms of land use and land availability for growth including proposed plans and potential for significant change in land use (within project period/ design life);
- Positioning of the hinterland, linkages with core of region and connectivity, importance and contribution as an economic base for the region;

- Availability of resources to facilitate provision and delivery of services and facilities;
- Implications of the ongoing and proposed projects towards improving the provision and delivery of services;
- Other external and internal growth dynamics responsible for migration; And Other factors - tourism, natural disasters and related.

Table 5.2 and Fig.5.2 project the population of Coimbatore as 119 lakhs in 2023. Forecasting of population can be accomplished with different mathematical methods by using present and past population records. The most commonly used Geometric Progression method is used here for the calculation of population growth. Exponential growth occurs when the growth rate of the value of a mathematical function is proportional to the function's current value. Exponential decay occurs in the same way when the growth rate is negative. In the case of a discrete domain of definition with equal intervals it is also called geometric growth or geometric decay (the function values form a geometric progression). The exponential growth model is also known as the Malthusian growth model.

The formula used for exponential growth of a variable x at the (positive or negative) growth rate r , as time t goes on in discrete intervals (that is, at integer times 0, 1, 2, 3, ...), is

$$x_t = x_0(1 + r)^t \dots\dots\dots(5.1)$$

where x_0 is the value of x at time 0. For example, with a growth rate of $r = 2\% = 0.02$,

The city population and slum households are projected to calculate future demand using above equation. As per the 2011 census, Coimbatore city population and slum households are 1601438 and 45811 respectively. Based on this 2011 census data, the projection of city population and slum households has been calculated. The projected values are given in table 5.2 and shown in Fig 5.2 & 5.3. From this, it is observed that the city population projected is 19.91 lakhs in 2022. It has been observed from Table 5.2 that, every year the projected housing requirement is increasing in an average 1043. It is also observed that total number of slum households projected is 55751 in 2022. Hence, 8345 households have been considered for the preparation of estimation for preventive strategy which is furnished in the Table 5.3.

Table 5.2 Projected Slum Household and population for Coimbatore City

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Projected Slum Households	46650	47583	48535	49505	50495	51505	52535	53586	54658	55751
Projected Additional Households	-	953	972	992	1012	1032	1052	1073	1095	1117

