Rajiv AwasYojana (2013-2022)

SLUM FREE CITY PLAN OF ACTION - ERODE CORPORATION

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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
GoI	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
MoHUPA	Ministry of Housing and Urban Poverty Alleviation
MIS	Management information System
NIUA	National institute of Urban Affairs
PDS	Public Distribution System
PIU	Project Implementation Unit
PPP	Public Private Partnerships
RAY	Rajiv AwasYojana
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 Awas Yojana (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 (SFCPoA) envisages the objectives of RAY. SFCPoA encompasses two major strategies (i) Curative Strategy, a plan to bring about the improvement of the existing slums through the participation of the existing consent of 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. The first step towards this is to carry out detailed survey and develop Geographic Information System (GIS) based management information management system which will in turn help to evolve slum management strategies. Hence, detailed socio economic surveys, has been carried out in Erode city by NITTTR, Chennai, in accordance with the guidelines provided by Tamil Nadu Slum Clearance Board (TNSCB). This executive summary reports the exact condition of slums in Erode Corporation and suggestions to the upliftment of slum dwellers in terms of infrastructure development, way to overcome economic barrier and disaster risk, and also evolve strategies to prevent the formation of future slums.

Erode Corporation

Erode is familiar for Power loom Textile Industries and cultivation of turmeric in agriculture. It is located at a distance of about 100 kilometres east of Coimbatore. Erode got three major economic activities such as Textile Industry, Turmeric Industry and Oil Industry.In textiles prominent products such as Towels, Bed sheets and Lungis are exported worldwide.In addition, it has well developed infrastructure in the field of education. In 2011 the Erode Corporation area limit was extendedto 109.54 sq km, which is encompassing 60 wards, by merging the nearby local bodies such as Surampatti, VeerappanChatram,PeriyaSemur, Kasipalayam, Thindal, BP Agaraharam, Suriyampalayam, Ellapalayam, Villarasampatti and Gangapuram.Erode city now has an area of 109.54sq.kms with the population of 4.99 lakhs as per 2011 census. The population of Erode city has grown from 16,701 in 1911 to 4.99 lakhs in 2011. The population has increased nearly30 times from that it was in the year 1911. Drastic increase in population is due to extend of corporation limit by adding four Municipalities, two Town panchayats and three village panchayats. Influx people are denied essentials service such as clean water,

Year	Population	Increase	% of Variation
1971	105111	31349	42.50
1981	142252	37141	35.34
1991	159232	16980	11.94
2001	151274	-7958	-5.00
2011	499645	348371	230.29

electricity and health care – even though they may live close to these services because of their economic background. Too many are forced to live in risky and unhygenic place in ramshackle dwellings and overcrowded settlements that are highly vulnerable to disease and disaster and also 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 Erode 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 Quick bird Satellite 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. For the purpose of community mobilization, the interaction with the Mayor and elected Ward Councilors, who have helped a lot in sensitization of the community through canvassers selected from the sourced slum or nearby slum pockets.

→ Entry of data from Slum Surveys in the web-enabled MIS application software (provided by Tamil Nadu Slum Clearance Board), collation and compilation 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 Public Private Partnership (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 Erode

Erode Corporation is divided into four zones.Each zone is having 15 wards. There are 120 slum pockets within the corporation limits. Out of 120 slums 5 had been developed already by TNSCB and by the urban local bodies, and 25 slums are not taken for the survey due to the non cooperation of slum dwellers. After detailed deliberation with corporation officials, community organizers, TNSCB officials, elected representatives etc., list of slums for the project is finalized. Totally 90 slums have been identified for the enumeration purpose under RAY scheme. These 90 slums are distributed in 37 wards. Details of the slums in Erode (both notified and non-notified) have been collected from the Erode Corporation through Tamil Nadu Slum Clearance Board. The slum population of the Corporation constitutes nearly 7% of the total population of the Corporation. Gandhi Nagar is the largest slum of the city and has a population of 2078 with 575 households and is situated in ward No.6 of zone – I.

S. No	Name of the Slum	No. of Slums	House Holds
1	Developed Slums by TNSCB	5	1864
2	Slums not Surveyed under RAY due to opposition from Slum Dwellers (To be surveyed)	25	3303
3	Surveyed Slums under RAY	90	10743
Total		**120**	**15910**

No of Slums	Slum Population	No. of HHs	Area in Sq.Km
90	**35514**	**10743**	**2.33**

Because of power looms, 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 were found to be the important factors contributing to the growth of the slums in Erode Corporation area. Estimated statistics from the socio economic survey shows there are 10743 slum households in Erode Corporation covering an area of 2.33 sq.km.

Basic definition of Slum clearly categorizes based on the housing condition and surrounding environment. 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 objective of the slum development programmes is to provide decent shelter of minimum acceptable size. Kutcha and Semi pucca households need to be transformed to pucca structure with due consideration of the land ownership. In Erode Corporation 9121 households (consisting 85%) are Semi Pucca & Kutcha category which need to be transformed to pucca structure. In addition 386 households from untenable slums are to be relocated.

Sl.No	Type of Houses	No. of Houses	%
1	Pucca	1622	15
2	Semi Pucca	7628	71
3	Kutcha	1493	14
	Total	**10743**	**100**

Water is one of the great necessities of human life. A supply of clean water is absoultely necessary for decent life and health. Yet many people of the world do not have access to clean water or can only obtain it a high prices in time or money. 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 as well as more time towards procuring water for potable purpose. The average water price in informal settlements is almost five times the average price. In Erode Corporation 85 % of households are not having Individual water supply facility. There is a highest demand for water supply connection in the Zone - II which is having only 2.62%.

Zone	Total HouseHold	Individual Tap Connection
Zone - I	3758	587
Zone - II	1199	281
Zone - III	2560	336
Zone - IV	3226	364
Total	**10743**	**1568**

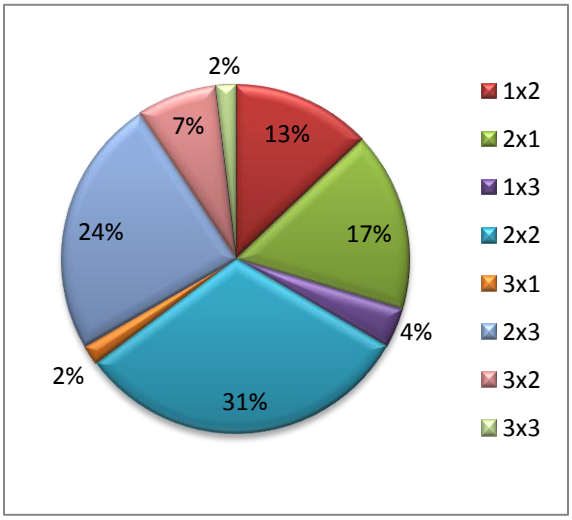
The difference among the levels of service largely owes to the availability of revenue. Cities in developed countries have 32 times as much money per person to spend on infrastructure and other urban services as cities in least developed countries. In Erode Corporation, the corporation made arrangements to collect the solid waste from the slums in different frequency namely daily, alternate days, once in fortnight. Totally 47 slums are not having the facility to dispose off the solid waste. In the surveyed slums of Erode Corporation, a total of 85.40 % 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 Erode 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 36 slums are falling under the category of untenable.

	Zone - I		Zone - II		Zone - III		Zone - IV		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
Tenable	18	3720	13	1199	06	380	17	1504	54	6803
Untenable	01	38	--	--	17	2180	18	1722	36	3940
Total	**19**	**3758**	**13**	**1199**	**23**	**2560**	**35**	**3226**	**90**	**10743**

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 Erode 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 13% of the surveyed slums in Erode Corporation come under the category of 1x2 matrix and 2% of slums falls under into a category of most vulnerability and poor infrastructure. Hence focus need to be towards providing basic infrastructure to improve the living environment of slums. There is a need for immediate attention in improving the housing condition and livelihood for six slums. The following table lists the tenable slums in the Erode city.

Tenable Slums					
S.No	Ward No	Slum Name	Notified / Non notified	Matrix	No. of Household
Zone - I					
1	2	Neelikkaradu	Notified	3x3	65
2	2	Balan Nagar	Notified	2x3	102
3	2	Perumal Malai	Notified	2x3	310
4	2	Mayapuram	Notified	2x2	166
5	3	CM Nagar	Notified	2x3	123
6	3	Suriyampalayam	Notified	2x2	489
7	3	Madeshwaran Nagar	Notified	2x2	127
8	3	Veerapannadiyur	Notified	1x2	72
9	4	Maravampalayam	Notified	2x2	319
10	4	Ambedkar Nagar	Notified	2x2	233
11	4	Sanarpalayam	Notified	2x2	152
12	5	Bharathi Nagar	Non Notified	3x2	253
13	5	Kamaraj Nagar	Notified	2x2	247
14	5	Gnanapuram	Notified	2x1	102
15	6	Gandhi Nagar	Notified	2x1	575
16	13	Madhavankadu Sinthan Nagar	Notified	2x3	16
17	13	Jayagopal street	Notified	2x1	46
18	15	Krishnampalayam colony	Notified	1x2	323
		Total No. of HHs in Zone - I			**3720**
Zone - II					
19	17	Thaneer Pandal Palayam AD colony	Non Notified	2x3	37
20	17	Jeeva Nagar	Non Notified	2x2	61
21	17	MGR Nagar	Non Notified	1x2	18
22	18	MGR Colony	Notified	3x2	63
23	18	Adukkuparai	Non Notified	2x3	126
24	18	Muthu Manickam Nagar	Non Notified	2x1	69

25	18	SSP Nagar	Notified	1x2	326
26	20	Indra Nagar	Non Notified	1x2	188
27	21	Kumalan Kuttai	Notified	2x1	36
28	27	Thiruvalluvar Kudusaigal	Notified	2x3	26
29	28	Jinnah Maithanam	Non Notified	2x3	59
30	28	Kavery Road	Non Notified	2x3	91
31	30	Rajajipuram	Notified	3x2	99
		Total No. of HHs in Zone - II			**1199**
Zone - III					
32	31	Kamaraj Nagar	Notified	1x2	60
33	36	Sastri Salai	Notified	2x2	105
34	37	Muthampalayam Housing Unit II, Gandhji street	Non Notified	1x3	75
35	38	Palayapalayam odai medu	Non Notified	2x2	20
36	39	West Ambedkar Street	Notified	2x1	45
37	40	East Ambethkar Street	Notified	3x2	75
		Total No. of HHs in Zone - III			**380**
Zone - IV					
38	32	Karattankadu	Notified	2x2	432
39	46	Sudhandhirapuram	Notified	3x1	74
40	46	Kallavarai	Notified	2x3	34
41	46	Narikuravar colony	Non Notified	2x3	54
42	46	Rangampalayam AD colony	Notified	2x3	20
43	46	Barathi palayam	Notified	2x2	22
44	46	Kalyana Sundram Street	Notified	2x2	68
45	46	Ragupathy Naikkanpalayam AD colony	Notified	2x2	33
46	46	Sangankurai	Notified	2x2	83
47	46	Vendipalayam Lakhmi Nagar	Non Notified	2x1	101
48	46	Sathya Nagar	Non Notified	1x3	257
49	49	J J Nagar	Non Notified	2x3	18
50	49	Sadayampalayam AD colony	Notified	2x2	72
51	49	Pudhukalli Valasu	Notified	2x1	32
52	49	Ceylone Colony	Notified	1x2	107
53	52	Easwaran Veethi	Notified	2x1	24
54	60	Loganathapuram	Non Notified	2x2	73
		Total No. of HHs in Zone - IV			**1504**
		Total No. of HHs in Tenable slums			**6803**

Untenable Slum Prioritization

The prioritization of untenable slums have been done based on the (i) environmental risk, (ii) Proportion of women population, (iii) SC/ST population, (iv) Minority population and (v) BPL family. The following table lists the untenable slums in the surveyed slums of Erode city.

Untenable Slums					
S.No	Ward No	Slum Name	Notified / Non notified	Rank	No. of Household
Zone - I					
1	11	Pithchaikkaran pallam	Non Notified	3	38
				Total No. of HHs in Zone - I	**38**
Zone - III					
2	31	Valliammai Nagar	Notified	3	78
3	31	Therkupallam	Notified	2	14
4	33	Karaparai Pudhu Colony	Notified	3	59
5	33	Karaparai	Notified	2	232
6	37	Ramamoorthy Nagar	Non Notified	3	102
7	37	Ramamoorthy Street(Anaikkattu)	Non Notified	3	209
8	37	Bharathipuram	Notified	3	231
9	38	Nethaji Nagar	Non Notified	1	94
10	41	Santhan Karukku	Non Notified	3	32
11	41	Anna Nagar	Notified	2	85
12	41	Deva Nagar	Non Notified	2	19
13	41	Kulathupannai	Non Notified	2	75
14	41	Ashokapuri	Non Notified	1	209
15	41	Kallukuzhi	Non Notified	1	64
16	41	Stony Bridge Huts	Non Notified	1	92
17	45	Nethaji Nagar	Non Notified	3	68
18	45	Palaya Poondurai Road	Non Notified	1	517
				Total No. of HHs in Zone - III	**2180**
Zone – IV					
19	46	Petrol bunk Anna Nagar	Non Notified	3	74
20	46	Subramania Nagar	Non Notified	3	102
21	46	Vaikalmedu Bharathi Nagar	Non Notified	3	94
22	46	Baladhandayutha Street	Non Notified	3	74
23	46	Senapathy Palayam	Non Notified	2	72
24	48	Shastri Nagar	Non Notified	3	251

25	48	Lakhmi Nagar(Sastri Nagar,Gandhi Nagar)	Notified	2	23
26	50	Kattabomman Street	Non Notified	2	92
27	51	Manalmedu Good Shed Huts	Notified	2	545
28	52	Poyerikarai	Notified	2	62
29	52	Kalaiankadu	Notified	2	82
30	54	Kuyavan Thittu	Non Notified	2	61
31	54	Nataraja Theatre slum	Non Notified	1	19
32	55	Kuppipalayam Vaikkal Road	Notified	1	10
33	56	Ayyanarappan Koil Street	Notified	3	24
34	57	Mosi Keeranur Veethi	Non Notified	1	57
35	58	Kuyilan Thoppu	Non Notified	2	20
36	60	Kaverikarai	Non Notified	3	60
		Total No. of HHs in Zone - IV			**1722**
		Total No. of HHs in Untenable slums			**3940**
		Total No. of HHs in all slums			**10743**

Slum Development Options

i. Objectionable Slums

Out of 90 slums, 36 slums are found to be located in objectionable zone. This constitutes 3940 of the households. Around 14 acres of vacant lands are identified by TNSCB, Erode for the resettlement of the 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 40 acres. At present the available land is not sufficient for the curative measures. The resettlement phasing for un-tenable slums and Improvement of the infrastructure and livelihood have been indicated.

ii. Unstable Land Tenure

Only 54 slums are falling under the stable land tenure, even though more than 80% of slum dwellers are not possessing pattain 17 slums. (A patta is a legal document issued by the Government in the name of the actual owner of a particular plot of land. It can also be issued for lands having buildings or individual houses etc. constructed on them.)

iii. Infrastructure

Few tenable slums (9 slums) are having very good infrastructure facility, but the housing condition is very poor. Hence, these slums are also need to be considered for the curative strategy. One slum is not at all having electricity facility namely, Jinna Mithanam. In core of the city few slums are located in the course of drains which are not having the proper solid waste disposal arrangement. Slum dwellers are dumping the waste in the drains which will cause the flood during the rainy season.

iv. Livelihood status

Livelihood status is mainly depending upon the educational status of the slum dwellers. Education is not a problem especially in Erode Corporation. The number 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 the surveyed slums ofErodecity. A total of 40% of households in slum area of Erode city are getting income of less than Rs. 5000 which is inadequate to fulfill their day to day requirements.

Type of Slum Development Strategies

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

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

The above two development strategies are playing the vital role to improve the stats 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 Erode 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 (CDTI)
- ✓ Employment Web portal
- ✓ Community welfare schemes.

Further, the infrastructure development was analysed with the following parameters

- ❖ Development of infrastructure other than housing, 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 Assisting 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 helps the employers to identify persons nearby places. In this way, the skilled person will get a job and salary commensurate to his / her talent or expertise, and thus avoiding the exploitation of slum workers with less salary.

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 Erode was made to evolve slum free city. It is observed that number of slums is 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

1. Plan out slum improvement strategies with respect to infrastructure in 90slums under RAY in a phased manner.
2. Improve the livelihood conditions of slum people by providing training in operation of earth moving equipment, Motor mechanic, Carpentry, Masonry, Office automation, and Tailoring through CDTI.
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 10743 households, 9507 HHs need to be intervened at total cost of Rs. 1105.45 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 censusthe future house demand has been arrived. The projected housing demand at the end of 2022 is 3916 households which require cost of Rs. 474.01 crores. For Erode city total cost is arrived to Rs. 1579.46 crores for both preventive and curative measures.

CHAPTER 1 OVERVIEW

1.1. INTRODUCTION

Slums exist due to the physical manifestation of several overlapping forces. On the one hand, they are a manifestation of the ingenuity and resilience with which extremely disadvantaged populations have organized them in the face of these very challenges. But on the other hand, slums are the manifestation of deep poverty, unrealistic regulatory frameworks, ill-conceived policies, inadequate urban planning, weak institutional capacity, and larger macroeconomic factors. All slums are not the same, and some provide better living conditions than others. There is no need to underscore the magnitude of the challenge or the dire implications of ignoring it. Ironically, the solutions to slums are well known and are not difficult. What is required is political will with the involvement of dwellers with the continuous commitment.

In order to meet the Millennium Development Goals, there is an unprecedented opportunity to improve the lives of billions of people who are living in slums by adopting practical approaches. It was a group of 189 nations in 2000 making a promise to free people from extreme poverty and multiple deprivations. This pledge became the eighth Millennium Development Goal (MDG) to be achieved by 2015. In September 2010, the world recommitted itself to accelerate progress towards these goals. It is this growing global concern that has shifted the focus of International community to the Slums evidently manifested in the United Nations Millennium Declaration and subsequent identification of new development priorities. The increasing number of Slum dwellers have forced the governments to adopt a target on slums called MDG7, Target 7D, indicator 7.10 aiming at improving significantly the lives of at least 100 million slum dwellers by the year 2020. The international community in the form of this Millennium Development Goal target is aiming for the bare minimum given the predicted growth of roughly two billion in the next 30 years. Thus, it is evident that the present efforts put in this direction are not enough.

The problem of inadequately serviced and overcrowded urban housing dates back when the humanity first began to live in cities

-UN-Habitat 2010

The adequate supply of infrastructure services has long been viewed as essential for economic development and poverty reduction; both in the policy and academic realms .Over the last three decades, considerable efforts have been devoted to theoretical and empirical evaluation of the contribution of infrastructure to growth and economic development. 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 their daily activities 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, at a smaller scale and at a considerably slower pace. National and International policies need to be guided by the real concern and compassion to make these slums the participatory elements in driving away distress, deprivation and other facets of poverty.

Almost one of three urban dwellers lives in a slum

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 in illegal and unauthorized 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 32.7 % (400 million) of Indians live below the international poverty

line. The Global Hunger Index (GHI) report (2013) places India in 63rdposition, making a marginal improvement since 2012, but continues to suffering far behind other emerging economies. The score for India has improved slightly from 22.9 in 2012 to 21.3 in 2013. Within SAARC countries also, India continued to trail behind Pakistan and Bangladesh on the index. India continued to record one of the highest prevalence of children under five who are underweight, at more than 40 per cent.

1. Undernourished population 2010-12: 17.5 Per cent
2. Underweight children <5years 2008-12: 40.2 Per cent
3. Under-5 Mortality 2011: 6.1 Per cent

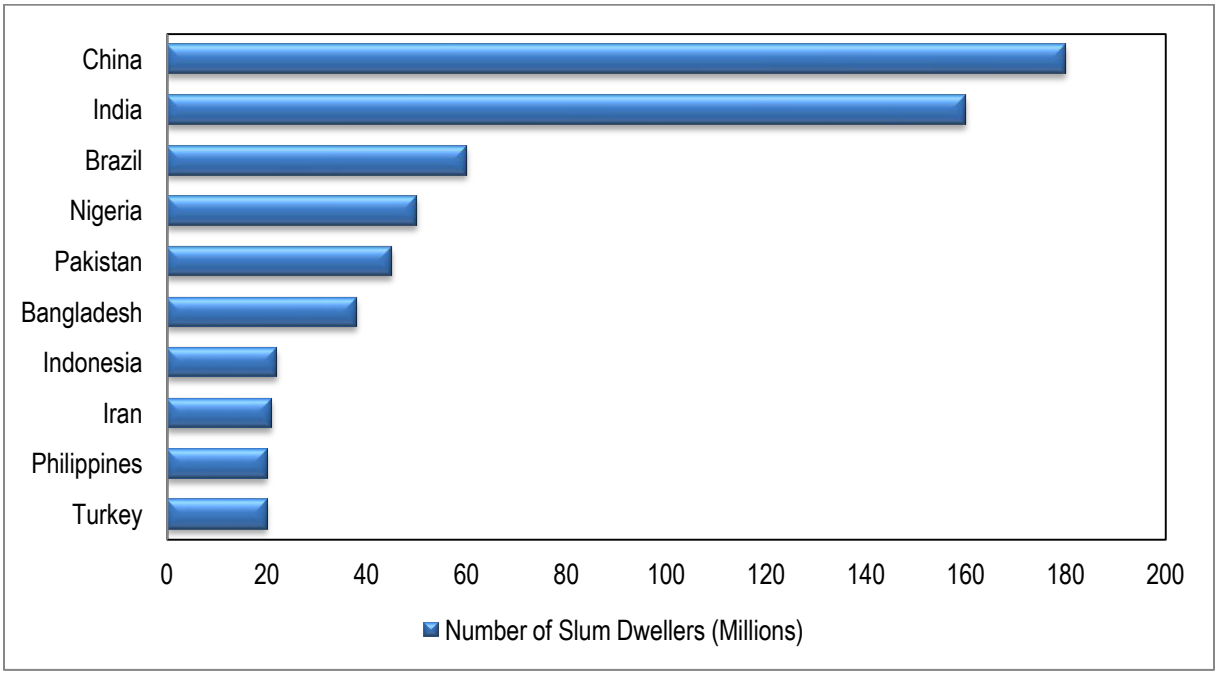


Fig.1.1 Number of slum dwellers in Top 10 countries (Source: UN Habitat Report, 2003)

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

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

The Encyclopedia 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 in adequate light, air, toilet and bathing facilities; that are in bad repair, dump and improperly

In India, Informal settlements occupy one-third of the large city spaces: 34.5 per cent of the population of Mumbai, Delhi, Kolkata, and Chennai

heated; that do not afford opportunity for family privacy; that are subject to fire hazard and that over crowd the land, leaving no space for recreational use.

Registrar General 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)

Table 1.1Indicators and Thresholds for defining Slums (Source: UN Habitat Report, 2003)

Characteristics	Indicator	Definition
Access to water	Inadequate drinking water supply (MDG indicator 30)	A settlement has an inadequate drinking water supply if less than 50% households have an improved water supply: a) Household connection b) Access to public stand pipe c) Rainwater collection With at least 20 litres/person/day available within an acceptable collection distance.
Access to Sanitation	Inadequate sanitation (MDG indicator 31)	A settlement has an inadequate sanitation if less than 50% households have an improved sanitation: a) Public sewer b) Septic tank c) Pour-flush latrine d) Ventilated improved pit latrine The excreta disposal system is considered adequate if it is private or shared by a maximum of two households.
Structural quality of housing	a. Location	Proportion of households residing on or near a hazardous site. The following locations should be considered: • Housing in geologically hazardous zones (landslide/earthquake and flood areas); • Housing on or under garbage mountains; • Housing around high-industrial pollution areas; • Housing around other unprotected high-risk zones (e.g., railroads, airports, energy transmission lines)
	b. Permanency of structure	Proportion of households living in temporary and/or dilapidated structures. The following factors should be considered when placing a housing unit in these categories: • Quality of construction (e.g., materials used for wall, floor and roof); • Compliance with local building codes, standards and bylaws;
Overcrowding	Overcrowding	Proportion of households with more than two persons per room. The alternative is to set a minimum standard for floor area per person (eg. 5 square meter)
Security of tenure	Security of tenure (MDG indicator 32)	• Proportion of households with formal tide deeds to both land and residence; • Proportion of households with formal tide deeds to either one of land or residence; • Proportion of households with enforceable agreements or any documents as a proof of a tenure arrangement;

In Census 2011, the 'slum Enumeration Blocks (EB)' was demarcated in all statutory towns with a population of50,000 or more as per the Census 1991. Slum population was reported from 640 towns of 26States UTs. More than 23 percent of the population from these 640 towns was from the 'slum EBs'. A total of six States (Himachal Pradesh, Sikkim, Nagaland, Arunachal Pradesh, Manipur and Mizoram) and three UTs (Daman & Diu, Dadra & Nagar Haveli and Lakshadweep) did not report any slum population. Three types of slum areas considered for demarcating the 'slum EB's in Census 2001 were:

→ Notified slum: All areas notified as 'Slum' by the State Government/ UT administration under any Act.

→ Recognized slum: All areas recognized as 'Slum' by the Local State Government and UT administration, which have not been formally notified as slum under any Act.

→ Identified slum: 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.

It may be noted that all EBs formed in entire notified and recognized slum areas were considered as 'slum EBs'. Further, the 'identified slum' areas were identified by the Census Charge Officers, who were from the respective municipalities, at the time of forming the Census EBs. The Charge Officers were instructed not to mix the slum and non-slum areas while demarcating the census EBs.

1.4. SCHEMES TO ALLEVIATE URBAN POVERTY

The Ministry of Housing and Urban Poverty Alleviation (HUPA) 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 1.2, shows the investment required to upgrade slums by 2020.

Table 1.2 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**	**440**	**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 upgradation 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, 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 AwasYojana 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 AwasYojana".

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

"My Government proposes to introduce a Rajiv Awas Yojan a 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.

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

In order to ensure a good delivery system it is fundamental to involve communities. Transforming the relationship between ULBs and communities is the basis of what guarantees the success of projects and provides added support and assistance to cities. Many large projects producing (gradual) evictions need to have a robust re-location strategy as an intrinsic part of RAY. This strategy should include transport linkages and livelihood concerns. Fig.1.2 shows the National Urban Poverty Alleviation Mission (NUPAM) for targeting reduction of vulnerabilities.

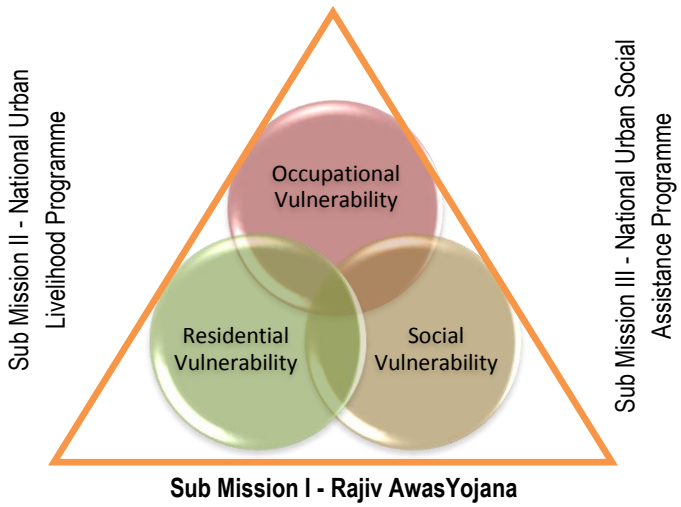


Fig.1.2 National Urban Poverty Alleviation Mission (NUPAM): targeting reduction of vulnerabilities

The major concern of this report is to summarize the action plan to be taken for achieving slum free city status. It is known fact that the growing challenge of slums, in the context of unprecedented urban growth increase poverty and inequality. The report provide strategies that address fundamental problems of housing, unemployment, lack of income generation opportunities and rising income inequalities, in the four zones of Erode. Journey towards Slum Free City (without slums) is part of the more difficult journey towards poverty eradication with a search for sustainable urban livelihoods. This report gives the details of the socio-economic survey carried out for Erode city (consisting of 4 zones) and development of road maps of activities that lead realization of Erode as slum free city within a span of maximum ten years period. Deficiency matrix also computed which assist the decision makers in allocating the sparse resource to the right place rationally.

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, Tiruchirrappalli, Tirunelveli, Tirppur, Erode, Salem, Vellore and Tuitcorin. TNSCB is the Nodal Agency for implementation of the project, vide Government of India, Ministry of Housing & Urban Poverty Alleviation Letter *1) F.No.N-11027/71/2010-RAY dt., 25-04-2011 and 2) N-11027/71/2010-RAY-II. dated 02-08-2012.*

Specific Objective: 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.

TNSCB through a competitive bidding process, has selected National Institute of Technical Teachers Training and Research (NITTTR), MHRD, GoI 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, Tiruchirrappalli and Tiruppur. NITTTR commenced the work and carried out the survey as per the scope of the project at Erode Corporation.

CHAPTER 2 ERODE CITY PROFILE

2.1 CITY AN OVERVIEW

Erode is famous for Power loom Textile Industries and cultivation of turmeric in agriculture. The city is located in a cotton growing region, and it is having a major export hub, with a total value of exports alone being above Rs. 10,000 crores per year. It is the home for host of textile, hosiery, engineering and auto spare parts industrial units. In textiles, prominent products such as towels, bed sheets and loungis are exported worldwide. The industries include cotton ginning and the manufacture of transport equipments. City has well developed industrial infrastructure, cluster of educational institutions and health care centre. The cause for the name of the Town "ERODE" is being the existence of the two odais (water courses) viz., Perumpalayam and Pitchaikaranodai.

2.1.1 History

Erode was under the regimes of Cara kings in 850 A.D. Thereafter (in 1000 A.D. - 1275 A.D.) this place came under the rule of Cholas with Dharapuram as their Headquarters. Subsequently, it came under the control of Padiars (from 1276 A.D.). Only during this period, a ruler by name Veerapandian caused the digging of Kalingarayan Channel. Then the Muslims (MoideenSulthans) took over the rule after which Nayaks of Madurai ruled. Then Hyder Ali and Tippu Sultan had their sway. In 1799 when Tippu fell to the British, the East Indian Company took over the administration.

During Hyder Ali's regime, this town flourished with 300 houses. A population of 1500, a mud fort, with a garrison of 4000 soldiers surrounded by coconut groves and fertile lands bounded on the north by River Cauvery and east by Kalingarayan channel (By Bucchanan 7th and 8th November 1800). But owing to the successive wars of Marathas, Mysore and British invasions, it become almost deserted and ruined. However, as peace was restored by the British, the people returned and settled here. Within a year it began to grow with 400 houses with a population of 2000. The garrison withdrew in 1807, and the ruined fort was levelled as a relief work during the famine in 1877. Till the year 1947, when India attained independence, the area remained under British control who initiated systematic revenue administration in the area. Periyar district had been formed with head Quarters at Erode, by bifurcating the Coimbatore district, through the G.O.Ms.No.1917, Revenue dated 31st August 1979.

2.1.2 Geography

Erode, a special grade Municipal Town is located at a distance of 100 km east of Coimbatore and is situated on the bank of river Cauvery between 11 ° 19.5" and 11 ° 81.05" North latitude and 77 ° 42.5"

and 77 ° 44.5" East latitude. Erode city spreads over an area of 109.54 sq.kms with the population of 4.99 lakhs as per 2011 census. It is situated at the centre of the South Indian Peninsula, about 400 km southwest of the state capital Chennai. Fig. 2.1 shows the location map of the Erode Corporation.

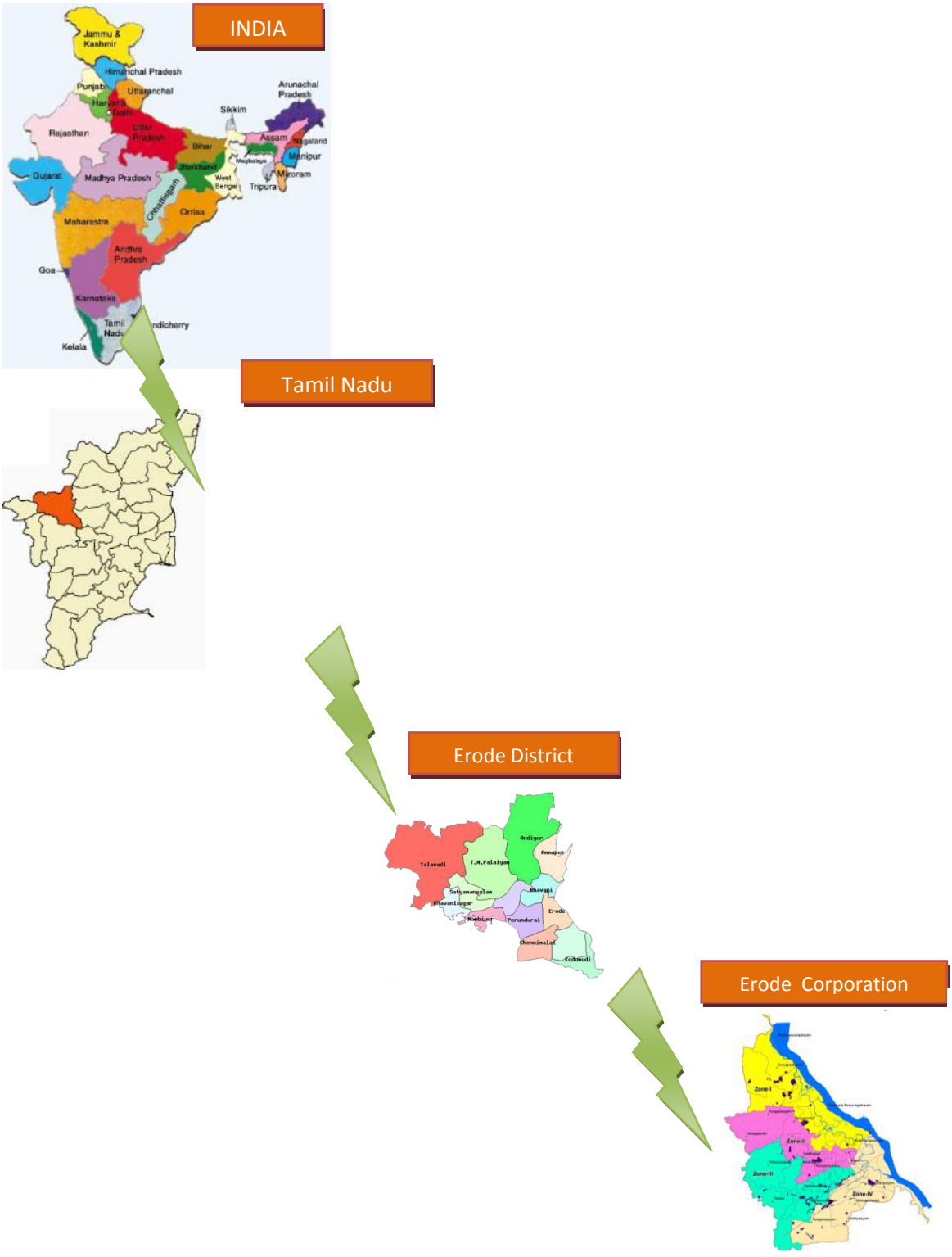


Fig. 2.1. Location map of Erode Corporation

2.1.3 Soil &Geology

Black loam is found in parts of Erode Taluk. In this area soil is found to be rather sandy, stony and of the gravel type. In general, it can be classified into two main groups (black and red soils). Lime stone is found in abundance in the form of modules, streaks and massive beds of grey and white colours inter-banded with igneous rocks. Feldspar is also abundant.

2.1.4 Climate and Rainfall

The climate of the town and its vicinity is hot and dry. During February and March the climate is usually oppressive especially along river Cauvery. In April the weather gets hotter and humidity is at its maximum. During June, July and August cool breeze flows through Palghat Hills gap, but by the time it reaches the area under Erode Taluk it loses its cooling effect and becomes hot and dusty. The average minimum and maximum temperatures are27°C and 35°C, respectively. The temperature gradually increases from 29°C in January to 35°C in May and reduces gradually to 27 °C in December.

Total rainfall is over 1000 mm in a year. When monsoon breaks maximum rainfall reaches 30mm per day. Erode gets the major portion of the rain during South West Monsoon. In October the North-East Monsoon sets in.

2.2 Overview of the Erode ULB

Erode Municipal Council came into existence in the year of 1871 and was upgraded to Special Grade Municipality with effect from 1.3.1980 as per G.O. Ms. No. 349 and R.D. & L.A at 27-2-1980, with an area of just 7.4 km^2. In 2007, this Municipal limit covering only the Central Business District and had a population of about 1,59,728 and it has been upgraded as a Municipal Corporation with effect from the first January, 2008. And in 2011, it has started to function as the integrated City Municipal Corporation by merging the nearby local bodies such as Surampatti, VeerappanChatram, PeriyaSemur, Kasipalayam, Thindal, BP Agaraharam, Suriyampalayam, Ellapalayam,

Villarasampattiand Gangapuram. Its total area is 109.54sq.km and consists of 60 wards. The information about the Erode ULB is provided in the Table 2.1.

Table 2.1 Information about Erode Corporation

S. No.	Title	Info
1	Name of the Corporation	Erode
2	Area of the Corporation (Sq.km.)	109.54
3	No. of Zones	4
4	No. of Wards	60
5	Total Population (Census 2001) in Lakhs	1,51,274
6	Total Population (Census 2011) in Lakhs	4,99,645 *

* - (Increase in populationis due to extend of corporation limit by adding four Municipalities, two Town panchayats and three village panchayats.)

Source: Census 2011

The corporation is administered by the Mayor of the city and the executive body is looked after by the Corporation Commissioner. Theheadquarter of the corporation is municipal corporation building in erode, which is nearby Panneerselvam Park.This corporation is divided into 15 sanitary divisions and 60 electoral sections. According to 1991 census the corporation's population was 1,59,232,in 2001 it decreased to 1,51,274 and in 2011 it increased to 4,99,645 due to merger of four of adjoining Municipalities, two Town panchayats and three of village panchayats with the existing corporation area.

The development of the city has been taking place at a much faster pace due to the increasing industrial activities. The city being an urbanized industrial centre and the nodal point has been attracting people for job opportunities from the neighbouring villages and towns. The increase in the industries is evident from the increasing share of workers in the tertiary sector of the city over the recent years. In Erode Corporation, the industries users are found along the Nethaji road. Most of the industries are located outside the municipal limits. The industrially developed Perundurai Road is near the fringe of Erode corporation road. Some industrial development is also found along Sathy road. The industries that are located within the city belong to mainly oil and rice mills and allied trades, such as engineering works, automobiles and power looms. The industries such as dyeing and power loom textiles are predominant in outside of Erode city.

Industries belonging to Dhal mill, Cotton textiles, Vanaspathy manufacturing, wax and screen printing, power loom, sizing, wrapping and printing press are also found in and around Erode city.

The population of Erode city has grown from 16,701 in 1911, 4.99 lakhs in 2011. Table 2.2 shows the decadal growth of population from 1911. It is seen that the population has increased nearly30 times from that it was in the year 1911. The drastic increase in population in the year 2011 is due to extension of City boundary. 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 Erode city

Year	Population	Increase	% of Variation
1911	16701	-	-
1921	22911	6210	37.18
1931	33672	10761	46.97
1941	39483	5811	17.26
1951	57576	18093	45.82
1961	73762	10186	28.11
1971	105111	31349	42.50
1981	142252	37141	35.34
1991	159232	16980	11.94
2001	151274	-7958	-5.00
2011	**499645**	**348371**	**230.29 ***

* - (Drastic increase inpopulation is due to extend of corporation limit by adding Four Municipalities, two Town panchayats and three village panchayats.)

Source: Census of India 2011

2.3 Diagnostic assessment of slums

Population growth and governance are the two main reasons for the slum increase in a city. The migrated poor are settled in unusual land 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 Erode 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. These features are very common in the slums of the Erode Corporation.

2.4 SURVEYS, INVESTIGATIONS AND CONSULTATIONS

Erode city has a total of120 pocket sof slums with 15910 households are distributed in five zones. 80% of the slums are identified in the fringe area of corporation. Detailed list of the slums in Erode have been collected from the Erode Corporation through TNSCB officials. Table 2.3 shows abstract of slums in Erode Corporation.

Table 2.3 Details of Slums in Erode Corporation

S.No	Name of the Slum	No. of Slums	House Holds
1	Developed Slums under TNUDP Schemes by TNSCB	5	1864
2	Slums not Covered under RAY due to opposition from Slum Dwellers (To be surveyed Slums)	25	3303
3	Surveyed Slums under RAY	90	10743
Total		120	15910

2.4.1 Slums not covered 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, Erode has constructed tenements / houses for various slums which are shown in the Tables 2.4 to 2.5 by Zone wise. Already TNSCB, Coimbatore division has collected the socio economic details for 1864 household from 5slums. Hence, we have not covered these slums under RAY scheme, as per the instruction of TNSCB, Coimbatore Division.

Table 2.4 Survey not covered under RAY in TNSCB schemes implemented slums in Zone-II

Sl.No	Name of Slum	No. of House Hold	Tenable / Untenable
1	Bhavani Road Phase - I (Tenements)	648	Tenable
2	Bhavani Road Phase - II (Tenements)	312	Tenable
3	Pananthoppu (Tenements)	180	Tenable
4	Naryanavalasu	256	Tenable
		1396	

Table 2.5Survey not covered under RAY in TNSCB schemes implemented slums in Zone-IV

Sl.No	Name of Slum	No. of House Hold	Tenable / Untenable
1	Perumpallam Odai (Tenements)	468	Tenable
Total		468	

2.4.2 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 3303 households of 25 slums. The slum details are given in the Tables 2.6

Table 2.6 Slums not surveyed under RAY due to Opposition from Slum Dwellers and to be surveyed.

Sl.No	Name of Slum	Zone	Ward No.	No. of House Hold	Teneble / Untenable
1	Harijan Colony (Gangapuram) (Mariyamman)	1	16	150	Teneble
2	Odai Street South	1	16	30	Teneble
3	Harijan Colony North	1	16	50	Teneble
4	Mokaiyanpalayam	1	16	120	Teneble
5	Thottampatti	1	16	110	Unteneble
6	Mahaliyamman Koil street	1	16	50	Teneble
7	Ellapalayam East	1	16	60	Teneble
8	Sathya Nagar & Gandhi Nagar	1	16	80	Teneble
9	Gandhi Nagar	1	16	50	Teneble
10	North Chinna MariammanKoil Street	1	58	198	Teneble
11	Jeevanandham Road	1	54	116	Teneble
12	Marapalam Road	1	54	165	Teneble
13	PerumpallamAnaikattu (TNUDP)	3	38	48	Tenable
14	PerumpallamOdai -1(Tenements – TNHB)	3	38	224	Tenable
15	PerumpallamOdai – 2 (Tenements – TNHB)	3	38	400	Tenable
16	Periyar Nagar (Tenements – TNHB)	3	53	400	Tenable
17	Karungalpalayam (Tenements – TNHB)	3	57	272	Tenable

18	AllamarathuMedu - TNUDP	4	53	350	Tenable
19	MGR Nagar Phase-I- TNUDP	4	17	113	Tenable
20	MGR Nagar Phase – II- TNUDP	4	17	44	Tenable
21	Rangampalayam Phase – I- TNUDP	4	46	75	Tenable
22	Rangampalayam Phase – II- TNUDP	4	46	47	Tenable
23	Rangampalayam Phase –III- TNUDP	4	46	93	Tenable
24	Rangampalayam Phase – IV- TNUDP	4	46	23	Tenable
25	Rangampalayam Phase – V- TNUDP	4	46	35	Tenable
	Total			**3303**	

2.4.3 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 90 slums have been enumerated under RAY scheme. The details of the slums are shown in Table. 2.7. Henceforth, statistical analysis presented in the report will reflect only the surveyed slums. Table 2.8 shows the number of wards and area of each zone of the Erode City.