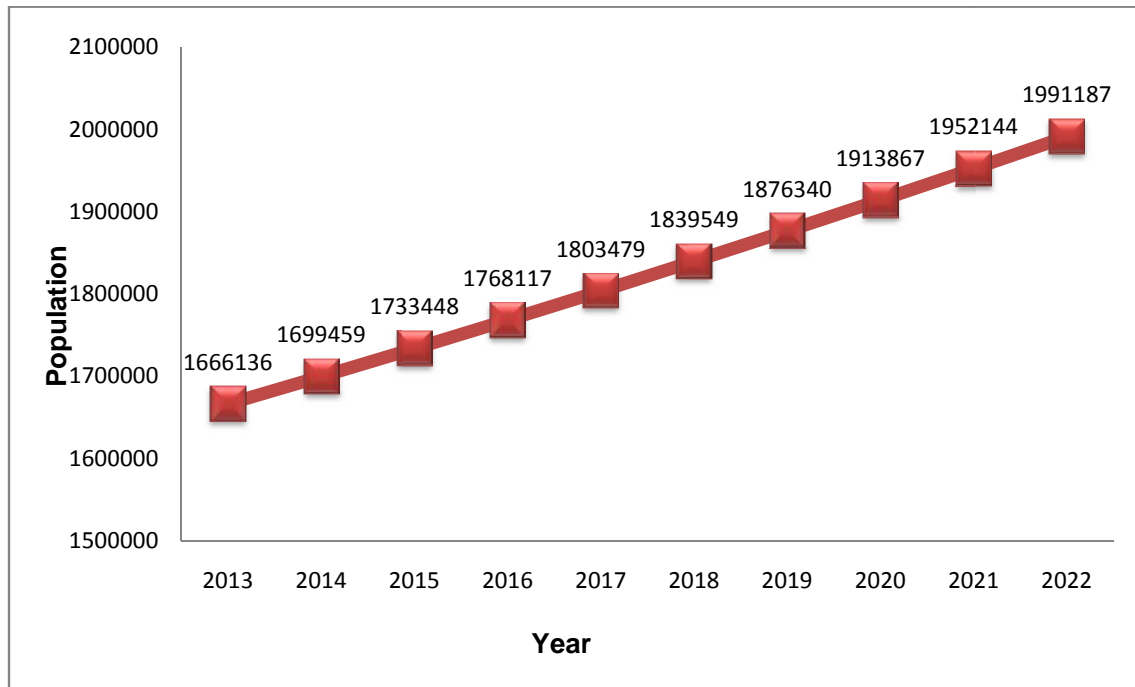


Fig. 5.2 Projected population of Coimbatore City

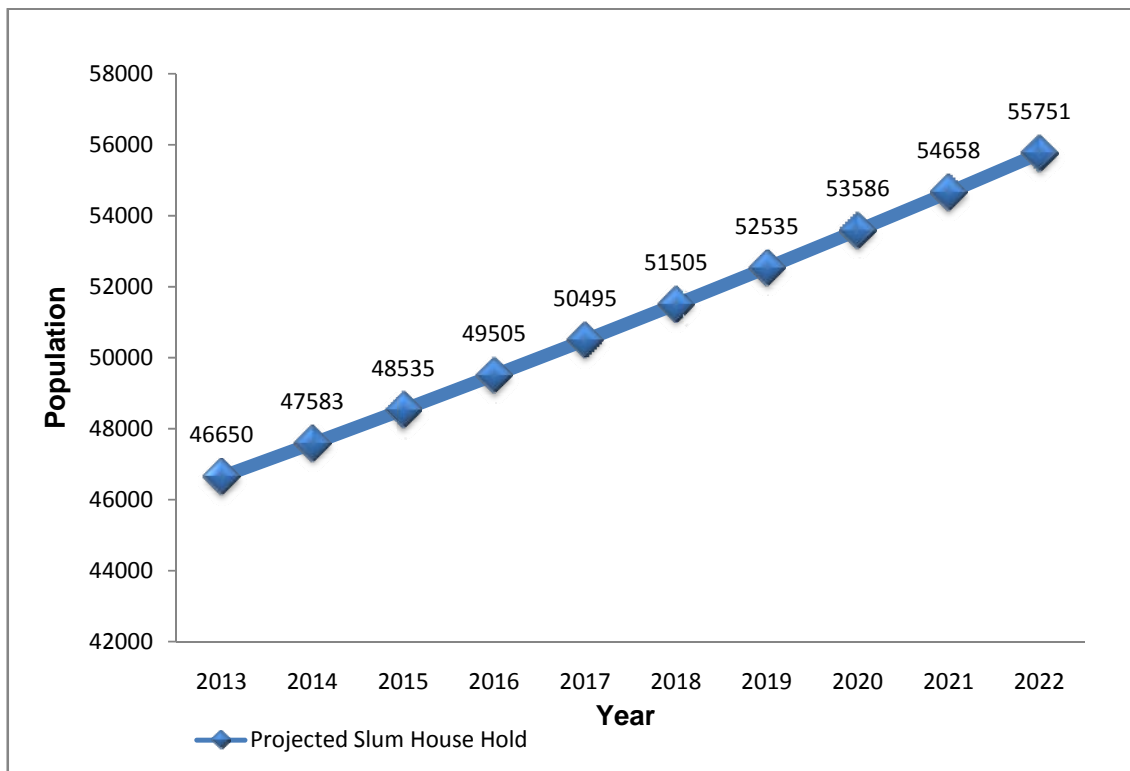


Fig. 5.3 Projected Slum Household of Coimbatore City

5.4 HOUSING AUGUMENTATION STRATEGY

It is going to be very difficult task for the government with its limited resources to manage the massive housing problems. Hence, government started realizing the importance of private sector participation. During the Seventh Five-Year Plan recognized radical reorientation of all housing policies and stated that “major responsibility of house construction would have to be left to the private sector, in particular the household sector”. The housing supply strategies through using four different models are depicted in Fig.5.4. The salient features of the four models are:

5.4.1 Public

- Implementation of the development option identified on its own through conventional contracting, i.e. EPC (Engineering Procurement and Construction) or item rate contract.
- Financing the project would depend on the budgetary provisions for slum rehabilitation.

5.4.2 Public-Private

- The public entity develops the infrastructure and the private entity develops the housing
- Private entity develops both infrastructure and the housing
- Due to private participation, higher efficiency in implementing the project is expected. This would result in comparatively lesser time and lower cost overruns.

5.4.3 Public-Community-Private

- This option would encompass a structure between the private partner and the representative of the community such as a cooperative society.
- In this option, the project structure could be such that the private entity could take up both the housing and the infrastructure, or only the housing with the public entity constructing the infrastructure.

5.4.4 Public-Community

- This would encompass a structure between the public entity and the community, which is the beneficiary/ the representative of the community such as a cooperative society.
- The entire infrastructure provision is made by the public entity and the community takes up the housing component.

5.4.5 Criteria for Site Selection for Affordable Housing Schemes

Site to be selected / approved should preferably be in the vicinity of existing infrastructure, so as to minimize delay and cost in extending various services to the scheme area.

- Proper Approach.
- Availability of Local Transport.
- Availability of Water and Electricity.
- Primary School to be in near vicinity.
- Primary Health Centre facility nearby.