Table 2.7 Zone and Ward details of Erode City

S.No.	Zones	Wards	Total No. of Slums with wards	Area in sq.km
1	Zone – I	1 to 15	19 (2,3,4,5,6,11,13,15)	33.08
2	Zone – II	16 to 30	13 (17,18,20,21,27,28,30)	21.54
3	Zone – III	31 to 45	23 (31,32,33,36,37,38,39,40,41,45)	27.00
4	Zone – IV	46 to 60	35 (46,48,49,50,51,52,54,55,56,57,58,60)	27.92
	TOTAL		90 (in 37 wards)	**109.54**

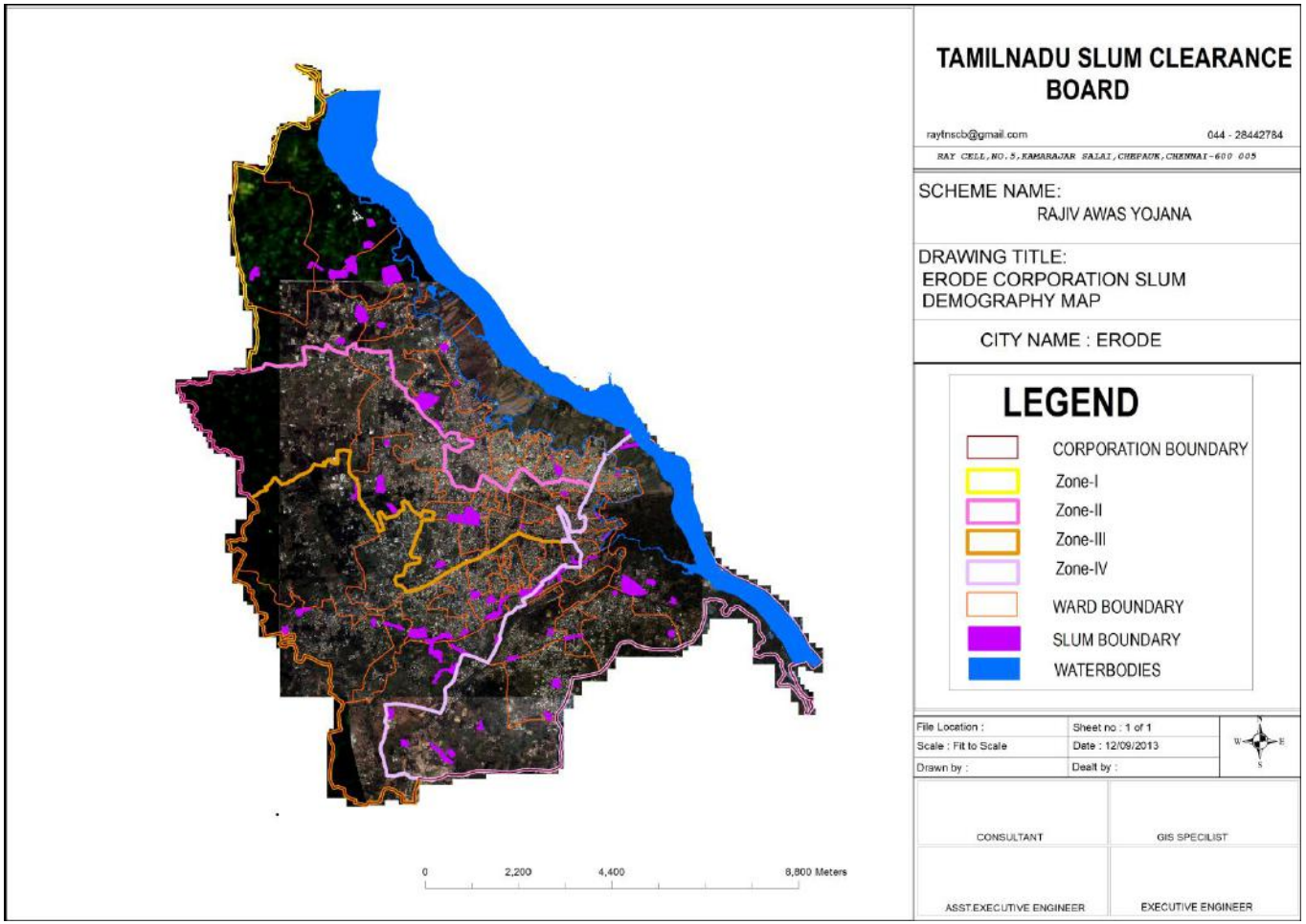


Fig. 2.2 Spatial distribution of slums on satellite imagery

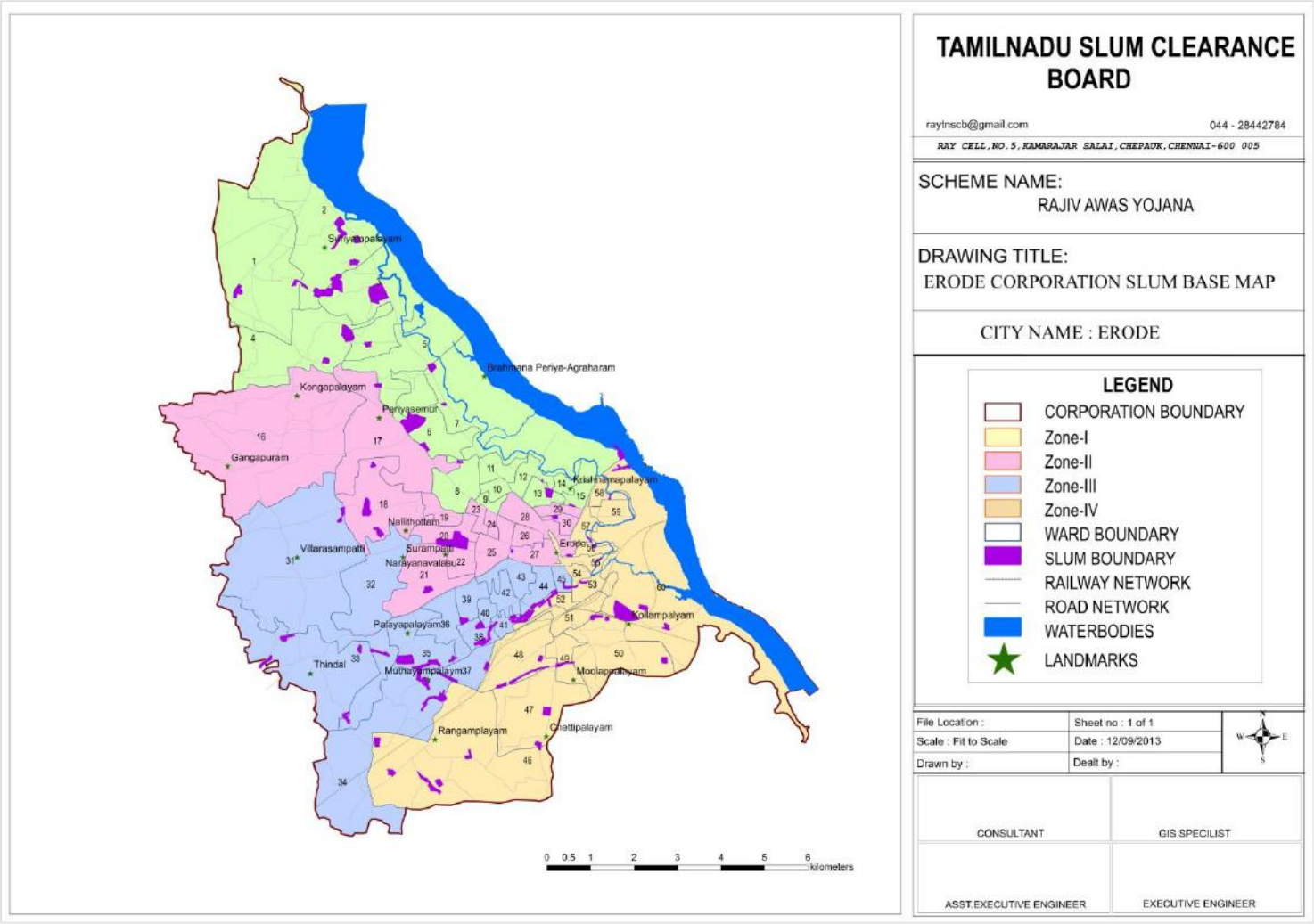


Fig. 2.3 Base Map with location of slums

Satellite map of Erode Corporation along with locations of slums is shown in Fig. 2.2.Base map of Erode Corporation with all important landmarks and the detailed demarcation of slums is shown in Fig. 2.3.

2.5 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 four 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 Tamil Nadu Slum Clearance Board after due training of trainers, training of survey personnel /canvassers 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 total station survey, 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 software (provided by Tamil Nadu Slum Clearance Board), collation and compilation of data, preparation of Slum-wise, City

and State Slum Survey Database and Baseline Reports. The MIS will also assist in developing a robust Slum and Slum Households Information System.

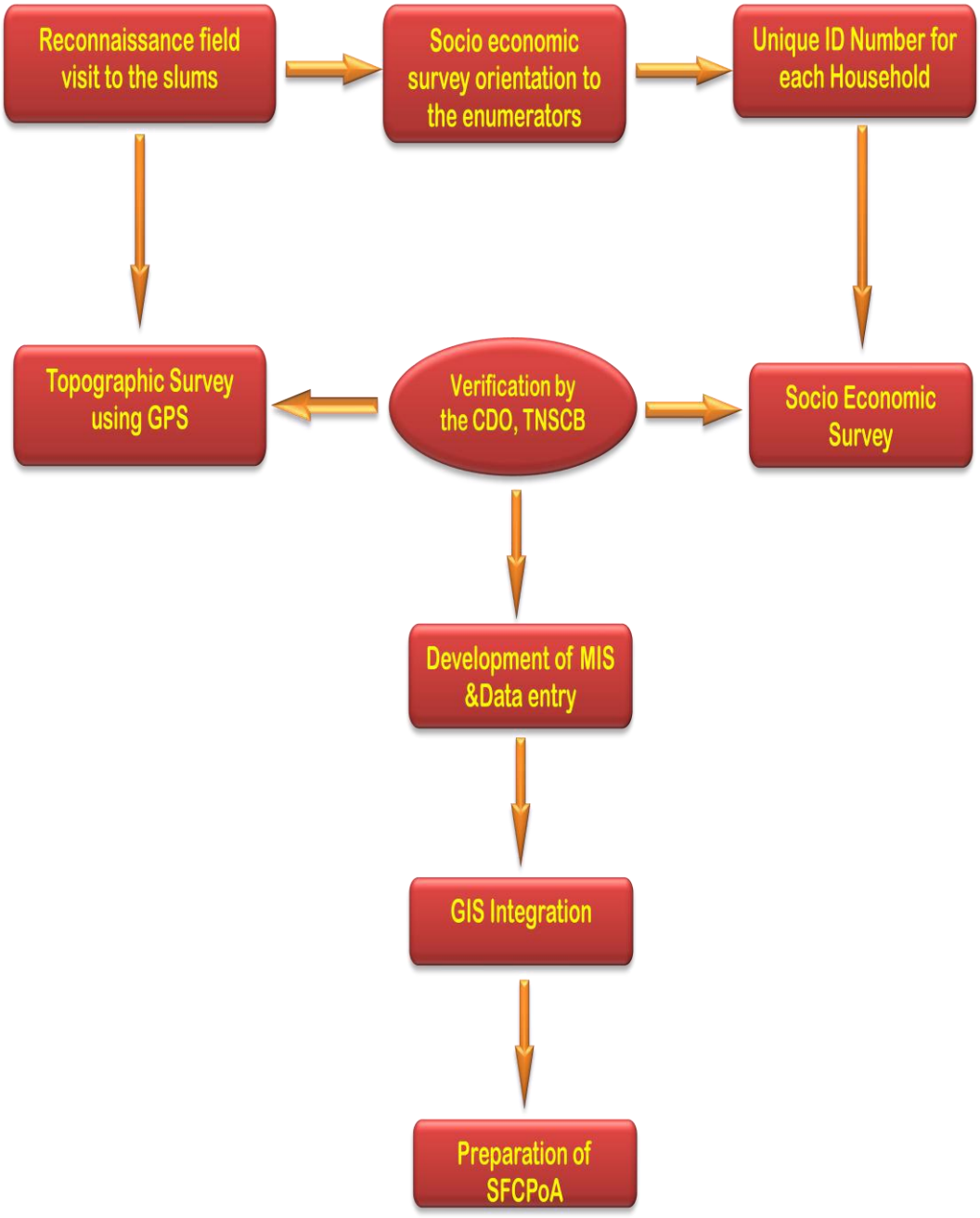


Fig 2.4 Methodology deployed for preparing SFCPoA

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. Methodology followed for enumeration is shown in Fig. 2.4.

First Slum Enumeration Block (EB) is demarcated based on the information provided by TNSCB officials as well as information obtained from Erode 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.

2.6 Socio Economic Survey

2.6.1 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, discussion were held with the local govt officials including the Mayor of Erode Corporation, Commissioner of Corporation, City Engineer, SE, EE and AEs of Slum Clearance Board, Councillors and other officials concerned, regarding the project and also to make aware of the requirements and support required for the project at various stages. 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.

(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.

Fig 2.5 Consultative Meeting with Mayor, Commissioner and Councillors

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 Erode consultative meeting with stake holders, public and other government official has been conducted in connection with Rajiv Awas Yojana. Fig 2.5 shows the consultative meeting which conducted in Erode Corporation with Mayor, Commissioner, Councillors and other government officials.

Erode city presents lots of scope for employment in various commercial and institutional sectors. Owing to rapid development in and around the city, the rural poor have been attracted, which has resulted in formation of slums. After detailed deliberation with corporation officials, community organizers, TNSCB officials, elected representative etc., list of slum for the project is finalized. Totally 90 slums have been identified for the enumeration purpose under RAY scheme. Table 2.8 lists the name of the slums in the four zones of Erode Corporation with number of households.

Table 2.8 List of Surveyed Slums in Erode Corporation

S.No	Ward No	Slum Code	Slum Name	Number of Household
Zone - I				
1	2	33 610 011 01 002 0001	Balan Nagar	102
2	2	33 610 011 01 002 0002	Mayapuram	166
3	2	33 610 011 01 002 0003	Neelikkaradu	65
4	2	33 610 011 01 002 0004	Perumalmalai	310
5	3	33 610 011 01 003 0005	CM Nagar	123
6	3	33 610 011 01 003 0006	Madeshwaran Nagar	127
7	3	33 610 011 01 003 0007	Suriyampalayam	489
8	3	33 610 011 01 003 0008	Veerapannadiyur	72
9	4	33 610 011 01 004 0009	Ambedkar Nagar	233
10	4	33 610 011 01 004 0010	Maravampalayam	319
11	4	33 610 011 01 004 0011	Sanarpalayam	152
12	5	33 610 011 01 005 0012	Bharathi Nagar	253
13	5	33 610 011 01 005 0013	Gnanapuram	102
14	5	33 610 011 01 005 0014	Kamaraj Nagar	247
15	6	33 610 011 01 006 0015	Gandhi Nagar	575
16	11	33 610 011 01 011 0016	Pithchaikkaranpallam	38

17	13	33 610 011 01 013 0017	Jayagopal Street	46
18	13	33 610 011 01 013 0018	Madavankadu Sinthan Nagar	16
19	15	33 610 011 01 015 0019	Krishnampalayam Colony	323
			Total No. of HHs in Zone - I	**3758**
			Zone - II	
20	17	33 610 011 02 017 0020	Jeeva Nagar	61
21	17	33 610 011 02 017 0021	MGR Nagar	18
22	17	33 610 011 02 017 0022	ThaneerPandalPalayam AD colony	37
23	18	33 610 011 02 018 0023	Adukkuparai	126
24	18	33 610 011 02 018 0024	MGR Colony (Panankuttai TNUDP)	63
25	18	33 610 011 02 018 0025	MuthuManikam Nagar	69
26	18	33 610 011 02 018 0026	SSP Nagar	326
27	20	33 610 011 02 020 0027	Indra Nagar (Narayana Valasu - TNUDP)	188
28	21	33 610 011 02 021 0028	KumalanKuttai	36
29	27	33 610 011 02 027 0029	Thiruvalluvar Kudusaigal	26
30	28	33 610 011 02 028 0030	Jinnah Maithanam	59
31	28	33 610 011 02 028 0031	Kavery Road	91
32	30	33 610 011 02 030 0032	Rajajipuram	99
			Total No. of HHs in Zone - II	**1199**
			Zone - III	
33	31	33 610 011 03 031 0033	Kamaraj Nagar	60
34	31	33 610 011 03 031 0034	Therkupallam	14
35	31	33 610 011 03 031 0035	Valliammai Nagar	78
36	33	33 610 011 03 033 0036	Karaparai	232
37	33	33 610 011 03 033 0037	Karaparaipudhu Colony	59
38	36	33 610 011 03 036 0038	SastriSalai	105
39	37	33 610 011 03 037 0039	Bharathipuram	231
40	37	33 610 011 03 037 0040	Muthampalayam Housing unit II, Gandhiji Street	75
41	37	33 610 011 03 037 0041	Ramamoorthy Nagar	102
42	37	33 610 011 03 037 0042	Ramamoorthy Stree t(Anaikkattu)	209
43	38	33 610 011 03 038 0043	Nethaji Nagar	94

44	38	33 610 011 03 038 0044	Palayapalayam (TNUDP)	20
45	39	33 610 011 03 039 0045	West Ambedkar Street	45
46	40	33 610 011 03 040 0046	East Ambethkar Street	75
47	41	33 610 011 03 041 0047	Anna Nagar	85
48	41	33 610 011 03 041 0048	Ashokapuri	209
49	41	33 610 011 03 041 0049	Deva Nagar	19
50	41	33 610 011 03 041 0050	Kallukuzhi	64
51	41	33 610 011 03 041 0051	Kulathupannai	75
52	41	33 610 011 03 041 0052	Santhankarukku	32
53	41	33 610 011 03 041 0053	Stony Bridge Huts	92
54	45	33 610 011 03 045 0054	Nethaji Nagar	68
55	45	33 610 011 03 045 0055	PalayaPoondurai Road	517
			Total No. of HHs in Zone - III	**2560**
			Zone - IV	
56	32	33 610 011 04 032 0090	Karattankadu	432
57	46	33 610 011 04 046 0056	Baladhandayutha Street	74
58	46	33 610 011 04 046 0057	Barathipalayam	22
59	46	33 610 011 04 046 0058	Kallavarai	34
60	46	33 610 011 04 046 0059	Kalyanasundram Street	68
61	46	33 610 011 04 046 0060	Narikuravar Colony	54
62	46	33 610 011 04 046 0061	Petrol bunk Anna Nagar	74
63	46	33 610 011 04 046 0062	Ragupathy Naikkanpalayam AD Colony	33
64	46	33 610 011 04 046 0063	Rangampalayam AD Colony	20
65	46	33 610 011 04 046 0064	Sangankurai	83
66	46	33 610 011 04 046 0065	Sathya Nagar	257
67	46	33 610 011 04 046 0066	Senapathypalayam	72
68	46	33 610 011 04 046 0067	Subramania Nagar	102
69	46	33 610 011 04 046 0068	Sudhandhirapuram	74
70	46	33 610 011 04 046 0069	Vaikalmedu Bharathi Nagar	94
71	46	33 610 011 04 046 0070	Vendipalayam Lakhmi Nagar	101
72	48	33 610 011 04 048 0071	Lakhmi Nagar (Sastrinagar,Gandhinagar)	23
73	48	33 610 011 04 048 0072	Shastri Nagar	251

74	49	33 610 011 04 049 0073	Ceylone Colony	107
75	49	33 610 011 04 049 0074	J J Nagar	18
76	49	33 610 011 04 049 0075	Pudhukalli Valasu	32
77	49	33 610 011 04 049 0076	Sadayampalayam AD Colony	72
78	50	33 610 011 04 050 0077	Kattabomman Street	92
79	51	33 610 011 04 051 0078	Manalmedu Good Shed Huts	545
80	52	33 610 011 04 052 0079	Eswaran Veethi	24
81	52	33 610 011 04 052 0080	Kalaiankadu	82
82	52	33 610 011 04 052 0081.	Poyerikarai	62
83	54	33 610 011 04 054 0082	Kuyavanthittu	61
84	54	33 610 011 04 054 0083	Nataraja Theatre Slum	19
85	55	33 610 011 04 055 0084	Kuppipalayamvaikkal Road	10
86	56	33 610 011 04 056 0085	AyyanarappanKoilStreet	24
87	57	33 610 011 04 057 0086	Mosikeeranur Veethi	57
88	58	33 610 011 04 058 0087	Kuyilanthoppu	20
89	60	33 610 011 04 060 0088	Kaverikarai	60
90	60	33 610 011 04 060 0089	Loganathapuram	73
			Total No. of HHs in Zone - IV	**3226**
			Grand Total	**10743**

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, Chennai 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 based on the instruction of TNSCB official, a 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 location of slums is given in the Table 2.9. Fig 2.6 shows the percentage of distribution of slums in city with respect to physical location.