5.4.6 Programmes of Affordable Housing

In order to meet the growing requirement of shortage of affordable housing in EWS/LIG categories, an initial target of construction of 20,000 houses for weaker sections, lower income groups and lower middle income groups in the next five years has been fixed.

5.4.7 General Housing Schemes for the Urban Poor

- a) General / Self financing / Specific Registration Schemes of TNHB.
- b) Incentive Schemes for the private sector
- c) Housing under new township policy (proposed)
- d) Rental housing
- e) Rajiv Awas Yojna.

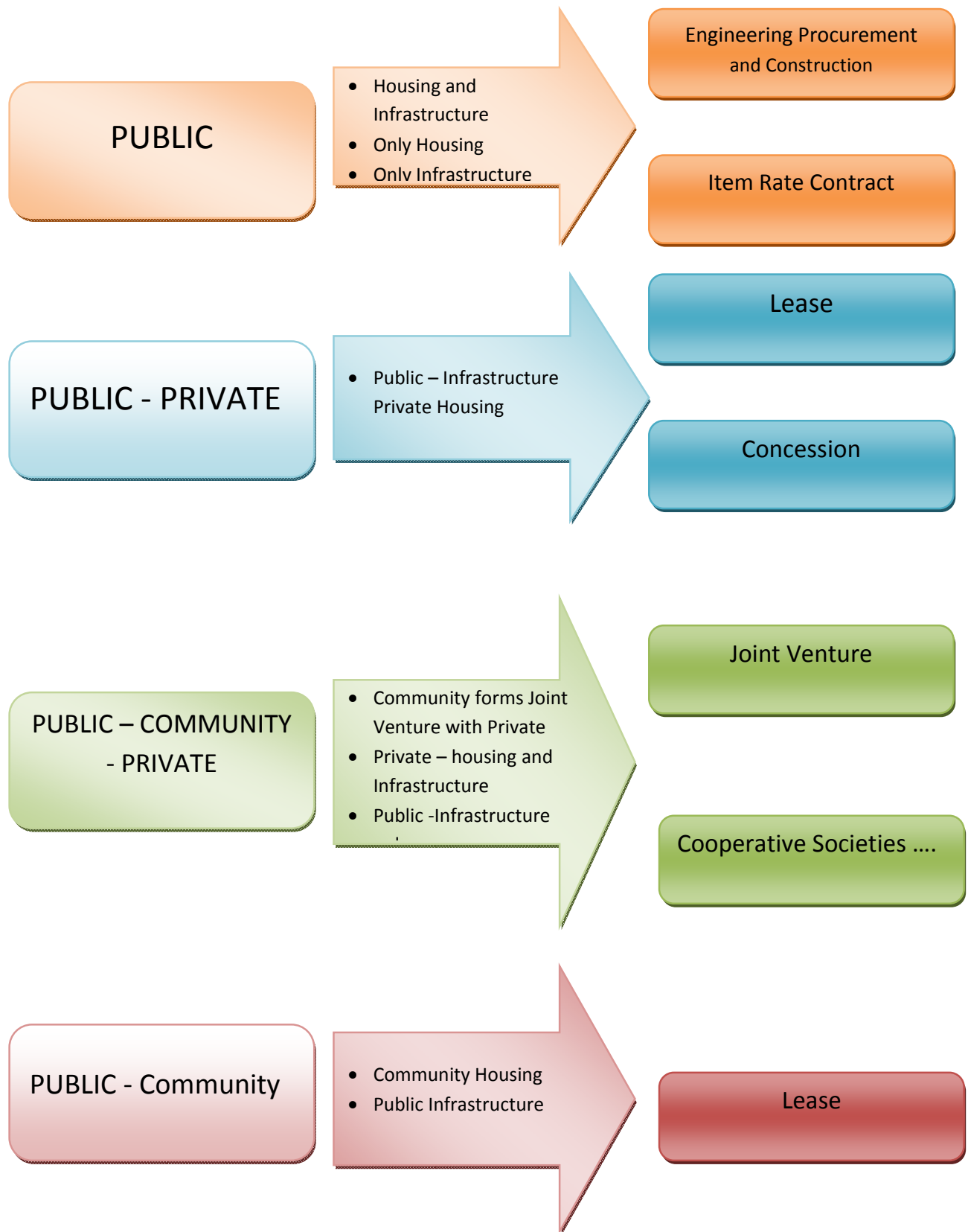


Fig. 5.4 Housing Augmentation strategic models

5.5 POLICY AND INSTITUTIONAL REFORMS

Mostly slums are formed due to rural immigrants coming to the city in search of better opportunities, in other cases it is people escaping from natural or manmade disasters – from earthquakes and flood, civil war – or sometimes it is simply the demographic growth of the urban poor who cannot find a proper dwelling.

Poverty is a far more threatening and explosive nature and it has a potential to hurt the economy of the nation. All the slums are forced into poverty, suffering unemployment, low income, no access to basic services as well as social and economic deprivation. Rapid growth in urbanization is the major factor which causes millions of people to live in slums. At the same time, It is not possible to provide accessible and acceptable solutions for housing the new arrivals, or the new generations of urban poor, due to financial and other logistical limitation. The different dimensions of poverty and their causal factors underscore the need for policy and institutional reforms at the national as well as the city level, in order to achieve sustainable city in the conditions facing the poor.

5.5.1. Policy and institutional reform include:

The vulnerability of the urban poor is exacerbated by the inadequate provision of basic public services, as well as by policy and regulatory frameworks that govern both land and housing supply and property rights. The identification of main policy areas for slum upgrading is a big task, because many policies are interrelated.

- 1.land policy
- 2.planning and regulation
- 3.information
- 4.governance and
- 5.financing

Policy reforms are required in the areas of: Tenure security, property rights and land development regulations; Housing finance; and Service provision.

5.5.2 Tenure Security, Property Rights and Land Development Regulations

Most of the urban poor do not have tenure security because their dwellings are:

- built on public land; or
- constructed on private property not belonging to the owner; or
- built on shared title land; and/or
- constructed without occupancy or construction permits; or
- rented in slums without formal renting contracts

- Many of the urban poor have to house themselves illegally because:
- Land policies do not make sufficient developed land available.

Urban planning tools, including master planning, zoning and plot development regulations, are not appropriate to make land available, and coping with rapid urbanization, resulting in insufficient land supply, and increase in land prices. Master plans in many developing and transition countries are too centralized, take too much time to prepare, and fail to address implementation issues or the linkages between spatial and financial planning. Resulting regulations are outdated and inappropriate.

Policies and/or regulations as well as public authorities' approach are not conducive to regularization of tenure due to the reason there is a widespread assumption by authorities that regularization may encourage illegal practices issuance of land documents can create considerable conflict, especially in places with multiple forms of property rights. Authorities may prefer to retain the informal status of some spontaneous settlements, as the land may be demanded by other uses, and informal occupation provides a sufficient ground for eviction

Land and housing regulations make housing unaffordable.

Unrealistically high standards for subdivision, project infrastructure, and construction make it impossible to build low-income housing legally. Furthermore, urban land supply can be limited by: (i) extensive public ownership of land and unclear land transfer procedures (most common in transition countries); (ii) unrealistic standards for land and infrastructure development; (iii) complex procedures of urban planning; and (iv) unclear responsibilities among public agencies. In addition limited land supply would cause the land price to increase.

Land and housing regulations make it difficult for the poor to follow cumbersome procedures. Procedures can be unduly cumbersome, difficult for poor people to save time and to follow. Observations from many developing countries show that the processes of obtaining construction and occupancy permits are complicated, not well-understood by the poor, especially immigrants, time consuming and costly. The result is invasions of state land or purchase of unplanned or unauthorised land from illegal agents.

Lack of tenure security leads to loss of physical capital, damage of social and informal networks for jobs and safety nets, and sense of security. Several million urban dwellers are forcibly evicted from their homes each year, most without any form of compensation.

Inability to use the house as a resource when other sources of income reduced.

For poor people, housing is an important productive asset that can cushion households against severe poverty during economic hardships. Renting a room or creating an extra space for income generating activities are the common coping strategies. When the poor have secured ownership of their housing, they often use it with particular resourcefulness when other resources of income are reduced or limited.

5.6 SUGGESTED POLICIES

Public authorities need to establish systems to provide tenure security (e.g., free-hold or use rights) in view of the country's cultural context and communities' particular circumstances. The aim should be to incorporate common practices into a formal system. If the majority of land acquisition practices and tenure systems do not fit into the current legal system, regulatory and policy frameworks have to be adjusted to incorporate viable practices. Systems need not be restricted to free-hold titles, but can be flexible. For example protected use rights can be gradually upgraded to full ownership rights. In general, public authorities need to establish and publish guidelines for property registration and development. Also, property rights should be designed to allow free transaction of property. Owners should also be allowed to use their property as collateral.

It may often be possible to sell occupied public lands to the resident communities or individuals. Such initiatives may, however, require arrangements with community groups to prevent exploitation through illegitimate claims by people who had not established residence there. For example, the National Community Mortgage Program of the government of the Philippines made it possible for squatters to buy the land they had occupied for an extended period of time.

Regulations both at the national and city levels should also support:

Transparency in land provision by establishing a clear division of authority among public agencies, simple rules and mechanisms of provision (which are accessible by everybody), and by establishing private property rights. Computerisation of land transaction and publishing the same in government owned website would avoid illegal or under rated transactions.