Table 2.9 Distribution of Slums with reference to Physical Location

S.No.	Physical Location of Slums	Number of slums
I. Objectionable Locations		
1	Along Nallah	29
2	Along other drains	03
3	Along Railway lines / Railway land	02
4	Along Major / Minor Transport Alignment	01
5	long the banks of River / Water body	01
6	On River Bed / Water body bed	--
7	Others (Hazardous or Objectionable)	--
	Total	36
II. Non Objectionable		
8	Others (Non Hazardous or Non Objectionable)	54
	Total	90

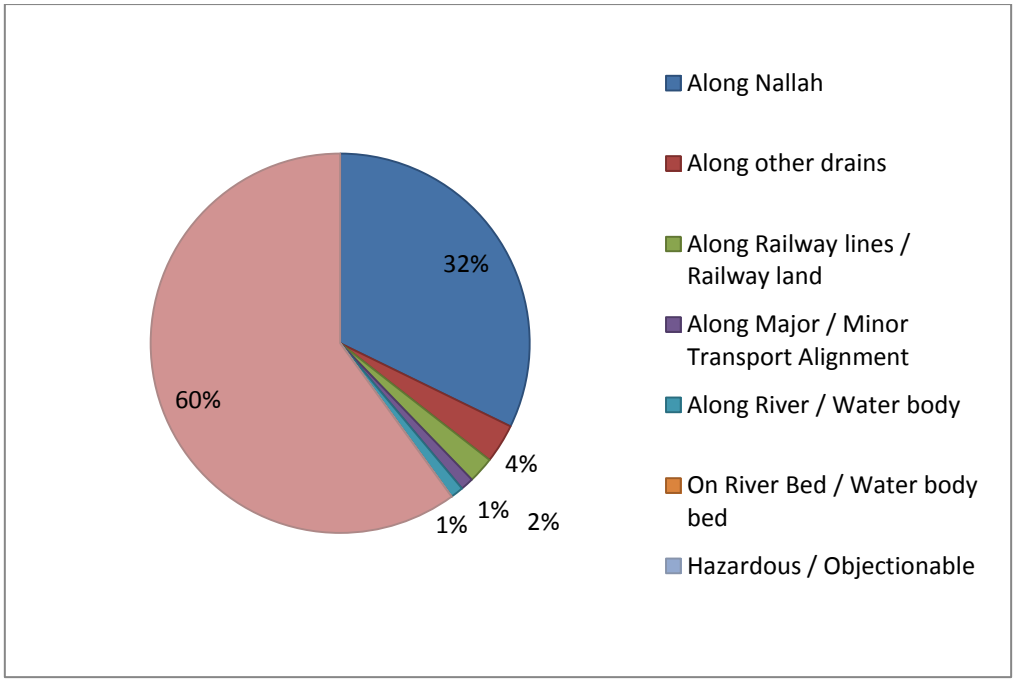


Fig. 2.6. Percentage of slums with reference to physical location

2.7 Categorization of Slums based on Tenability Analysis.

All identified slums need to be categorised as tenable, semi-tenable, or untenable based on the location, in order to develop the suitable development plans. 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.

2.7.1 Tenable slum

The slum is called as tenable when it is

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

2.7.2 Untenable slum

The slums are called as untenable when they are 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 or vulnerable) including right under the high tension lines

2.7.3 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 categorized into Tenable and Non-Tenable. Table 2.10 provides the criteria used for evaluating the tenability of slums in Erode City. Fig. 2.7 shows the tenability assessment of the slums in the Erode Corporation.

Table 2.10 Criteria for Tenability Assessment

Parameter	Definition
A. Flooding or Drainage Corridors	
Flood plain with risk of floods	Yes/no whether in flood 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
B. 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
C. 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

Tenability analysis for the Erode Corporation slums has been carried out as per the standard procedure. Fig. 2.7 shows the tenable and untenable slums in base map, 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.

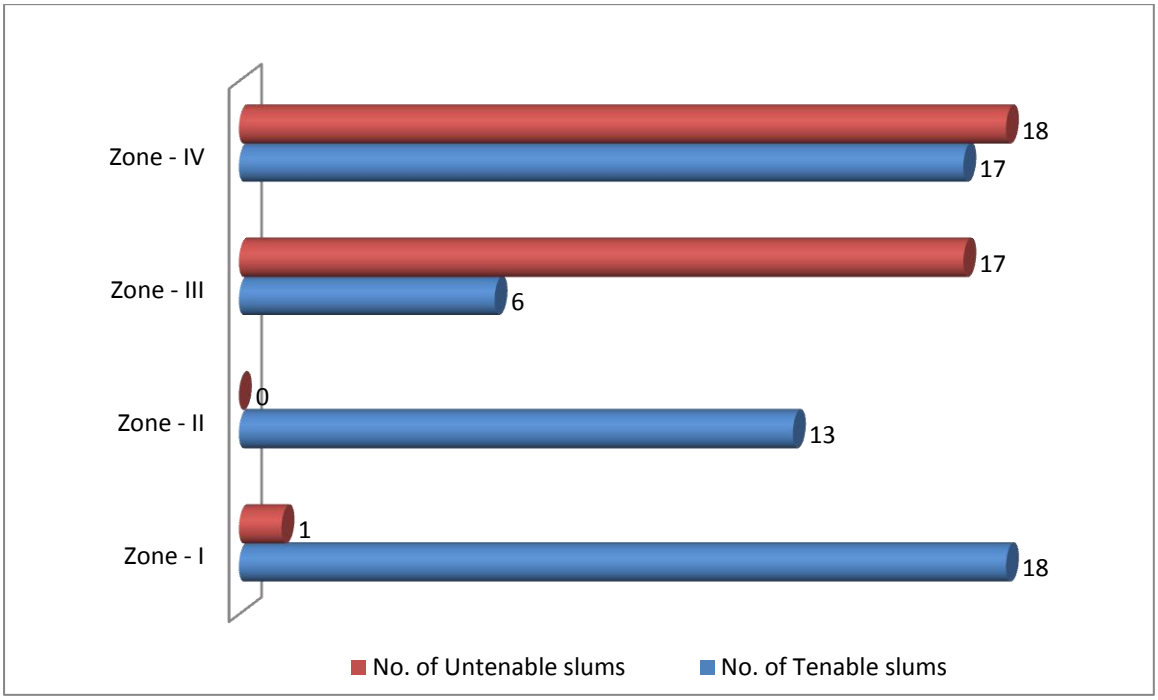


Fig. 2.7 Tenability of slums in Erode City

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 2.11 lists the zone wise number of slums and households with respect to tenable and untenable. Fig.2.8 represents the tenability status of the slums.

Table 2.11 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	Zone - I	18	3720	1	38	19	3758
2	Zone - II	13	1199	0	00	13	1199
3	Zone - III	6	380	17	2180	23	2560
4	Zone - IV	17	1504	18	1722	35	3226
	Total	54	**6803**	36	**3940**	**90**	**10743**

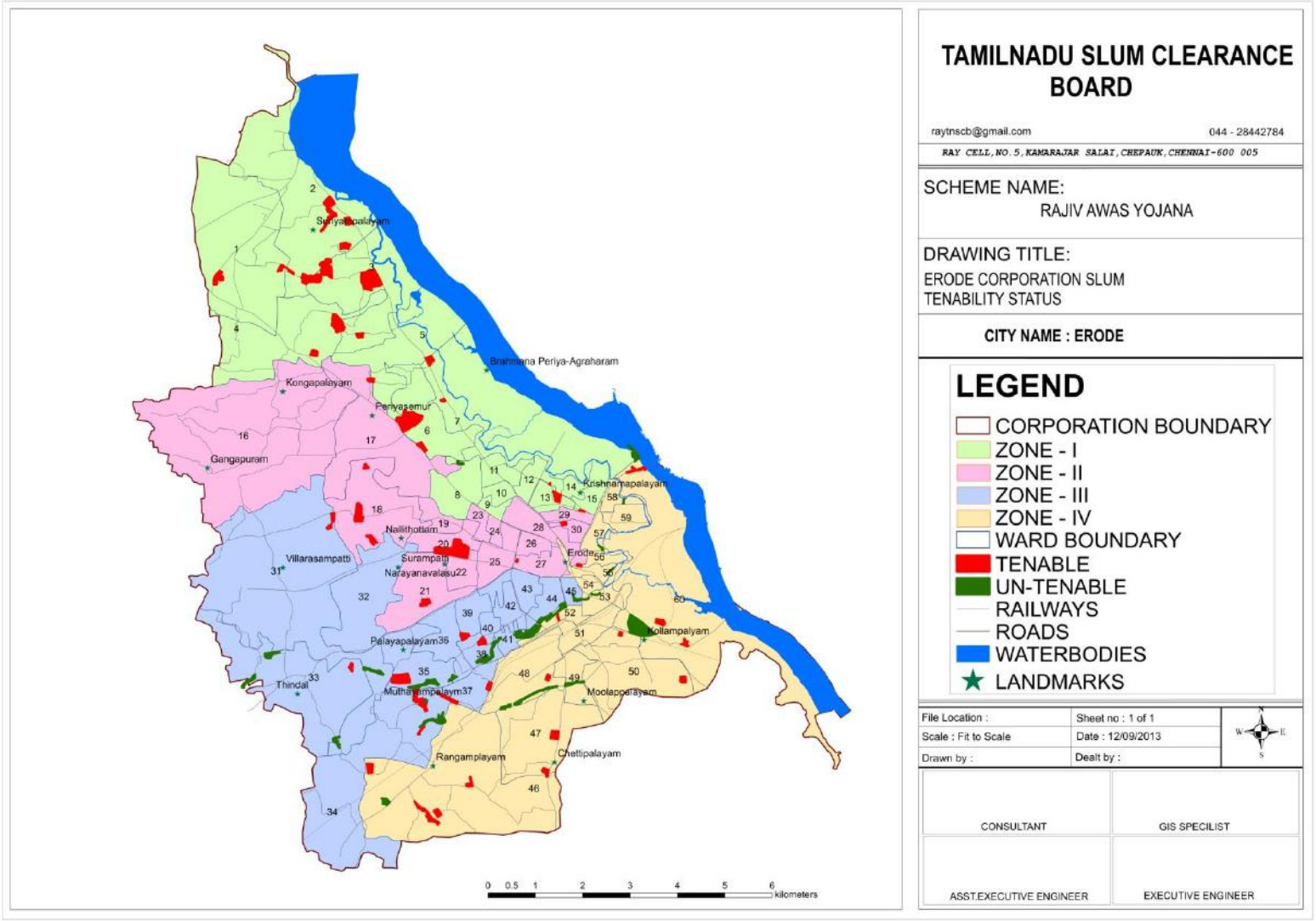


Fig.2.8 Map of Tenability Status of Slums in Erode Corporation

2.8 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 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 Erode corporation, 54 slums are falling in secured tenure. Fig. 2.9 is showing the tenure of Erode corporation slums.

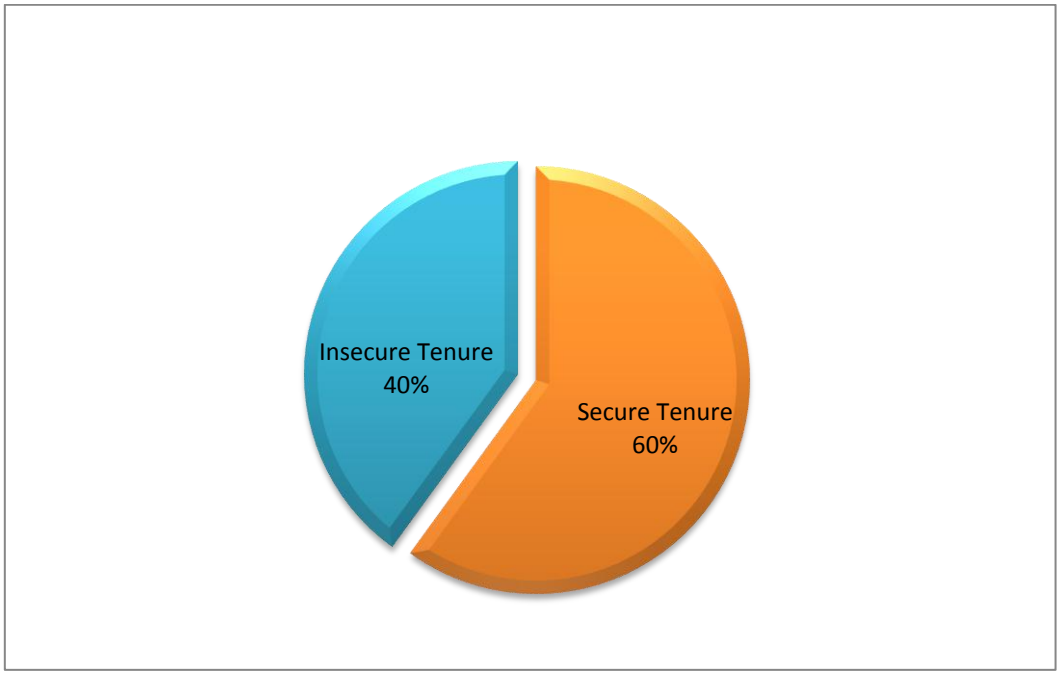


Fig. 2.9 Tenure of Erode slums

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 deterioration of 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. 2.9 represents the tenure status of slums in corporation base map.

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. The facilities available in the Erode corporation slums are shown in Fig. 2.10 to Fig. 2.15. The detail analysis of present status of slums is discussed in the chapter 3.

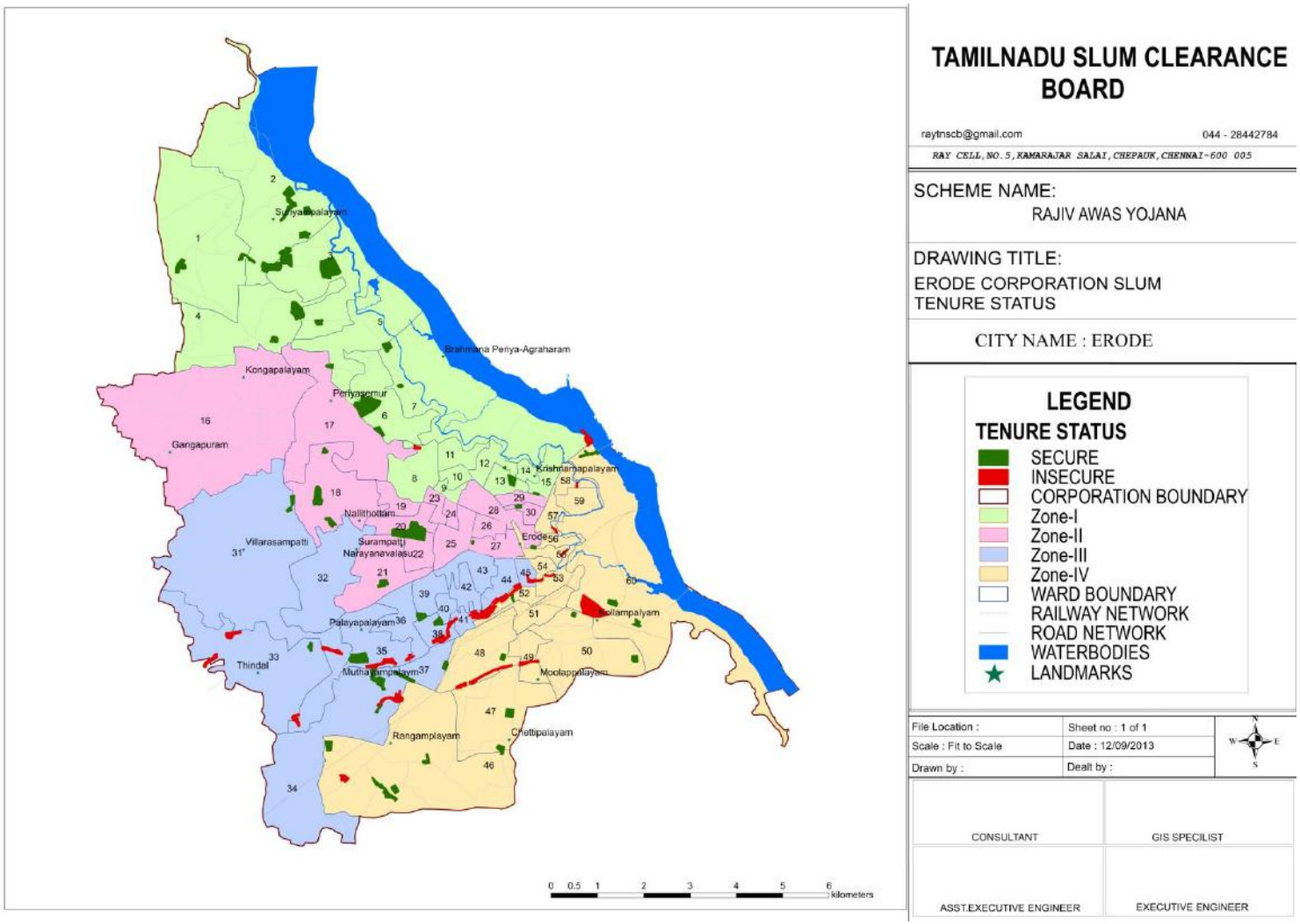


Fig.2.10 Map of Tenure Status of Slums in Erode Corporation

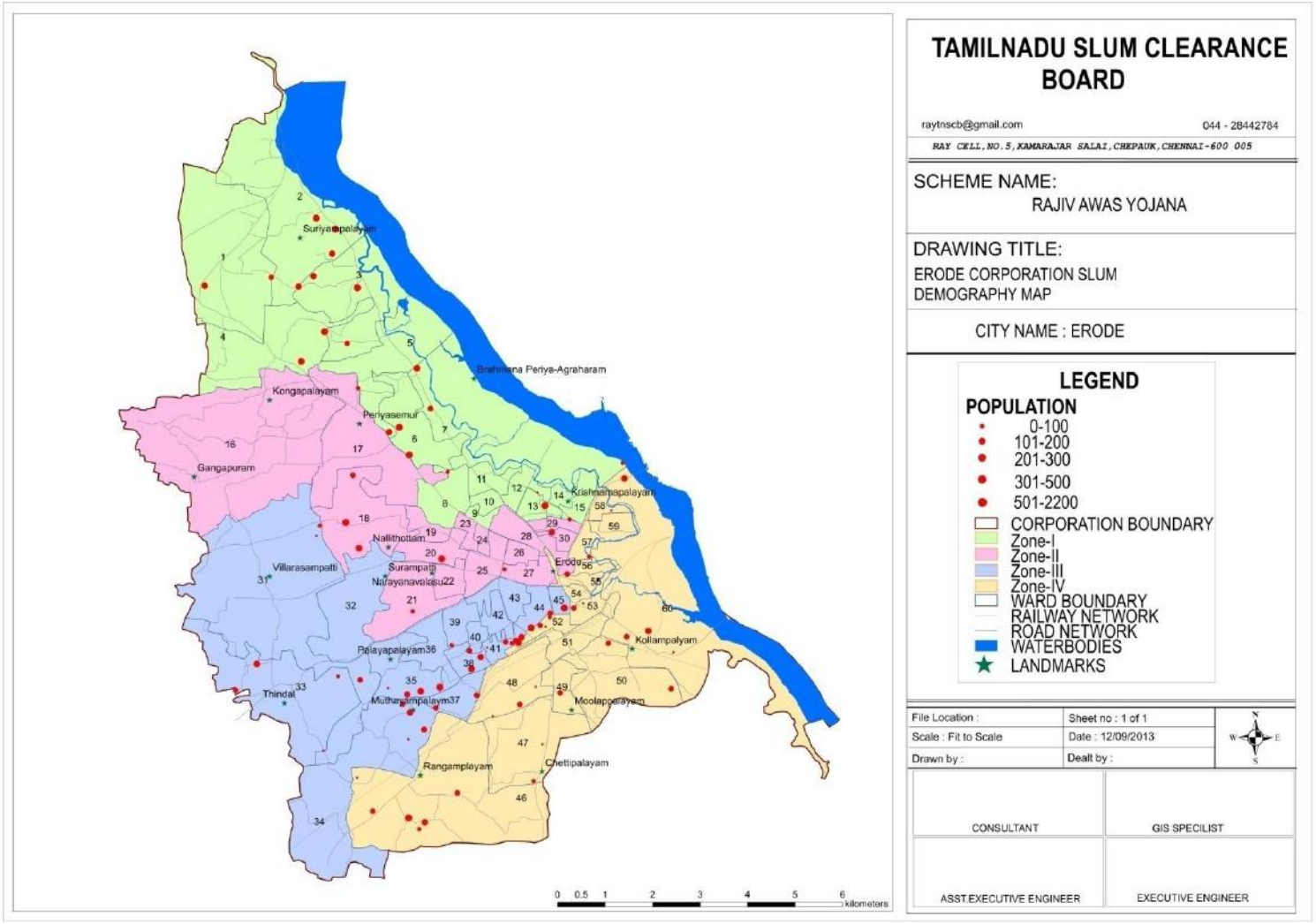


Fig.2.11. Demography of Slums in Erode Corporation

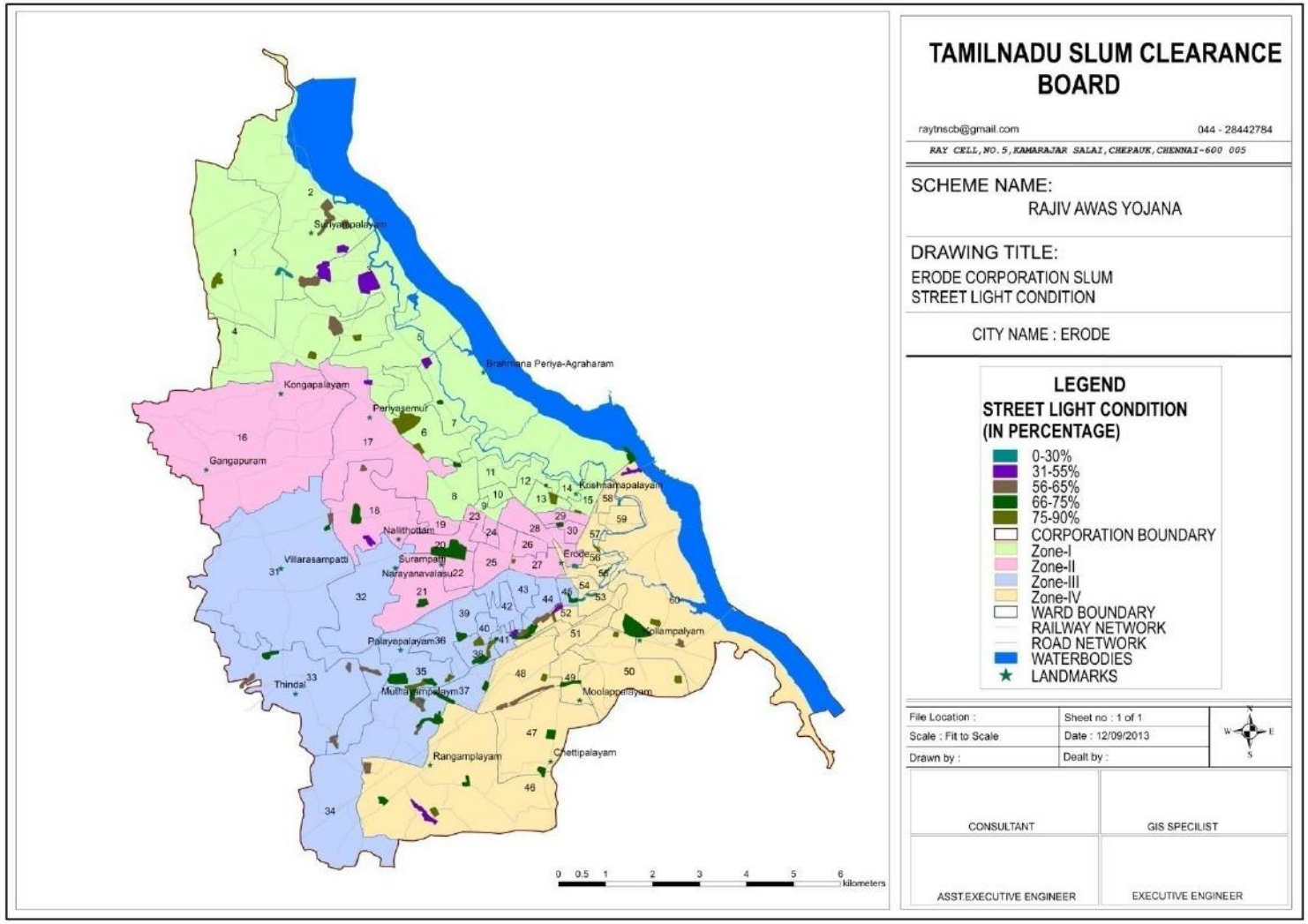


Fig.2.12. Map representing percentage of availability of Street lights in slums

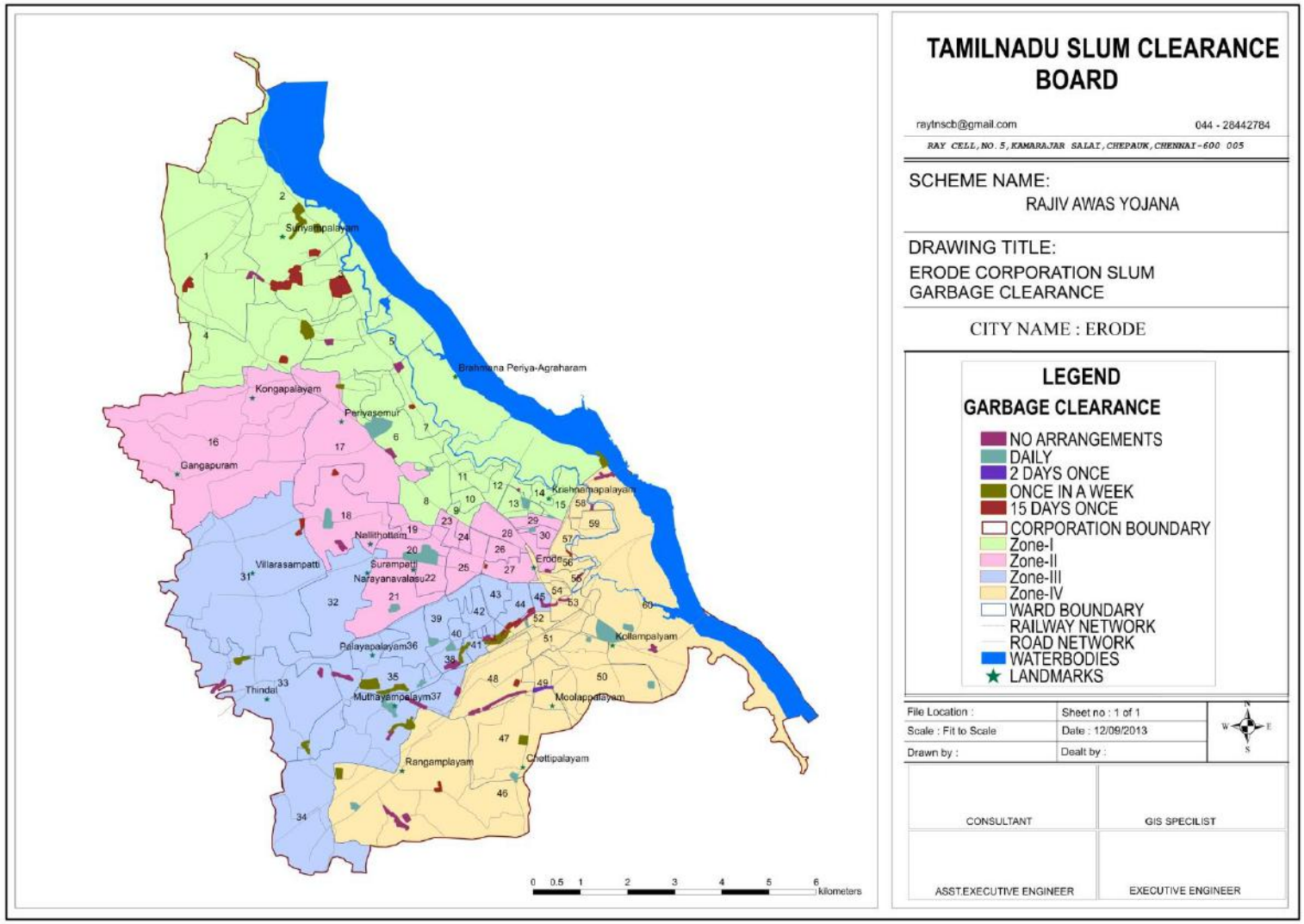


Fig.2.13. Map representing Garbage clearance frequency in slums

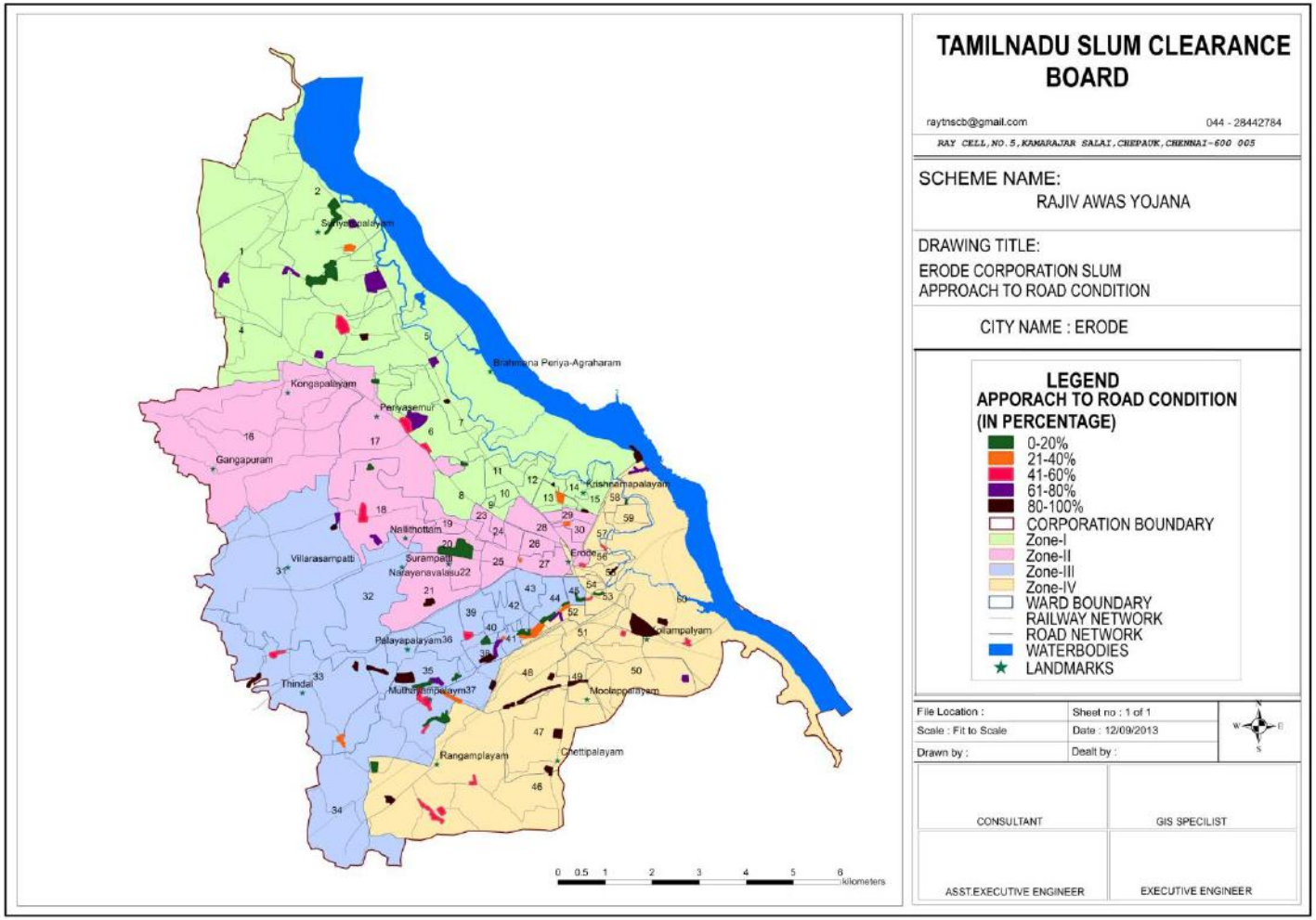


Fig.2.14. Map representing approach road condition in slums

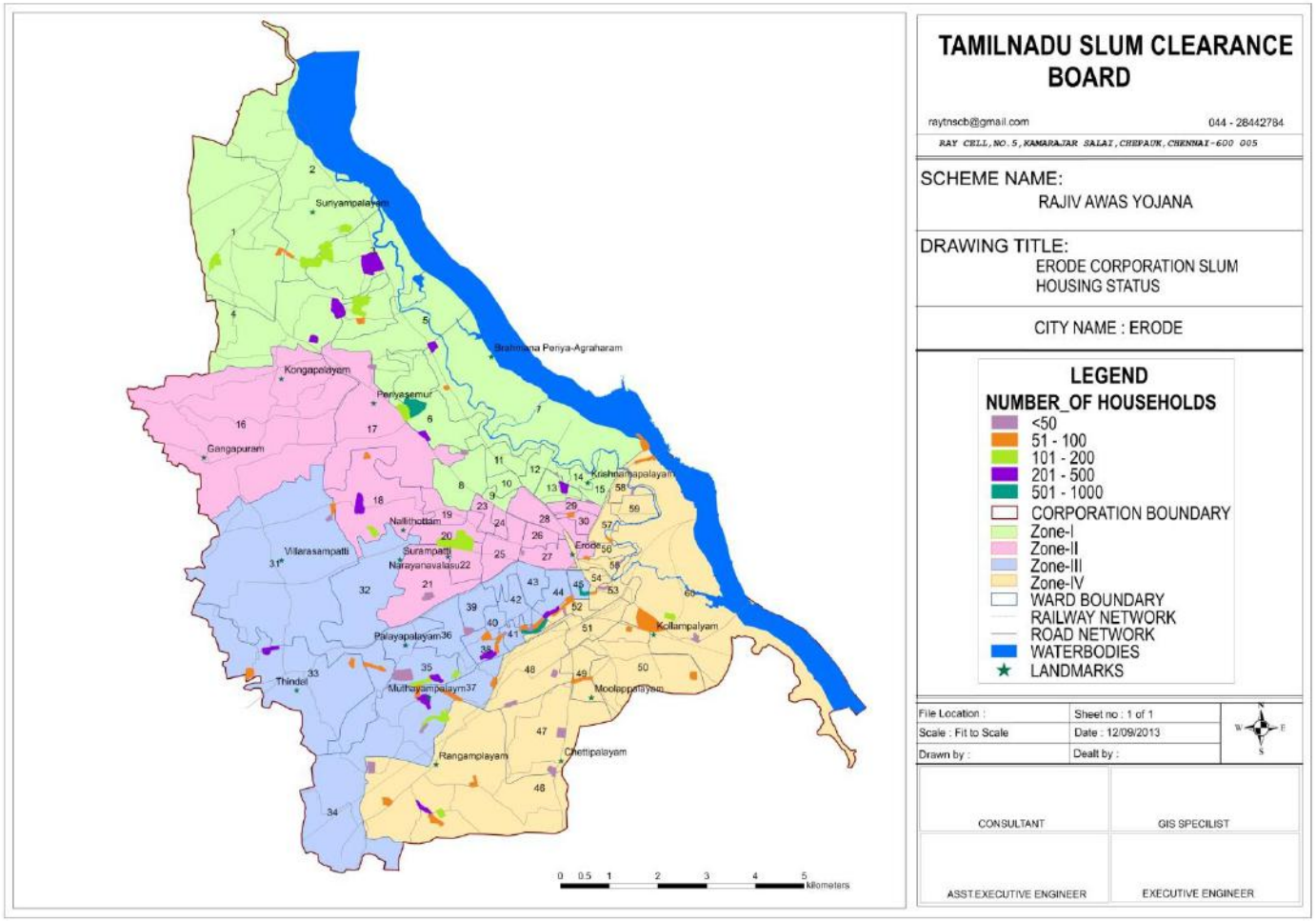


Fig.2.15. Availability of water supply connection for individual household in slums

CHAPTER 3 ASSESSMENT OF PRESENT STATUS OF SLUMS

3.1 Introduction

As discussed in the earlier chapters, socio economic survey was conducted in the ErodeCorporationunder RAY scheme in 90 slums. To prioritize the slums for housing / infrastructure development, a detailed analysis was carried out with the help of surveyed data, so that priority will be given to the poorest and the most deprived slums for upgrading or resettlement.

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 Erode Corporation are analysed by the three interrelated parameters namely (i) Poverty, (ii) Vulnerability of housing and (ii) other Infrastructure deficiency. During the field survey the enumerators collected socio-economic data of each slum dweller familyand 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.

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

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 (RAY Guidelines). As per the Tenth Five – Year Plan, BPL for urban area is calculated 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 declares the threshold for the poverty line every year based on income of person per month.

It was found that, in erode corporation the slum households 2595 out of 10743 (24.16 %) are living Below Poverty Line. The details of BPL households for erode city corporation are given in Table 3.1and Fig 3.1. It can be seen from this table that among the four zones, the third zone is having maximum of 28.8 % of BPL households.

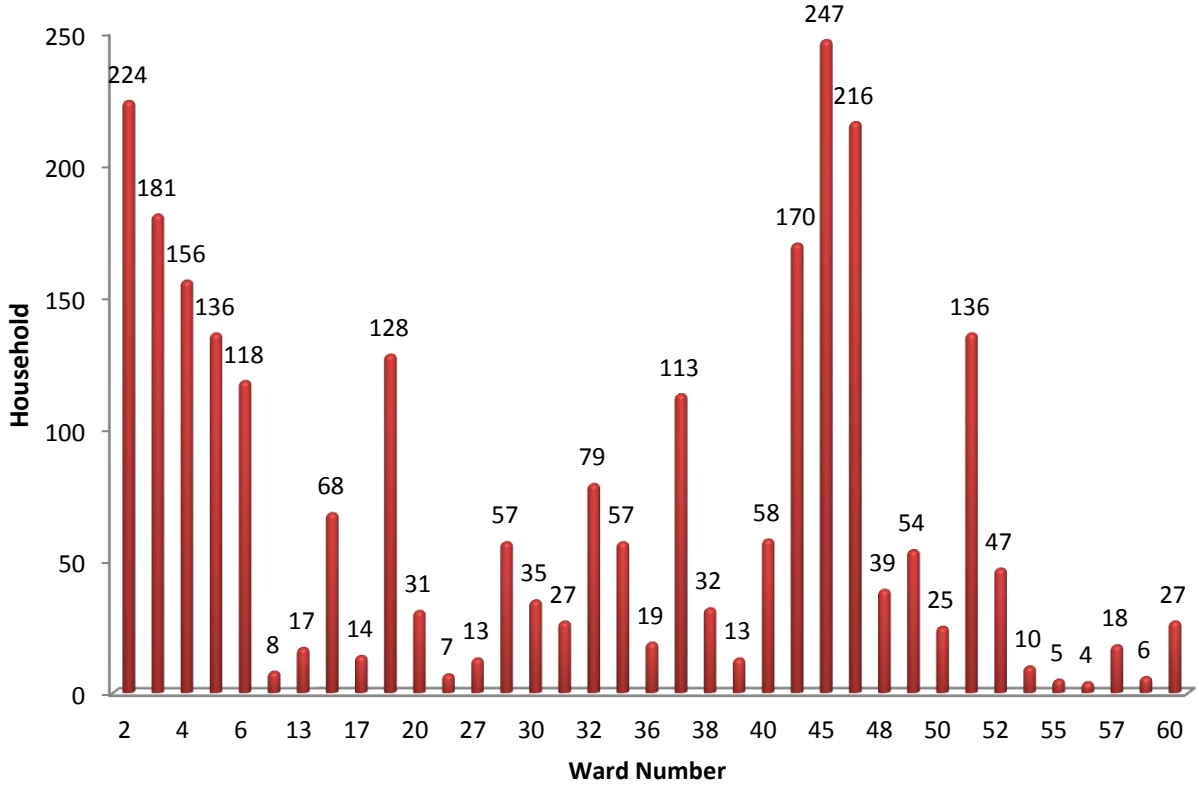


Fig 3.1:Ward wise BPL House Holds details of Erode Corporation

Table 3.1 Percentage of BPL households of Erode Corporation

S.No.	Zone	Total No. of Households	No. of BPL Households	% of BPL Households
1	Zone - I	3758	908	24.16
2	Zone - II	1199	285	23.77
3	Zone - III	2560	736	28.75
4	Zone - IV	3226	666	20.64
	Total	**10743**	**2595**	**24.16**

In the slum wise data, the percentage of BPL Households varies from 0% to 77 %. Palayapalayam Odai Medu slum is having the lowest percentage of BPL household and East Ambedkar Street is having the highest percentage (77 %) of BPL household. Both slums are located in the Zone – III region. 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
1st	From 0.00 % to 26.00 %	1
2nd	From 27.00 % to 52.00 %	2
3rd	From 53.00 % to 77.00 %	3

3.2.2 SC/ST Population Analysis

In India, Scheduled Caste (SC) and Scheduled Tribe (ST) caste are most socio economically backward community. In general, Scheduled caste / Scheduled tribe population is more in slum areas than in other areas. In Erode corporation, totally four slums are having 100% of SC/ST population, two slums viz. Sudhandhirapuram and Bharathipalayam in zone 4, MadavankaduSinthan Nagar in Zone 1

and Thaneer Pandal Palayam Adi Dravidar Colony in Zone 2. The zone wise distribution household under major caste wise classification are listed in Table 3.3

Table 3.3 Zone wise community distribution

S. No.	Zone	Total House holds	Households belong to					SC/ST	% of SC/ST
			OC	BC	MBC	SC	ST		
1	Zone - I	3758	59	479	140	2576	25	2601	69.21
2	Zone - II	1199	62	395	210	504	2	506	42.20
3	Zone - III	2560	104	831	324	1396	18	1414	55.23
4	Zone - IV	3226	176	781	468	2175	18	2193	67.98
	Total	**10743**	**401**	**2486**	**1142**	**6651**	**63**	**6714**	**62.50**

According to the survey, the SC/ST population have found in all slums except two namely Kaveri Road and Kamaraji Nagar. Zone I and Zone IV are having highest population of SC/ST. It indicates that in spite of government welfare schemes, still the SC/ST people are living below BPL. The scoring of SC/ ST population is arrived which is shown in Table 3.4and Fig 3.2.

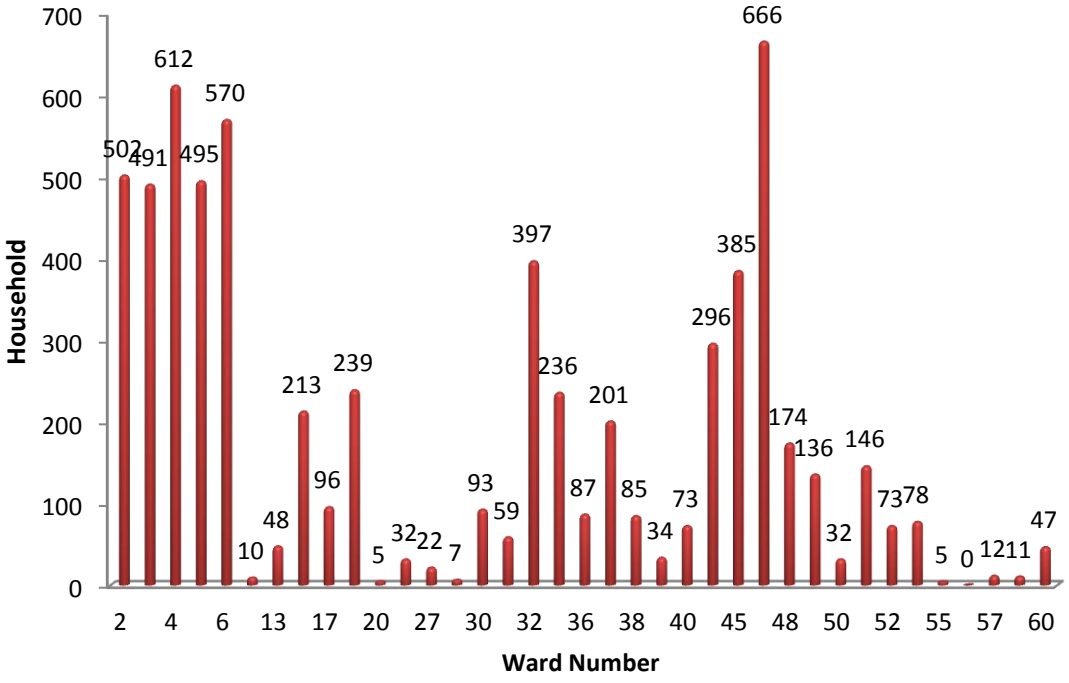


Fig. 3.2.Ward wise SC/ST population details of Erode Corporation

Table 3.4 SC /ST Classification

Range	SC/ST	Score
1st	From 0 % to 32 %	1
2nd	From 33 % to 66 %	2
3rd	From 67 % to 100 %	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

Based on the housing structure of the slums are 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 28% in Zone – I of the City.