Easy market transactions through clear and simple sales and registration procedures and taxation policies. In some countries, high rates of sales taxes constrain official transactions, which lead to illegal transactions. This perpetuates the lack of clear ownership. Cities and

national authorities should explore practical but transparent methods to promote the better utilization of public land while improving access for the poor. Public land owned by national authorities (e.g., treasury or crown land) can be a major problem since cities may not have planning or development rights to such land. In many cities, such land is often occupied and subdivided by informal agents and sold to the poor.

Policies at the central level should set out based on a broad framework, while more detailed planning policies should be designed at the local level. For example, density levels in different parts of the city and infrastructure standards should be decided at the city level, in consultation with local communities. Flexibility should also be extended to building standards, construction material standards, and codes. Regulations that can be eliminated without jeopardizing safety should be eliminated in order to keep construction costs down. Procedures to apply for and acquire construction and occupancy permits should also be made simple so that they are accessible to poor people with limited education and time. Lengthy and complex planning procedures also delay the provision of serviced land and housing production, leading to increases in land and housing prices.

5.7 Credit Plan

Some of the existing schemes of Government of India for credit support for affordable housing for the urban poor which can be tapped are:

5.7.1 ISHUP and Rajiv Rinn Yojana (RRY)

MoHUPA, GOI has revised interest subsidy scheme – renamed as Rajiv Rinn Yojana for addressing the housing needs of the EWS/LIG segment in urban areas. The scheme envisages the provision of a fixed interest subsidy of 5 % on interest charged on a housing loan to EWS/LIG segment to enable them to buy or construct a new house or for carrying out additions (of a room/kitchen/toilet/bathroom) in the existing building.

As a means of Credit Enablement, the Interest subsidy scheme for Housing the Urban Poor (ISHUP), has been dovetailed with RAY, with the existing ceiling of the subsidized loan of 1 lakh, so that the State/ULB could release a part of the subsidy for housing as per the guidelines of ISHUP to reduce the cost of the loan taken by the beneficiary to build or purchase his/her house.

5.7.2 Housing Finance

When housing loans are not available, households have to use their own savings, equity, and/or loans from relatives. Monthly incomes are irregular and hardly sufficient for minimum

nourishment requirements. Thus, building in illegal areas, without construction and/or occupancy permits, remains as the only option for the urban poor.

Service Provision

Access to serviced land may also be limited by unrealistic standards and regulations which impede entry. Infrastructure standards should be made relevant to the effective demand and income of the poor. Households can make their own tradeoffs between cost and quality of services. Limited access to urban services not only deteriorates human capital, i.e., health education, but hampers the productivity of small and micro-enterprises and home-based activities.

5.7.3 Financial Markets

Lack of access to credit increases the vulnerability of the urban poor by constraining their ability to improve their homes, their work, and to start new businesses. Credit underwriting is a major problem since the poor do not have property to use as collateral and often lack regular incomes. Supporting micro-finance programs and provision of tenure security to support underwriting are possible policy actions at local levels.

The poor typically have little access to formal savings programs. Mechanisms to mobilize small savings of the poor are often limited to credit associations and informal solutions such as rotating savings and credit associations. NGOs or other micro-crediting organizations' ability to collect savings and to mobilize other private and public funds is also limited. In many developing and industrial countries, banks do not perceive the poor as worthwhile clients. Banks are often located in such places which are out of reach of the poor.

5.7.4 Labour Markets and Employment

Employment opportunities for the urban poor are affected by diverse factors including macroeconomic conditions, regulatory constraints on small businesses, lack of access to job market opportunities, infrastructure, education and training, and bad health. A range of issues concerning labour market regulations and legislation, e.g., employment protection rules such as minimum wage, hiring and firing regulations, etc., can also have counterproductive effects on the poor by increasing labour costs and thus constraining job opportunities. Before deciding on strategies to increase access to employment and income generating opportunities for the poor, it is important to have a strategic understanding of local economic development and a broad range of strategies.

A subset of policy interventions particularly targeting the poor at the local level are:

Support to small and micro enterprises Increasing access to job opportunities Supporting home-based, income-generating activities and employment intensive work programs

5.7.5 Support to Small and Microenterprises (SMEs)

For the urban poor, small and microenterprises can be important source of income and employment (including self-employment) where no other alternatives are available. In many cities, a substantial share of the working population -- sometimes as high as 50 percent -- is engaged in microenterprise activity.

Despite wanting to stimulate microenterprises, the response of many local governments is to sweep mobile sellers off the street into back alleys, prohibit selling altogether, or subject them to strict regulations. Alternatively, the supply of rights and permits to permanent spaces may be severely restricted. Vendors stay small and mobile because they cannot afford the start-up capital to establish themselves in a permanent market where they are subject to inspection and have to pay rent, fees, and taxes.