Table3.5. Zone wise distribution of housing structure

S.No.	Zone	Total Households	Pucca	Semi Pucca	Katcha	Semi Pucca & Katcha	% of Households for Intervention
1	Zone - I	3758	745	2414	599	3013	80.18
2	Zone - II	1199	223	777	199	976	81.40
3	Zone - III	2560	292	1997	271	2268	88.59
4	Zone - IV	3226	362	2440	424	2864	88.78
	Total	**10743**	**1622**	**7628**	**1493**	**9121***	**84.90**

The zone wise distribution of housing status is shown in percentage in the Fig. 3.3

*Total number households to be intervened 9507 which includes 386 households from untenable slums

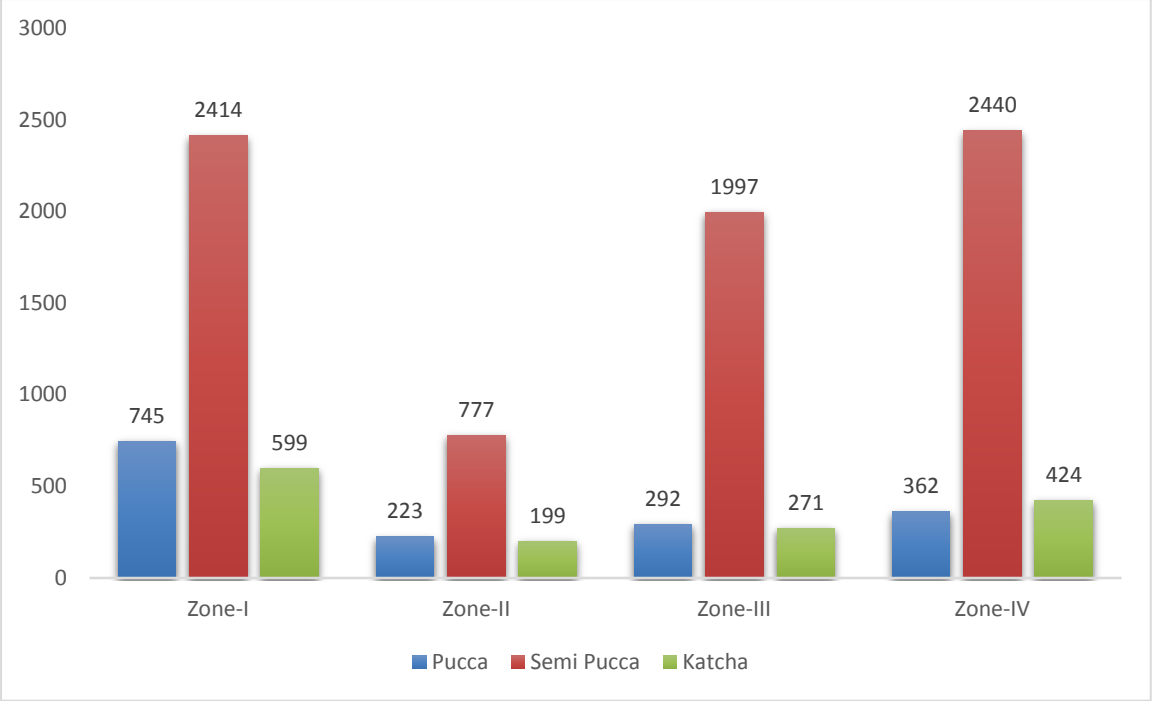


Fig. 3.3.Housing status in Erode Corporation slums

It can be seen from Table 3.5 that majority of the slum dwellers lived in semi pucca house irrespective of the Zone. Four slums are having 100 % semi pucca and katcha housing structure, two in Zone – II (Jinnah Maithanam and Thaneer Pandalpalayam AD Colony) and two in Zone - IV(Barathipalayam and Rangampalayam AD colony)The percentage of semi pucca and katcha is varying from 33 % to 100%. The ranges of the housing status are given in the Table 3.6.

Table 3.6. Housing status classification

Range	The percentage of semi pucca and katcha HH	Score
1st	From 33 % to 54 %	1
2nd	From 55 % to 77 %	2
3rd	From 78 % to 100 %	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 4 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	Vulnerability Index
1st	From 4 to 5	1
2nd	From 6 to 7	2
3rd	From 8 to 9	3

3.3 INFRASTRUCTURE DEFICIENCY ANALYSIS

The most needed basic facility for the urban poor is housing. Next to the housing, the essential infrastructure services and other related civic amenities like 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 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

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 range for 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.

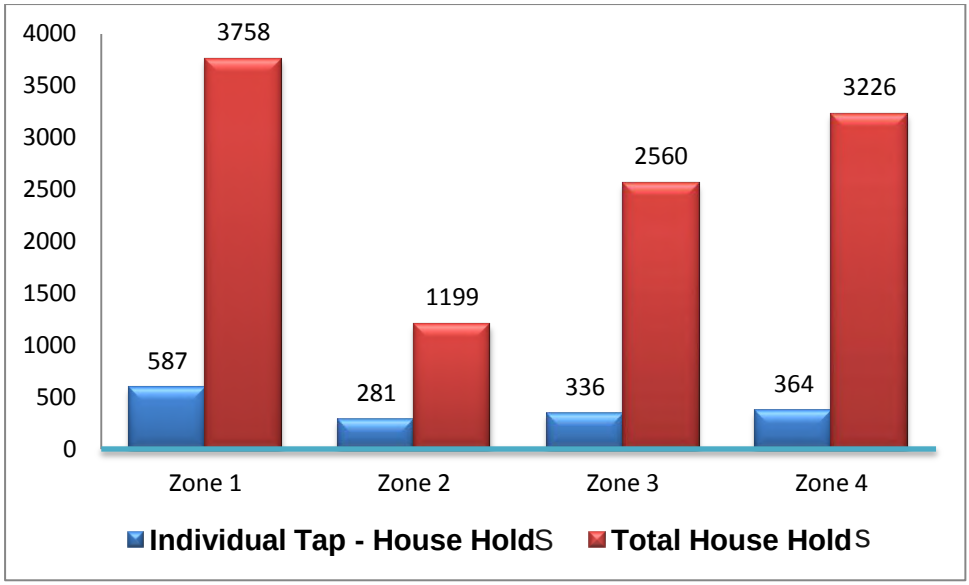


Fig.3.4. Zone wise number of Households with individual water tap connection

Access to water supply is an important priority of slum dwellers. It is observed from the socio economic survey data that overall around 15 % of slum households are having individual water supply facility in Erode. There is a highest demand for the water supply connection in the Zone - IV, only 11 % of households are having individual water connection. The zone wise status of individual water supply connection is shown in the Fig. 3.4.The percentage of households not covered with individual water supply connection is varying from 32 % 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
1st	From 32 % to 44 %	1
2nd	From 45 % to 58 %	2
3rd	From 59 % to 72 %	3
4th	From 73 % to 86 %	4
5th	From 87 % 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. Sanitary facilities in Erode Corporation slums are woefully inadequate.

Table 3.9. Zone wise distribution of percentage 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	Zone - I	3758	3171	84.4
2	Zone - II	1199	918	76.57
3	Zone - III	2560	2224	86.9
4	Zone - IV	3226	2862	88.72
	Total	**10743**	**9175**	**85.40**

Table3.9 indicates that overall 85.4 % of households are not having the individual toilet facility in the Erode corporation slums. The percentage of households not covered with individual toilet for slums is varying from 36 % 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 36 % to 48 %	1
2	From 49 % to 61 %	2
3	From 62 % to 74 %	3
4	From 75 % to 87 %	4
5	From 88 % 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. The drainage facility in Erode slum area varies from the lowest value of 0 % to the highest value of 100%. The range difference is 20 %. The classification of the drainage facility is given in Table 3.11.

Table: 3.11 Ranges of Non availability of Drainage facility

Range	Drainage status classification	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

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 Erode Corporation the corporation made facility to collect the solid waste from the slums in different frequency namely daily, alternate days, once in fortnight. Totally 18 slums are not having the facility to dispose the solid waste. Table 3.12 lists the facility of solid waste disposal.

Table: 3.12 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

3.3.5. Street Light Facility

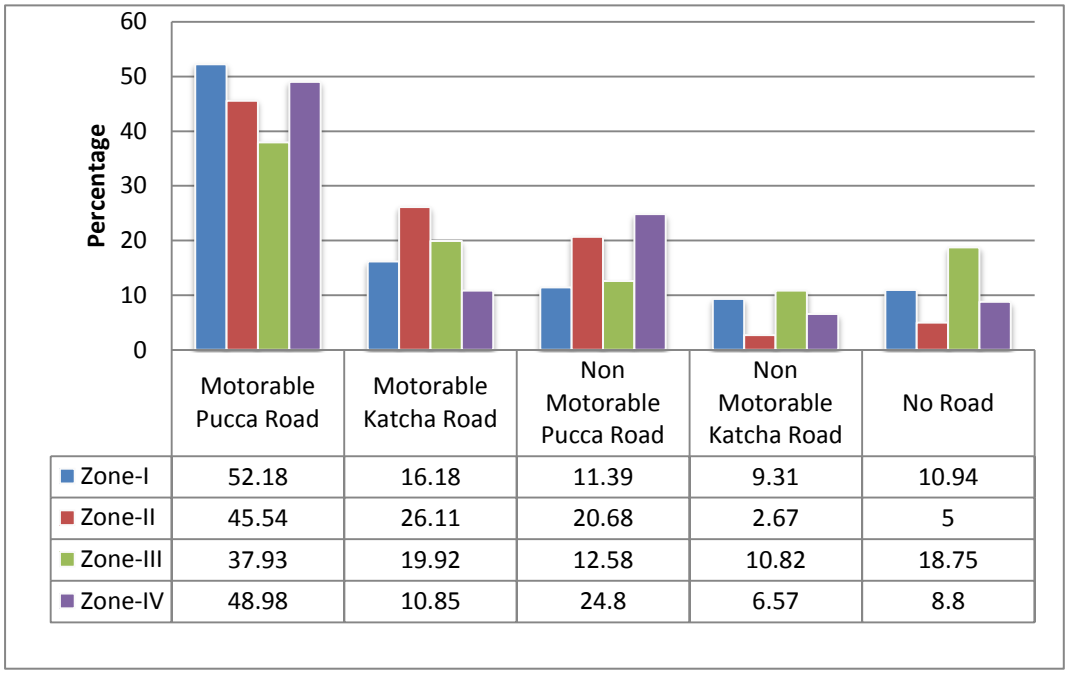
In Erode Corporation, the street Light facility varies from 0% to 90 %. The range varies with the value of 18 %. The range for the street light facility is given in Table 3.13.

Table: 3.13 Ranges of Street Light Deficit

Range	Street Light Coverage Classification	Score
1	From 0 % 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

3.3.6. Road facility

In Erode 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 motrable katcha is 37% and 16% respectively which is shown in Fig 3.5



	Motorable Pucca Road	Motorable Katcha Road	Non Motorable Pucca Road	Non Motorable Katcha Road	No Road
Zone-I	52.18	16.18	11.39	9.31	10.94
Zone-II	45.54	26.11	20.68	2.67	5
Zone-III	37.93	19.92	12.58	10.82	18.75
Zone-IV	48.98	10.85	24.8	6.57	8.8

Fig.3.5. 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 have been arrived based on the above six criteria. The infrastructure deficiency scores are varying from 11 to 29 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	Infrastructure Index
1st	From 11 to 15	1
2nd	From 16 to 22	2
3rd	From 23 to 29	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. 3.6). Based on the traversal, the facilities in the slums are observed. Slums with 3x3 scoring need immediate attention for the lack of facilities.

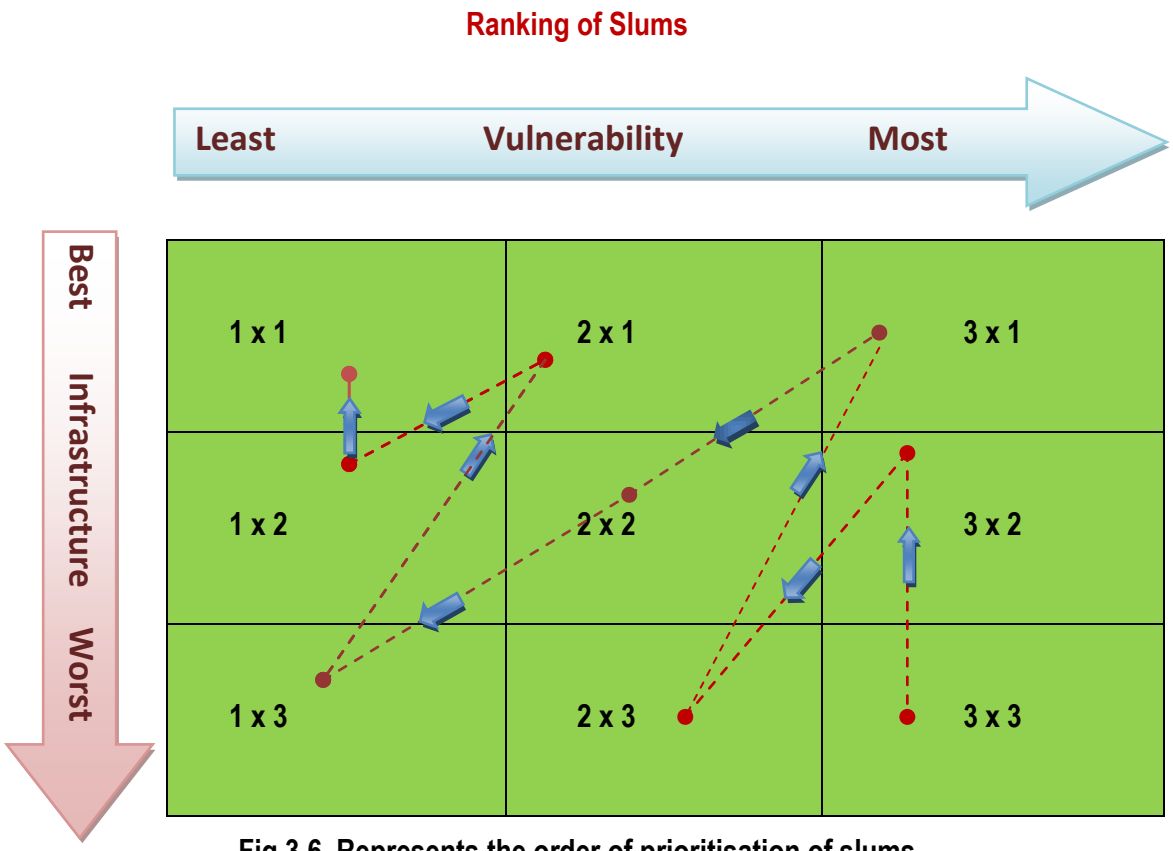


Fig.3.6. Represents the order of prioritisation of slums

Table 3.16. Deficiency Matrix for Tenable slums

Infrastructure \ Vulnerability			
	1x1 (Nil)	2x1 (09 Slums)	3x1 (01 Slum)
	1x2 (07 Slums)	2x2 (17 Slums)	3x2 (04 Slums)
	1x3 (02Slums)	2x3 (13 Slums)	3x3 (01 Slum)

Based on the tenability analysis, it is estimated that the total number of tenable and untenable slums in Erode Corporation are 54 and 36 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

1x1	2x1	3x1
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 (9 Slums)	An immediate care is needs to reduce the vulnerability index by providing in house training to the slum dwellers to improve theirlivelihood. (1 Slum)
1x2	**2x2**	**3x2**
Moderate attention needs to be given on infrastructure to provide access to all amenities, similar to the urban people. (7 Slums)	Immediate attention needs to be given tofacilitate the infrastructure service to the slum and livelihood of the slum dwellers. (17 Slums)	Special attention is needed to develop the status of the slum dwellers by providing skill development training to enhance themfor their betterment and also an immediate attention needed for improvement of the infrastructure of the slum. (4Slums)
1x3	**2x3**	**3x3**
An immediate measures needs to be taken to reduce the infrastructure deficiency by providing basic amenities to the slum dwellers. (2 Slums)	Special attention is needed to provide infrastructure facilities for better environment and care to be taken for the livelihood improvement through better employment. (13 Slums)	An immediate attention is required to improve the infrastructure as well aslivelihood condition. (1 Slum)

Totally 36 slums are falling in the untenable category. The developed deficiency matrix for untenable slums with priority ranking is shown in Table 3.18. Fig. 3.7 represents the location of slums with deficiency matrix analysis.

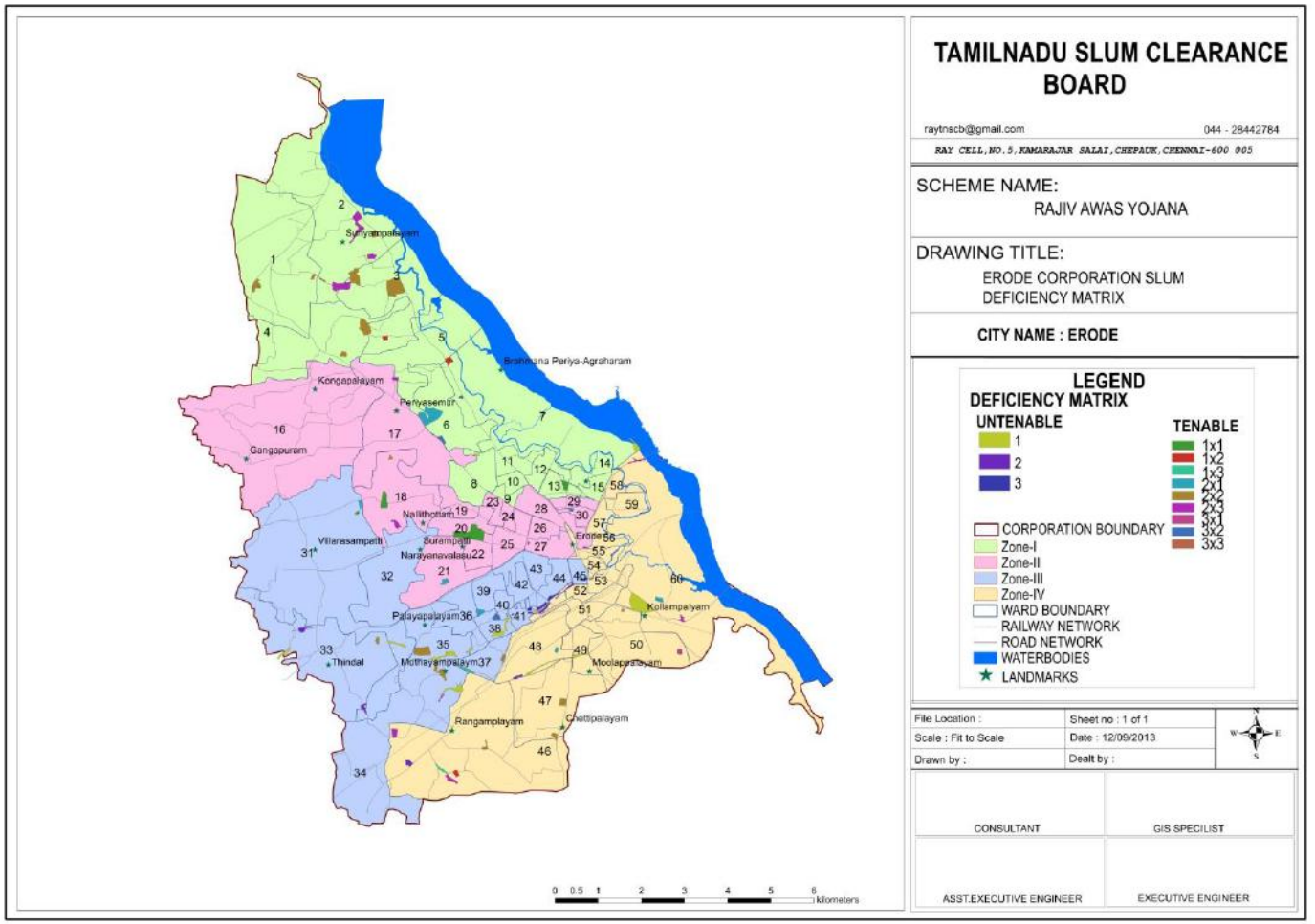


Fig. 3.7 Map Representing the Deficiency Analysis of slums

Table 3.18 Deficiency Matrix Analysis for Tenable Slums

S.No.	Zone	(3x3)	(3x2)	(2x3)	(3x1)	(2x2)	(1x3)	(2x1)	(1x2)	(1x1)	Total
1	**Zone - I**	1	1	4	0	7	0	3	2	0	**18**
2	**Zone - II**	0	2	5	0	1	0	2	3	0	**13**
3	**Zone - III**	0	1	0	0	2	1	1	1	0	**06**
4	**Zone - IV**	0	0	4	1	7	1	3	1	0	**17**
	Total	1	4	13	1	17	2	9	7	0	54

It is observed that 49% of tenable slums and 24% of untenable slums are falling under the 2 x 2 matrix which are having moderate infrastructure facility and medium vulnerability. The deficiency matrix of Tenable and ranking for Untenable slums are shown in Fig. 3.8 and Fig. 3.9 respectively.

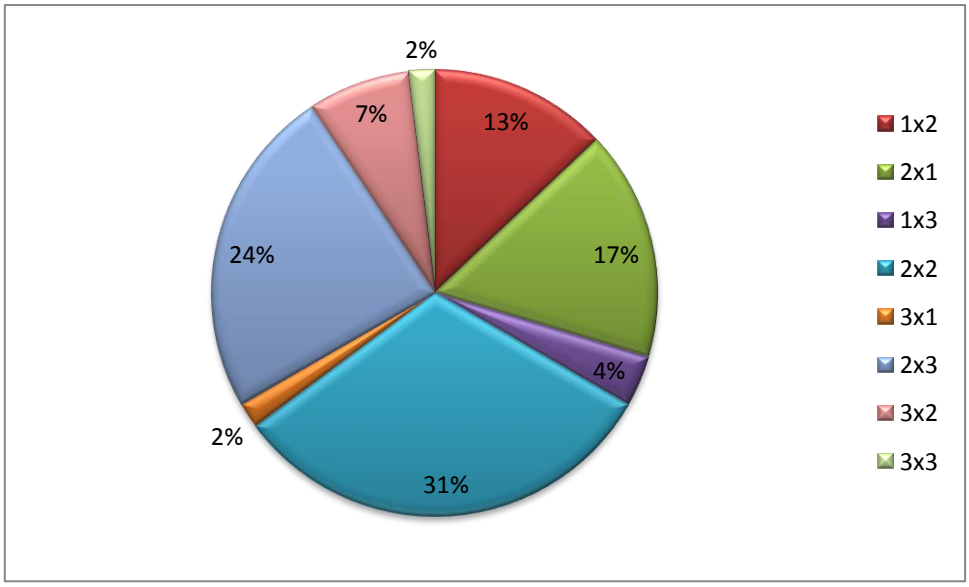


Fig. 3.8 Tenable slum distribution with deficiency Matrix

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 3.25). Totally 13 slums are falling in 1x1 category which may be delisted. There is no slum in 3x1 category.