Various activities to improve business environments can be considered. Regulations on hygiene, license fees, and area restrictions should be reviewed. Land use decisions, such as inner-city revitalization projects, often victimize small-scale enterprises and street vendors. Regularization efforts, such as high license fees, can be detrimental for small-scale entrepreneurs.

National governments and/or city authorities may need to develop simple and appropriate taxation policies for small businesses and the banks/financial institutions that serve them. For instance, small and microenterprises should not be required to provide detailed invoices since such responsibilities may be difficult.

5.8 Increasing Access to Job Opportunities

Physical access

Improving physical access to jobs and markets can be facilitated through better and more affordable transport services to low-income settlements. Land use and zoning decisions should allow poor households and firms to have residential mobility. Such regulations should not require households to reside far away from employment opportunities and should also avoid incentives for businesses to locate to areas removed from their workers.

Other enabling policies

Facilitating the flow of information on jobs and markets for products, e.g., through publications and through the establishment of NGOs and other organizations that can provide such services. Local economic development programs need to be inclusive, and ensure that the urban poor benefit from them.

Providing practical job training

The ability of the poor to benefit from growth requires good basic education and can be enhanced through job training programs. Cities can organize job training programs and workshops in collaboration with the private sector and central government to enhance the skills of the labour force.

Facilitating child care to enable women to work.

Governments can initiate simple and cost-effective programs with the help of NGOs and community-based organizations (CBOs). These child-care programs can be supported with modest subsidies. Cities must ensure basic hygiene and safety through advisory services and minimal regulations

Cities can also take a role in the creation of short-term employment, for example, through public works programs. Such programs typically address urban infrastructure deficiencies through small works investments. Although the jobs created are only short-term, such programs provide temporary supplements to income and promote small-scale entrepreneurs. Slum Evacuation and deployment them in another place should ensure that their daily earning or not affected much and towards this, it is suggested that free and non transferable (with photo identity) bus passes, train passes may be used to them so that their basic livelihood is not affected in anyway

Supporting Home-Based Income-Generating Activities

Home-based production (or cottage industry) is also an important income-generating activity among the poor. Not only can housing space be used to earn rents but homes can also accommodate commercial and manufacturing activity. However, planning policies and land-use regulations tend to be based on the principle of separating housing and productive activities. City authorities often prohibit cottage industry to avoid health and safety hazards.

In view of the potential importance of home-based production for the urban poor, the regulatory framework can be adjusted to permit those activities while maintaining safety and providing infrastructure. City authorities can:

- Provide infrastructure services (electricity, telecommunications, water, and sanitation) which would increase the efficiency and productivity of home-based activities;
- Provide information and advisory services in relation to markets for the products and access to credit for SMEs;
- Provide information and training on safety measures;
- Organize practical vocational training courses; and
- Provide people involved in home-based income-generating activities with basic health care and labour right.

5.9 Social Protection

Social insurance benefits include unemployment insurance and assistance and pensions. Safety nets/social assistance interventions include various cash and in-kind transfers programs such as child feeding, vouchers for schooling and housing, etc., that supplement income.

A major issue for the urban poor is that they are usually self-employed, often in unregistered (informal sector) activities, or have only occasional wage employment. Therefore, social insurance benefits that depend on workers' contributions, especially pensions and unemployment insurance, rarely provide adequate income replacement for workers in the informal sector or whose employment in the formal sector is occasional. This underscores the importance of other measures noted above to better integrate the poor into the regular labour market as registered small firms and employees so that they can have basic benefits and legal protections. In the meantime such workers must rely on safety net interventions that supplement income through a variety of cash or in-kind transfers. Safety nets (or social assistance programs) are often financed by national government but administered by local governments; therefore, capacity building of local governments is also important for the effectiveness of these programs. Non-governmental safety nets, such as NGO programs, could also be fostered by government as they may be suitable to reach the poor who remain outside of formal employment.

Social protection programs often require central government actions at policy and regulatory frameworks level. But actions that local authorities can take include: Identify poor and their needs and linking their communities to the central government programs Integrate the poor into the regular labour markets so that they will have access to social insurance Initiate specific programs, e.g., incentives to keep children at school, etc.

5.9.1 Social Services: Health, Nutrition, Education and Personal Safety

Health and Nutrition

Food insecurity and thus malnutrition, overcrowded and unhygienic living conditions; lack of sanitation and water; and the juxtaposition of residential and industrial functions are among the major causes of health poverty in cities. Urban poor are also prone to work and employment-related diseases and accidents. Children are also sufferers of unhealthy conditions, where the children also kept with.

The people who are most prone to environmental hazards and job related diseases are those least able to avoid them and who have the most serious health impacts because they lack the income or assets (insurance, etc.) to cope with illness and injury (Satterthwaite 1998). Taking time off threatens their family's economic survival. Poor households lose a higher proportion of total income from being ill than richer households.

Provision of health services can be under the responsibility of central governments. However, local authorities can contribute to the health poverty reduction through:

- Facilitating access to basic services
- Monitoring health in their cities
- Facilitating health education in poor districts
- Improving the state of nutrition through supporting urban agriculture, etc.

5.9.2 Education

Like health services, education can be under the responsibility of State governments with assistance from central government. However, local authorities can contribute through:

- Monitoring education
- Facilitating access to schools
- Collaborating with the private sector, NGOs, and parents for better school facilities

5.9.3 Personal Safety - Crime Prevention

Personal security of urban poor is jeopardized by:

Family breakdown (often caused by drug and alcohol abuse), social diversity and visible income inequality in cities, evictions due to tenure insecurity, social and institutional exclusion, and lack of assets and opportunities, often lead to community and domestic violence. Women and children are most often the victims of domestic violence.

Family breakdown often leads to reduced support for children, and youths are often involved in drugs and gangs (a negative form of social capital network) instead of family support. Gang, drug, and gun violence involves youths not only as perpetrators but victims as well and threatens personal security of others in low-income areas. Lack of jobs, inability to continue education, and lack of opportunities for other constructive activity are the underlying factors.

There is a strong consensus that crime problems should be addressed at the city level and that the municipal authorities are in a strategic position to initiate and coordinate action. Possible policy actions by local authorities are:

- Support community organizations to strengthen community networks
- Initiate training and job creation programs for the youth
- Provide community services, e.g., safe transport and electricity for slum areas
- Provide tenure security
- Support positive contact between poor communities and security forces; encourage and implement (if possible) appropriate training for security forces involved in crime prevention.

5.10 Poverty and Urban Environmental Conditions

Environmental problems exacerbate urban poverty. Poor cities and poor neighbourhoods suffer disproportionately from inadequate water and sanitation facilities and indoor air pollution. Poor people are often forced to live in environmentally unsafe areas, steep hillsides and flood plains or polluted sites near solid waste dumps, open drains and sewers, and polluting industries.

Climate Change

The impacts of climate change and natural disasters pose a number of risks to cities due to the high concentration of people and economic assets and, in many cases the hazard prone location of cities on coastal areas and along rivers. This makes them vulnerable to rising sea levels, storm surges, and floods. Within cities, impacts of climate change and disasters are distributed unevenly among urban populations. Low-income households have limited choices for location, particularly where the land available for housing is scarce or unaffordable. As a consequence, in many cities there are high concentrations of poor households typically living in slums, on land at high risk from landslides, sea-level rise, and flooding. The urban neighbourhoods that are at risk from extreme weather events and natural disasters are made even more vulnerable by overcrowded living conditions, the lack

of adequate infrastructure and services, including water, sanitation, drainage, solid waste collection, and unsafe housing, inadequate nutrition and poor health. When a disaster hits, impacts can include the loss of these basic services, damage or destruction to one's home, reduction or loss of livelihoods, and the rapid spread of malnutrition, and water- and vector-borne diseases (particularly malaria).

5.11 Possible Interventions:

Solid waste management

Large municipalities and metropolitan regions are encouraged to undertake city-wide strategic planning to design and implement integrated solid waste systems that are responsive to dynamic demographic and industrial growth. Strategic planning starts with the formulation of long-term goals based on the needs of a particular municipality, followed by a medium and short term action plan to meet the goals. The city-wide strategic plan should match service levels to user demand and affordability especially for the urban poor.

Water supply, sanitation, and wastewater management

Poor cities and poor neighbourhoods suffer disproportionately from inadequate water and sanitation facilities. These issues are central to the environmental agenda and among the prime responsibilities of city governments.

Industrial pollution management

Efforts should focus on guidance for good practice in pollution management, on support for integrating environmental elements into the privatization of highly polluting industries, and on facilitating the application of innovative regulatory instruments.