Table: 3.19 Tenable Slums with Deficiency Matrix of (v3xi3)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone - I	2	Neelikkaradu	65	An immediate attention is required to improve the infrastructure as well as livelihood condition.

Table: 3.20 Tenable Slums with Deficiency Matrix of (v2xi3)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone - I	002	Balan Nagar	102	Special attention is needed to provide infrastructure facilities for better environment and care to be taken for the livelihood improvement through better employment.
2		002	PerumalMalai	310	
3		003	CM Nagar	123	
4		013	MadavankaduSinthanNagar	16	
5	Zone - II	017	ThaneerPandalPalayamAD Colony	37	
6		018	Adukkuparai	126	
7		027	ThiruvalluvarKudusaigal	26	
8		028	Jinnah Maithanam	59	
9		028	KaveryRoad	91	
10	Zone -IV	046	Kallavarai	34	
11		046	NarikuravarColony	54	
12		046	Rangampalayam AD Colony	20	
13		049	J J Nagar	18	

Table: 3.21 Tenable Slums with Deficiency Matrix of (v3xi2)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone - I	005	MGR Nagar	253	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	Zone - II	018	MGR Colony	63	
3		030	Rajajipuram	99	
4	Zone - III	40	East AmbethkarStreet	75	

Table: 3.22 Tenable Slums with Deficiency Matrix of (v2xi2)

S.No	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone - I	02	Mayapuram	166	Immediate attention needs to be given to facilitate the infrastructure service to the slum and livelihood of the slum dwellers.
2		03	Madeshwaran Nagar	127	
4		03	Suriyampalayam	489	
5		04	Ambedkar Nagar	233	
6		04	Maravampalayam	319	
9		04	Sanarpalayam	152	
10		05	Kamaraj Nagar	247	
11	Zone - II	17	Jeevanagar	61	
12	Zone - III	32	Karattankadu	432	
15		36	SastriSalai	105	
16		38	PalayapalayamOdaiMedu	20	
17	Zone - IV	46	Barathipalayam	22	
18		46	Kalyanasundaram Street	68	
19		46	RagupathynaikkanPalayam AD Colony	33	
20		46	Sangankurai	83	
21		49	Sadayampalayam AD Colony	72	
22		60	Loganathapuram	73	
23		32	Karattankadu	432	

Table: 3.23 Tenable Slums with Deficiency Matrix of (v1xi3)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone - III	37	Muthampalayam Housing Unit- II, Gandhji Street	75	An immediate measures needs to be taken to reduce the infrastructure deficiency by providing basic amenities to the slum dwellers.
2	Zone - IV	46	Sathya Nagar	257	

Table: 3.24 – Tenable Slums with Deficiency Matrix of (v1x i2)

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone – I	03	Veerapannadiyur	72	Moderate attention needs to be given on infrastructure to provide access to all amenities, similar to the urban people.
2		15	Krishnampalayam Colony	323	
3	Zone – II	17	MGR Nagar	18	
4		18	SSP Nagar	326	
5		20	Indra Nagar	188	
6	Zone – III	31	Kamaraj Nagar	60	
7	Zone - IV	49	Ceylone Colony	107	

Table: 3.25 Tenable Slums with Deficiency Matrix of (v2xi1)

S.No	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone – I	05	Gnanapuram	102	Considerable development needs to be given for livelihood improvement of the slum dwellers
2		06	Gandhi Nagar	575	
3		13	Jayagopal Street	46	
4	Zone – II	18	MuthuManickam Nagar	69	
5		21	KumalanKuttai	36	
6	Zone – III	39	West Ambedkar Street	45	
7	Zone - IV	46	VendipalayamLakhmi Nagar	101	
8		49	PudhukalliValasu	32	
9		52	EaswaranVeethi	24	

3.4.2 Untenable Slum Prioritization

The prioritization of untenable slums has 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. Zone wise distribution of untenable slums ranking is shown in Table 3.26. The ranking assigned for the untenable slums are tabulated from Table 3.27 to Table 3.29.

Table 3.26 Ranking for Untenable Slums

S.No.	Zone	Rank - 1	Rank - 2	Rank - 3	Total
1	**Zone - I**	0	0	1	**01**
2	**Zone - II**	0	0	0	**00**
3	**Zone - III**	5	5	7	**17**
4	**Zone - IV**	3	8	7	**18**
	Total	8	13	15	**36**

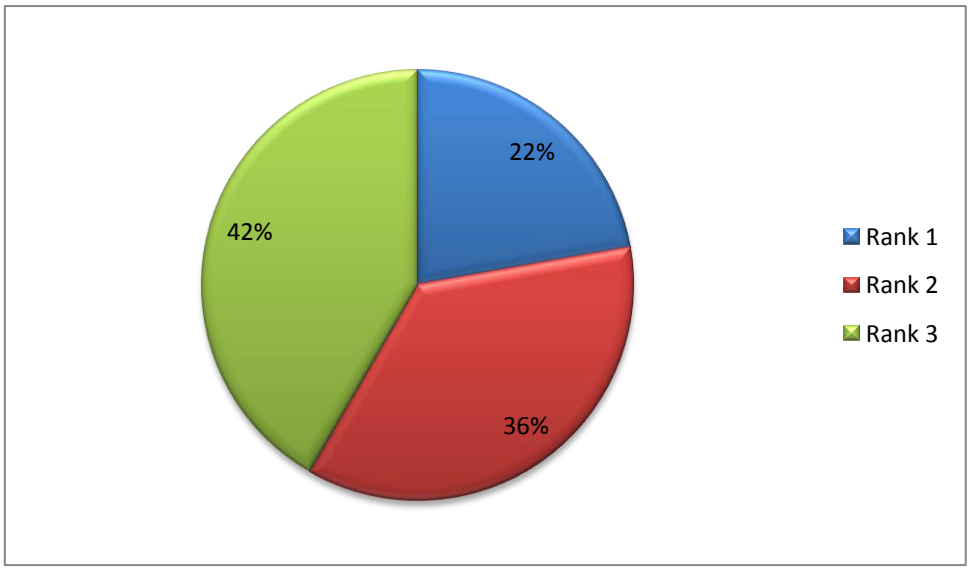


Fig. 3.9 Ranking of Untenable slum

Based on the environmental risk and other social factors like SC/ST Population, Female Population, BPL family strength and Minority community strength, the untenable slums are prioritised which is shown in Fig. 3.9

Table 3.27 Untenable Slums – Rank – 1

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone – III	38	Nethaji Nagar	94	An immediate attention needs to given to resettle the slum dwellers as well as livelihood improvement.
2		41	Ashokapuri	20	
3		41	Kallukuzhi	64	
4		41	Stony Bridge Huts	92	
5		45	PalayaPoondurai Road	517	
6	Zone – IV	54	Nataraja Theatre Slum	19	
7		55	KuppipalayamVaikkal Road	10	
8		57	MosiKeeranurVeethi	57	

Table 3.28 Untenable Slums – Rank – 2

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone – III	31	Therkupallam	14	Special attention is needed for resettlement the slum dwellers with all necessary infrastructure facilities for better environment and care to be taken for the livelihood improvement
2		33	Karaparai	232	
3		41	Deva Nagar	19	
4		41	Anna Nagar	85	
5		41	Kulathupannai	75	
6	Zone – IV	46	SenapathyPalayam	72	
7		48	Lakhmi Nagar(Sastri Nagar, Gandhi Nagar)	23	
8		50	Kattabomman Street	92	
9		51	Manalmedu Good Shed Huts	545	
10		52	Poyerikarai	62	
11		52	Kalaiankadu	82	
12		54	KuyavanThittu	61	
13		58	KuyilanThoppu	20	

Table 3.29 Untenable Slums – Rank – 3

S.No.	Zone	Ward No.	Slum Name	House Hold	Remarks
1	Zone – I	11	PithchaikkaranPallam	38	Special attention is needed for resettlement the slum dwellers with all necessary infrastructure facilities for better environment and care to be taken for the livelihood improvement
2	Zone – III	31	Valliammai Nagar	78	
3		33	KaraparaiPudhu Colony	59	
4		37	Ramamoorthy Nagar	102	
5		37	Ramoorthy Street(Anaikkattu)	209	
6		37	Bharathipuram	231	
7		41	Santhankarukku	32	
8		45	Nethaji Nagar	68	
9	Zone – IV	46	Subramania Nagar	102	
10		46	Petrol Bunk Anna Nagar	74	
11		46	VaikalmeduBharathi Nagar	94	
12		46	Baladhandayutha street	74	
13		48	Shastri Nagar	251	
14		56	AyyanarappanKoil Street	24	
15		60	KaveriKarai	60	

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 Erode city has been prepared using different strategies, tenability analysis, slum location, notified and un-notified of slums. An analysis is performed based on the following factors

- Environmental Risk
- Proportion of Women
- SC / ST population
- BPL Family and
- Minority population

i. Objectionable Slums

In Erode Corporation 90 slums were surveyed, in which 36 slums are found to be located in hazardous places which required re-location. This constitutes 3940 of the households in all zones. The 97% of untenable households are falling in Zone – III and Zone - IV. Table 4.1 and Fig 4.1shows 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	Zone - I	1	38
2	Zone - II	0	00
3	Zone - III	17	2180
4	Zone - IV	18	1722
Total		36	3940

The Number of households in untenable slums of Erode Corporation is 3940 which consist of 37% of total households of slums. Option of relocation depends upon the availability of land and number of slum dwellers.

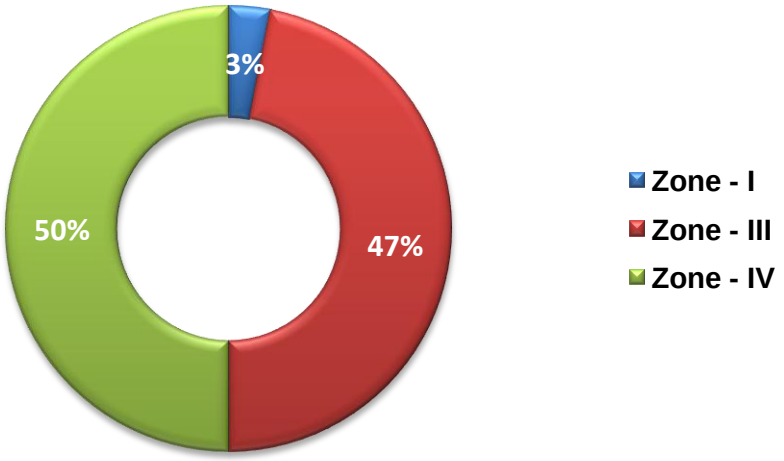


Fig. 4.1 Percentage of households needs to be relocated

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. 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 54 slums are falling under the stable land tenure. Even though the more than 80% of slum dwellers are not possessing patta in 17 slums.

iii. Only Infrastructure up-gradation

Out of 90slums, 2 slums required infrastructure upgradation. As per the phasing plan, these slums are to be taken up for the upgradation. This aspect will ensure that the progress is achieved in the implementation of the plan from the year of the commencement of the scheme itself.

iv. Educational Qualification

The no. of educational institutions are quite high in Erode Corporation. 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.

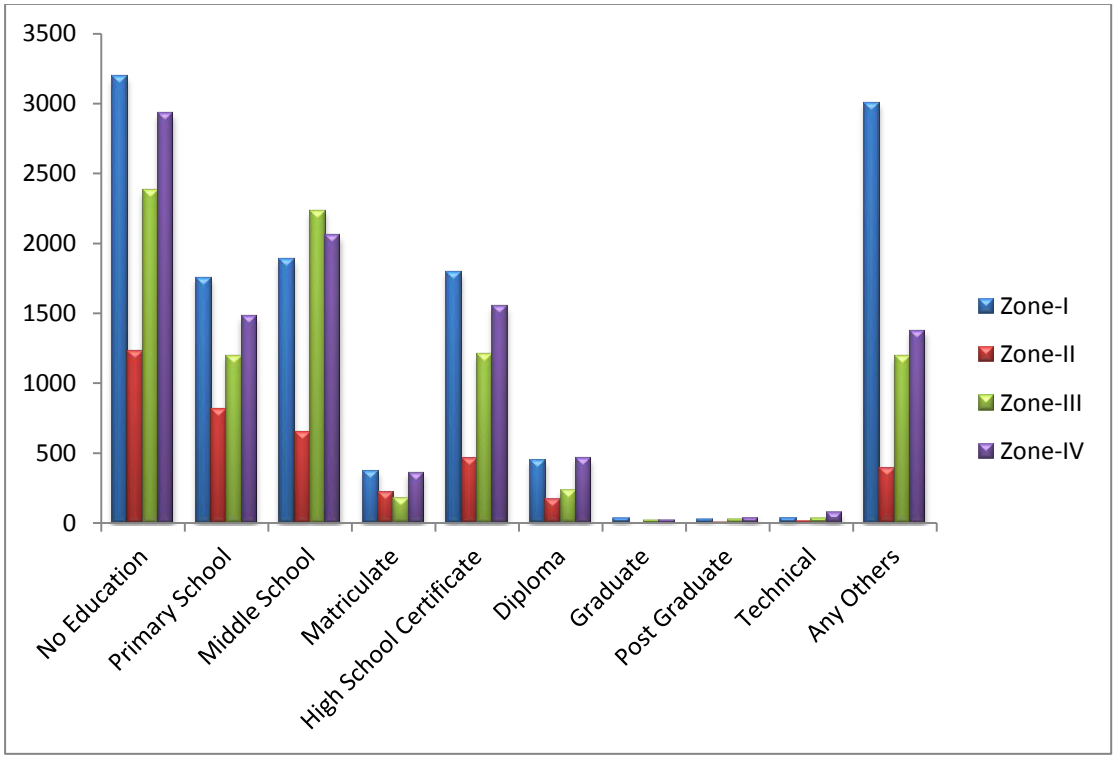


Fig. 4.2 Zone wise Educational Status

Due to the vulnerable and week socio-economic status, school dropouts are more in Erode 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.

v. Financial Status

Most of the slum dwellers are uneducated and unskilled. Due to this real fact the slum dwellers are getting low income. Erode city is one of the hubs of industries like automobile, textile, agriculture pumps etc. These industries need only skilled labours. The availability of skilled labour in slum areas is not encouraging. Figure 4.3 shows that 40% of households in slum area of Erode 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 Erode Corporation.

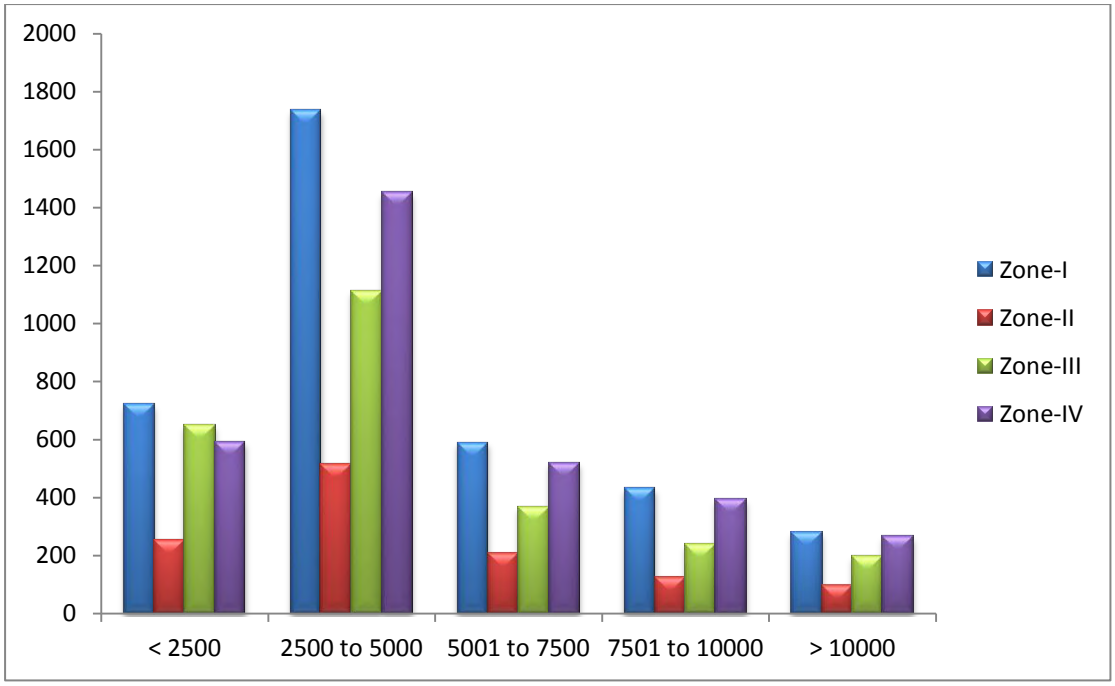


Fig. 4.3 Earning Status of Slum dwellers

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

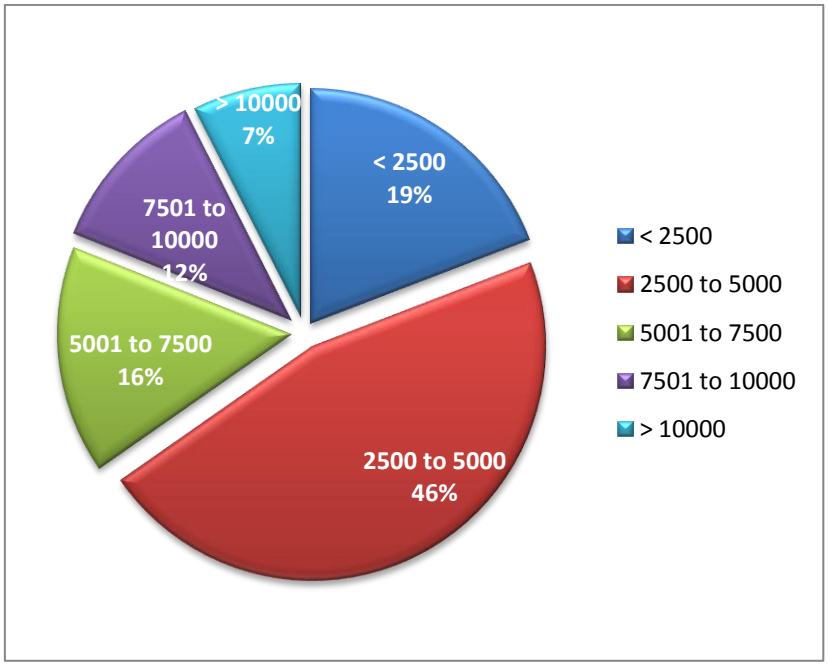


Fig. 4.4 Debt outstanding of Slum dwellers

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 Erode 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 two 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 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.

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 Erode 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, 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 Erode 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 and sanitation works, and 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 slum 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 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

Tailoring Training for slum dwellers

Tailoring Training for slum dwellers

Computer Training

Fig.4.5 Skill development Training at proposed 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 NITTTR 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 analyse and become conscious of their situation in structural terms, so that they can envisage possibilities for change.

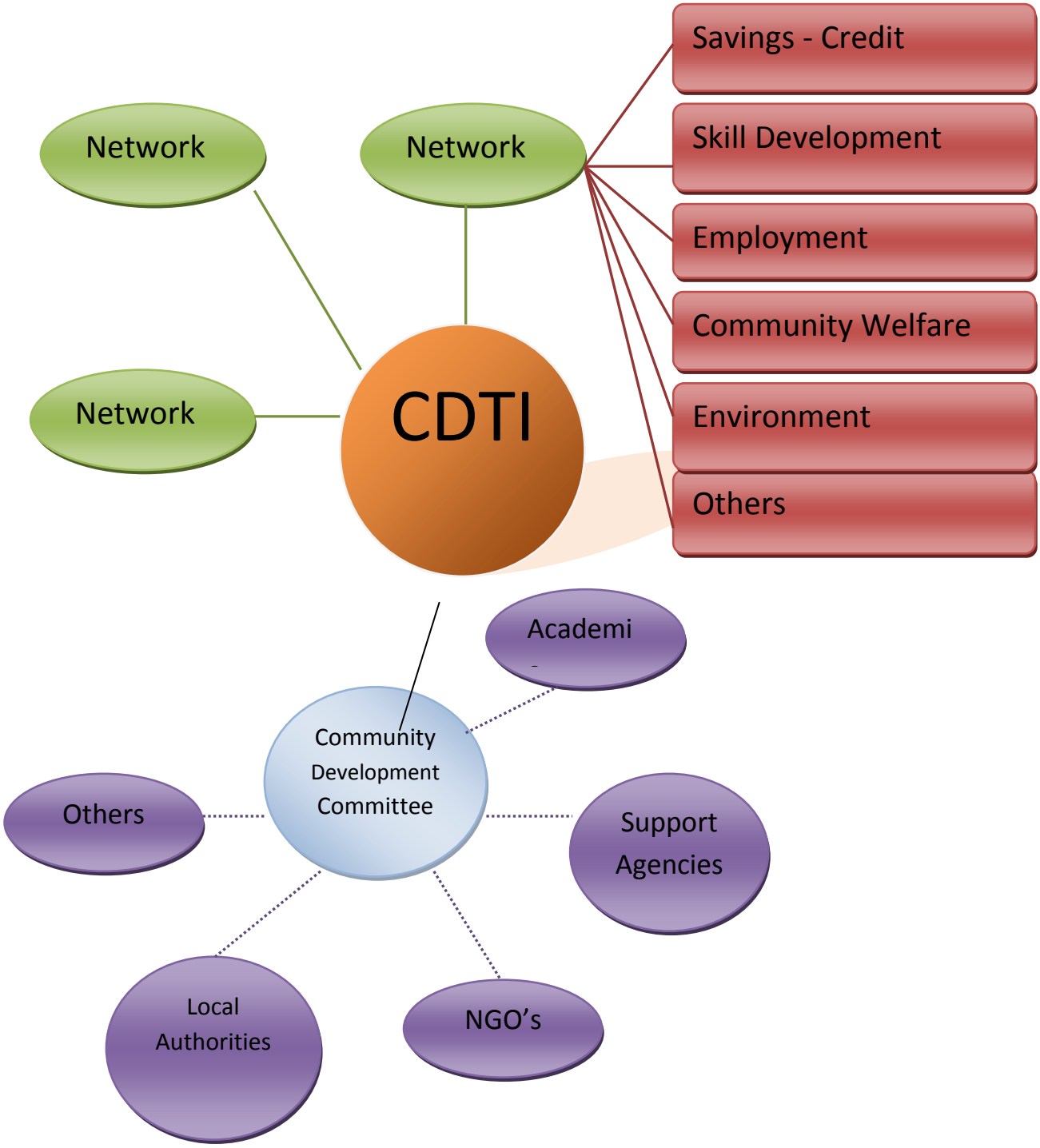


Fig. 4.6 Model of Community Development Institute

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 Erode, more than 1000 small, medium, large scale industries and textile mills are situated. Erode is also famous for the manufacture of motor pump sets and varied engineering goods. The major industries include power looms, hand looms, rice milling, edible oil expelling units, tanneries, chemical and plastic products, paper products, textiles, textile machinery, automobile spares, motors, electronics, steel and aluminium foundries. These industries require fully trained skilled labours to operate.