Table 5.3 Detailed Investment Plan - Preventive Strategy

Name of the City: Coimbatore

Sl. No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums									
	No of Households for future at 2% growth rate	972	992	1012	1032	1052	1073	1095	1117	8345
	Cost per Unit	5.5	6.05	6.66	7.33	8.06	8.87	9.76	10.74	
A	Land Cost									
B	Housing & Infrastructure									
	(i) Physical Infrastructure (at 15% of B (ii))	8.02	9	10.11	11.35	12.72	14.28	16.03	18	99.51
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	53.46	60.02	67.4	75.65	84.79	95.18	106.87	119.97	663.34
	(iii) Social infrastructure (at 7.5 % of B (ii))	4.01	4.50	5.06	5.67	6.36	7.14	8.02	9.00	49.76
	Subtotal B	65.49	73.52	82.57	92.67	103.87	116.60	130.92	146.97	812.61
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.49	0.55	0.62	0.70	0.78	0.87	0.98	1.10	6.09
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.49	0.55	0.62	0.70	0.78	0.87	0.98	1.10	6.09
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.33	0.37	0.41	0.46	0.52	0.58	0.65	0.73	4.05
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.16	0.18	0.21	0.23	0.26	0.29	0.33	0.37	2.03
	Sub total C	1.47	1.65	1.86	2.09	2.34	2.61	2.94	3.30	18.26
D	Overheads/Administrative costs (at 5% of A+B+C)	3.35	3.76	4.22	4.74	5.31	5.96	6.69	7.51	41.54
E	Tender Excess @ 10 % of B	6.55	7.35	8.26	9.27	10.39	11.66	13.09	14.70	81.27
F	Total(A+B + C+D+E)	76.86	86.28	96.91	108.77	121.91	136.83	153.64	172.48	953.68
G	Physical contingencies (@ 2.5% of F)	1.92	2.16	2.42	2.72	3.05	3.42	3.84	4.31	23.84
H	Total Investment Cost H = (F+G)	78.78	88.44	99.33	111.49	124.96	140.25	157.48	176.79	977.52
I	Operation and Maintenance cost (at 4% of B)	2.62	2.94	3.30	3.71	4.15	4.66	5.24	5.88	32.50
	Total Investment Cost (H+I)	81.40	91.38	102.63	115.20	129.11	144.91	162.72	182.67	1010.02

Table 5.4 Detailed Investment Plan - Curative and Preventive Strategy - Coimbatore Corporation

SI .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
A	Tenable									
	i. No of Slums	9	19	11	19	15	14	14	15	116
	ii. No of Households	1558	2080	2472	2164	2374	2043	4535	2029	19255
	iii. No of Households proposed for intervention	1312	1836	2327	1807	1870	1760	1771	1539	14222
	iv. Investment Cost – Insitu Up gradation	109.86	169.13	235.97	201.69	229.48	237.70	263.19	251.68	1698.70
B	Untenable									
	i. No of Slums									
	ii. No of Households									
	iii. No of Households proposed for intervention	0	320	320	320	320	320	231	0	1831
	iv. Investment Cost - Relocation	0.00	29.48	32.47	35.72	39.28	43.22	34.33	0.00	214.50
C	Curative Strategy - (A+B)									
	i. No of Slums (A(i)+B(i))	9	19	11	19	15	14	14	15	116
	ii. No of Households (A(ii) + B(ii))	1558	2080	2472	2164	2374	2043	4535	2029	19255
	iii. No of Households Proposed for intervention (A(iii) + B(ii))	1312	2156	2647	2127	2190	2080	2002	1539	16053
	iv. Investment Cost - Curative Strategy (A(iv) +B(iv))	109.86	198.61	268.44	237.41	268.76	280.92	297.52	251.68	1913.20
D	Preventive Strategy									
	i. No of Housing units to be constructed	972	992	1012	1032	1052	1073	1095	1117	8345
	ii. Investment Cost - Preventive Strategy	81.40	91.38	102.63	115.20	129.11	144.91	162.72	182.67	1010.02
	Total Investment Cost (C(iv) + D(ii))	191.26	289.99	371.07	352.61	397.87	425.83	460.24	434.35	2923.22

Table 5.5 Financial Plan for Curative and Preventive Strategy Coimbatore Corporation

S. No	ITEM	Year (Rs. In Crores)								Total
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	
1	SFCP INVESTMENT	191.26	289.99	371.07	352.61	397.87	425.83	460.24	434.35	2923.22
1.2	No of affordable housing stock proposed including dormitories and night shelters.									
2	SOURCES OF FUNDING									
2.1	Central Assistance	72.68	110.2	141.01	133.99	151.19	161.82	174.89	165.05	1110.83
2.2	State Contribution	105.19	159.49	204.09	193.94	218.83	234.21	253.13	238.89	1607.77
2.3	Local body contribution									
2.2.1	BSUP Fund									
2.2.2	General Allocation from the Budget									
2.2.3	Earmarked resources									
2.2.4	PPP									
2.2.5	Loans									
2.2.6	Others - specify:									
2.3	Beneficiaries Contribution	13.39	20.3	25.97	24.68	27.85	29.81	32.22	30.4	204.62
2.4	Sources to be identified during implementation									
3	TOTAL SOURCES	191.26	289.99	371.07	352.61	397.87	425.84	460.24	434.34	2923.22