The district has high concentration of power loom& Handloom weaving, Rice milling, Edible oil expelling units which required skilled labours. Already Tamil Nadu Slum Clearance Board is giving training for the slum dwellers in the area of Tailoring, Automobile service, Computer service, Mobile service for male and DTP operator, Nursing, Front office assistant for female. The same kind of training may be continued to the slum dwellers to improve their livelihood which is shown in Fig 4.7 and Fig 4.8.

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

Because of the recent development in Erode 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 Skill development training in Earth moving equipment's and Construction

Training on earth moving equipment's and driving of four wheelers will provide more employment opportunities to the youth living in slums.

4.3.2 Employment Web Portal

Technology has changed the way 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 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, NITTTR 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, NITTTR 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.

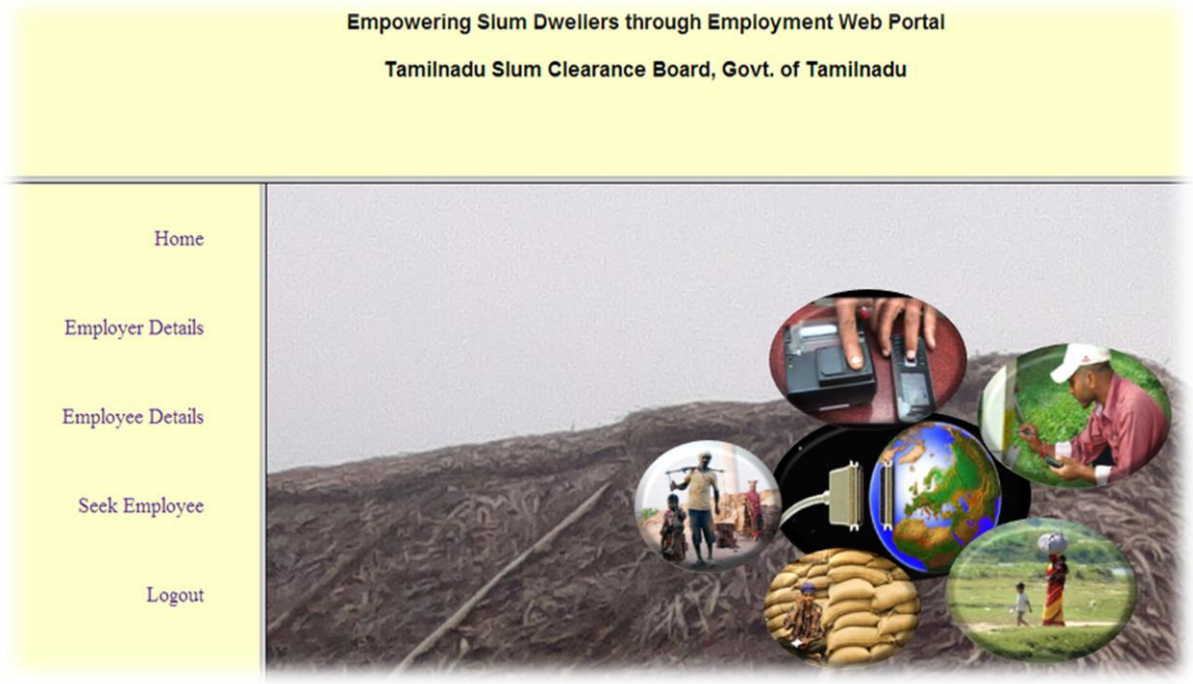


Fig.4.9 Empowering Slum Dwellers through Employment Web Portal

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 Erode.

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 GoI and ensure smooth flow of funds for implementation. The TNSCB has framed district committee 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 housingare 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 ERODE 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. Access to water supply is an important priority of slum dwellers. It is observed from the socio economic survey data that overall 85 % of slum households are not having individual water supply facility in Erode Corporation. There is a highest demand for the water supply connection in the Zone - II, only 2.62 % of households are having individual water top connection.

2. In Erode corporation 87.34 % of households are not having the individual toilet facility in the slums.

3. Solid waste disposal arrangement has a great impact on the environment and consequently on health of the people. In Erode Corporation the corporation made facility to collect the solid waste from the slums in different frequency namely daily, alternate days, once in fortnight. Totally 47 slums are not having the facility to dispose the solid waste.

4. In Erode 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 motrable katcha is 47% and 17% respectively.

5. It is observed that most of the slums are having the street light facilities. But, only one slum namely Jinnamaidhanam is not at all having electricity facility.

6. In Erode few slums are located in heart of the city with higher densities. The land encroached by these slums are highly valuable. It is observed that slums use upto 90% 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 stays in the same house.

7. In Erode, 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.

8. Improper wastewater disposal causes worst environmental sanitation in slum communities. The drainage facility in Erode slum area varies from the lowest value of 0 % to the highest value of 95%.

9. 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.

10. It is found that environmental concern among the people is exceptionally good. However, they areunable to improve the condition of unhealthy surrounding area due to the financial and spatial constraints faced bythe 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	**Land & Housing** 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	• Shifting of houses from the river / canal banks to higher elevated areas. • Provide freehold land rights. TNSCB/Erode Corporation to assist in reworking the lease/freehold agreements. • Slums near National highways should be avoided.

2	**Environment** 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.	• Mosquito repellent should be frequently sprayed by the City. • More public toilet facilities to be provided. • Erode 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	**Sewerage** Absences of proper sewer line in turn encourage open defection by slum dwellers. Leakage in the exiting drainage line. Sewage flows through the open drains, water logging/water overflows on the streets.	• 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
4	**Water Supply** Overall 85% of households are not having individual water supply connection. During the survey following points had been observed. • Water supply through public tap is in adequate. • The water supply is inconsistent • In few slums pipe line is not provided.	• Water supply should be frequent • Damaged pipelines may be replaced. • Damaged hand pumps may be repaired or replaced. • Water supply pipe lines need to be increased.
5	**Drainage** None of the slums are having 100% pucca drainage facility. • Drains are open in every settlement, leading to health risks. • Drains become blocked or clogged, causing water logging.	• Erode Corporation/District Urban Development Authority (DUDA) should ensure regular cleaning of drains. • More DEWATs should be developed to treat Waste water.
6	**Solid Waste** Out of 90 slums, 47 slums not having facility to dispose the garbage. • Inadequate placement of dust bins • Dumping of solid waste in to drains and road sides leads clogging and unhygienic conditions.	• Private sector participation is to be encouraged for waste collection and transportation. • Dustbins to be provided by City of Erode

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 defines the affordability ratio for different income groups as follows in table 4.3

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	> 1200sq.ft.	> 40% of household's gross monthly income	> 5 times households gross annual income

Source: MHUPA 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. 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. 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 Yojana, 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 surmise 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 operationalize 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 operationalizing 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 operationalize 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, and 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 up gradation. 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 in general terms. 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 slum free cities and programs for relocation, rehabilitation and slum up-gradation. The government has prepared a comprehensive housing policy responding to major housing issues in the state. Even though, 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 males/females 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 Erode City, TNSCB identified around14acres for constructing dwelling units for the people living in un-tenable and poor infrastructure environment. It is estimated that around 3940household 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 Erode 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
- 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

4.8 Schemes implemented by TNSCB Erode Division

4.8.1 Tamil Nadu Urban Development Programme

The Tamil Nadu Urban Development Project was implemented by Tamil Nadu Slum Clearance Board with World Bank Assistance from 1988-89. This scheme envisages providing basic amenities like roads, access pathways, P.C. units, and drainage, street lights, Water supply etc.,. After the transfer of land to TNSCB, sale deeds are being given to the beneficiaries. As on date 1099 families are benefited under this scheme which is shown in table 4.4.

Table 4.4 Tamil Nadu Urban Development project

Sl. No.	Name of Scheme	No. of Units
1.	Pannankuttai	184
2.	Palayapalayam Odai Medu	20
3.	Palayapalayam	22
4	Perumpallam Anaikattu	48
5	Allamarathumedu	350
6	MGR Nagar Phase - I	113
7	MGR Nagar Phase - II	44
8	Rangampalayam Phase - I	75
9	Rangampalayam Phase - II	47
10	Rangampalayam Phase - III	93
11	Rangampalayam Phase - IV	23
12	Rangampalayam Phase - V	35
13	Senathipalayam	45
	Total	**1099**

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 338 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.	Allamarathumedu	84
2.	M G R nagar Phase I	42
3.	M G R nagar Phase II	4
4.	Narayanan valasu	132
5	Panankuttai	22
6	PerumpallamAnaikattu	8
7	Rangampalayam Phase I	6
8	Rangampalayam Phase II	3
9	Rangampalayam Phase III	9
10	Rangampalayam Phase V	25
11	Senathipalayam	3
	Total	**338**

4.8.3 NehruRozgarYojana

Under this scheme an amount of Rs. 4000/- was given to the beneficiaries for improving their dwelling units, which includes a government grant of Rs. 1000 and balance repayable by the beneficiary in EMI over a period of 10 Years. Under this scheme 277 families were benefited which shown in Table 4.6

Table 4.6 Nehru Rozhar Yojana Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Allamarathumedu	37
2.	M G R nagar Phase I	8
3.	M G R nagar Phase II	15
4.	Narayanan valasu	26
5	Palayapalayam	22
6	Perumpallam Anaikattu	48
7	Rangampalayam Phase I	40
8	Rangampalayam Phase II	37
9	Rangampalayam Phase III	23
10	Rangampalayam Phase IV	3
11	Senathipalayam	18
	Total	**277**

4.8.4Tamil 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 allotters are required to pay a sum of Rs. 150/- per month over a period of 20 years. A total of 1864 tenements have been constructed in Erode is shown in Table 4.7

Table 4.7 Erode Corporation – Tenemental Schemes by TNSCB

Sl. No.	Name of Scheme	No. of Units
1.	Perumpallam Odai	468
2.	Bhavani Road Phase - I	648
3.	Bhavani Road Phase - II	312
4.	Narayanan Valasu	256
5	Pananthoppu	180
	Total	**1864**

4.8.5Tamil Nadu Housing Board (TNHB) - Tenement Scheme

TNHB has been catering to the needs of various categories of people such as, Economically Weaker Section, Lower Income Group, Middle Income Group & Higher income Group by providing house sites/houses and flats to them at an affordable cost, payable over a period of several years. In Erode Corporation, the TNHB, constructed 1296 units under the tenement scheme which is shown in table 4.8.

Table 4.8 Erode Corporation – Tenemental Scheme by TNHB

Sl. No.	Name of Scheme	No. of Units
1.	Perumpallam Odai - 1	224
2.	Perumpallam Odai - 2	400
3.	Periyar Nagar	400
4.	Karungalpalayam	272
	Total	**1296**

4.8.6 Integrated Housing & Slum Development Programme(IHDSP)

There is need to strengthen the urban planning process by integrating the urban poor in the city planning and development process in participatory manner and evolve citywide strategies to provide alternatives to slum formation. Strategies like making land available to the poor at affordable prices through reservation of land for EWS housing and ensuring the provision of housing, urban infrastructure, and transport services on the fringes of the cities, can provide alternatives that would restrict the formation of new slums.

The Hon'ble Prime Minister took a step forward in this direction by launching a scheme namely Integrated Housing & Slum Development Programme (IHSDP) on 3rd December, 2005. The Integrated Housing & Slum Development Programme (IHSDP) aims at combining the existing schemes of VAMBAY and NSDP under the new IHSDP Scheme for having an integrated approach in ameliorating the conditions of the urban slum dweller who do not possess adequate shelter and reside in dilapidated conditions.

4.8.6.1 Main Objectives of the Scheme

The basic objective of the scheme is to strive for slum less cities by adopting holistic slum development with a healthy and enabling urban environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas.

Under this programme, Minimum Floor Area of Dwelling Unit should not be less than 25 sq.mts. and preferably two room accommodation plus kitchen and toilet should be constructed.

In Erode corporation IHDSP scheme has been implemented in various slums which are listed in the Table.4.9.

Table 4.9 Erode Corporation - IHDSP scheme

S.No	Name of the slum	No of houses	Corporation subsidy per house	Total cost
ZONE-I				
1	Perumalmalai Slum	1	72000	72000
2	Mayavaram Slum	2	72000	144000
3	Maravapalayam Slum	7	72000	504000
4	Sanarpalayam Slum	1	72000	72000

5	SengottayanStreet	30	72000	2160000
6	Kalaignar Nagar	3	72000	216000
7	Gandhi Nagar (OR) Keel kuravanparavai	16	72000	1152000
8	Gnanapuram	5	72000	360000
9	KrishnampalayamColony	46	72000	3312000
10	Madhavakadusinthan Nagar	25	72000	1800000
11	Jayagopal Street	5	72000	360000
12	Kulathupalayam	1	72000	72000
13	Thottampatti (Ellapalayam)	9	72000	648000
14	Villarasampatti	3	72000	216000
15	Ondikaranpalayam	2	72000	144000
ZONE-II				
16	Thiruvalluvarkudisaikal	10	72000	720000
17	Rajajipuram	62	72000	4464000
18	Adukkuparai	1	72000	72000
19	Indra Nagar	1	72000	72000
ZONE-III				
20	Anna Nagar	34	72000	2448000
21	East Ambedkar Street	1	72000	72000
22	Karaparai	4	72000	288000
23	Sengunthapuram	1		
ZONE-IV				
24	Poyerikarai	63	72000	4536000
25	Kaliankadu	42	72000	3024000
26	EswaranVeethi	4	72000	288000
27	Ayyanarappankoil Street	31	72000	2232000
28	North chinnamariyammankoil Street	1	72000	72000
29	Kuppipalamvaikkal Road	6	72000	432000
30	Sudanthirapuram	6	72000	432000
31	Ragupathinaickanpalayam A DCcolony	7	72000	504000
32	RangampalayamKarunanithiStreet	1	72000	72000
33	Navithan street (or) Anna Nagar	4	72000	288000
34	IraniyanVeethi 1	5	72000	360000

35	Lakami Nagar (Sasthri Nagar)	1	72000	72000
36	MuthusamyColony	5	72000	360000
37	Sadayampalayam A D Colony	4	72000	288000
38	Karattankadu	4	72000	288000
		454		**32616000**

4.9 VACANT LAND DETAILS AND RESETTLEMENT

Around 14 acres of vacant lands are identified by TNSCB, Erode for the resettlement of the untenable slums. The details of the vacant lands are given in the following Table 4.10.

Table 4.10 Vacant Land Details

S.No	Name of the Location	Extent of land in (Acres)	Classification
1	Suriyampalayam	7.0	Assessed Waste
2	MettuNasavampalayam	7.0	Assessed Waste
	Total	**14.0**	

At the rate of 100 dwelling units per acre the requirement of the land is estimated to 40 acres for relocating the slum dwellers. Phasing of slums is programmed based on the feasibility of implementation. The resettlement phasing for un-tenable slums and improvement of the infrastructure and livelihood, Phasing for tenable and untenable slums are furnished from Table 4.11 to 4.25.

Table 4.11 Phasing of the tenable slums for the year 2014 -2015

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	1	5	Bharathi Nagar	253	11	162	80	242	3x2
2	2	30	Rajajipuram	99	5	91	3	94	3x2
3	1	5	Kamaraj Nagar	247	52	174	21	195	2x2
4	2	18	Muthu Manikkam Nagar	69	23	40	6	46	2x1
5	2	17	MGR Nagar	18	4	6	8	14	1x2
6	2	18	SSP Nagar	326	93	209	24	233	1x2
			Total	1012	188	682	142	**824**	

Table 4.12 Phasing of the tenable slums for the year 2015 -2016

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	1	2	Mayapuram	166	42	94	30	124	2x2
2	1	3	Suriyampalayam	489	90	328	71	399	2x2
3	1	4	Maravampalayam	319	76	209	34	243	2x2
			Total	974	208	631	135	**766**	

Table 4.13 Phasing of the tenable slums for the year2016 -2017

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	4	32	Karattankadu	432	88	253	91	344	2x2
2	1	4	Ambedkar Nagar	233	57	153	23	176	2x2
3	1	3	Veerapannadiyur	72	48	22	2	24	1x2
			Total	737	193	428	116	**544**	

Table 4.14 Phasing of the tenable slums for the year 2017 -2018

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	1	2	Neelikkaradu	65	5	41	19	60	3x3
2	2	18	MGR Colony (Panankuttai – TNUDP)	63	2	38	23	61	3x2
3	3	40	East Ambedkar Street	75	12	59	4	63	3x2
4	4	46	Sudhanthirapuram	74	8	63	3	66	3x1
5	1	2	Balan Nagar	102	24	42	36	78	2x3
6	1	6	Gandhi Nagar	575	72	403	100	503	2x1
			Total	954	123	646	185	**831**	

Table 4.15 Phasing of the tenable slums for the year 2018 -2019

S. No	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	1	3	CM Nagar	123	24	67	32	99	2x3
2	1	2	PerumalMalai	310	16	225	69	294	2x3
3	1	13	MadavankaduSinthan Nagar	16	0	16	0	16	2x3
4	2	17	ThaneerPandalPalayam AD Colony	37	0	29	8	37	2x3
5	2	18	Adukkuparai	126	24	73	29	102	2x3
6	2	27	ThiruvalluvarKudisaigal	26	9	13	4	17	2x3
7	2	28	Jinnah Maidhanam	59	0	45	14	59	2x3
			Total	697	73	468	156	**624**	

Table 4.16 Phasing of the tenable slums for the year 2019 - 2020

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	2	28	Kavery Road	91	4	41	46	87	2x3
2	4	46	Kallavarai	34	15	17	2	19	2x3
3	4	46	Narikkuravar Colony	54	3	42	9	51	2x3
4	4	46	Rangampalayam AD Colony	20	0	16	4	20	2x3
5	4	49	J J Nagar	18	2	15	1	16	2x3
6	1	3	Madeshwaran Nagar	127	25	76	26	102	2x2
7	1	4	Sanarpalayam	152	63	69	20	89	2x2
8	2	17	Jeeva Nagar	61	16	37	8	45	2x2
9	3	36	Shastri Salai	105	16	88	1	89	2x2
10	3	38	Palayapalayam - TNUDP	20	4	15	1	16	2x2
11	4	46	Bharathipalayam	22	0	18	4	22	2x2
12	4	46	Kalyana Sundaram Street	68	6	60	2	62	2x2
13	4	46	Ragupathy Naikkanpalayam AD Colony	33	14	15	4	19	2x2
14	4	46	Sangankurai	83	7	64	12	76	2x2
			Total	888	175	573	140	**713**	

Table 4.17 Phasing of the tenable slums for the year 2020 -2021

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	4	49	Sadayampalayampalayam AD Colony	72	14	46	12	58	2x2
2	4	60	Loganathapuram	73	1	60	12	72	2x2
3	1	5	Gnanapuram	102	27	69	6	75	2x1
4	1	13	Jayagopal Street	46	2	34	10	44	2x1
5	2	21	KumalanKuttai	36	6	19	11	30	2x1
6	3	39	West Ambedkar Street	45	29	15	1	16	2x1
7	4	46	Vendipalayam Lakshmi Nagar	101	21	64	16	80	2x1
8	4	49	Puthukalli Valasu	32	6	25	1	26	2x1
9	4	52	Easwaran Veethi	24	1	21	2	23	2x1
10	3	37	Muthampalayam Housing Unit II, Gandhiji Street	75	2	71	2	73	1x3
11	3	31	Kamaraj Nagar	60	5	49	6	55	1x2
12	4	49	Ceylone Colony	107	9	98	0	98	1x2
			Total	773	123	571	79	**650**	

Table 4.18 Phasing of the tenable slums for the year 2021 -2022

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	House Hold (SP+K)	Matrix
1	4	46	Sathya Nagar	257	18	215	24	239	1x3
2	1	15	Krishnampalayam Colony	323	98	210	15	225	1x2
3	2	20	Indra Nagar (Naryanavalasu – TNUDP)	188	37	136	15	151	1x2
			Total	768	153	561	54	**615**	

Table 4.19 Phasing of the untenable slums for the year 2014 -2015

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	3	41	Asokapuri	209	9	137	63	1
2	3	33	Karaparai	232	73	107	52	2
3	3	41	Anna Nagar	85	0	71	14	2
			Total	**526**				

Table 4.20Phasing of the untenable slums for the year 2015 - 2016

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	4	54	Nataraja Theatre Slum	19	0	5	14	1
2	4	55	KuppipalayamVaikkal Road	10	1	7	2	1
3	4	57	MosiKeeranurVeethi	57	1	49	7	1
4	3	45	PalayaPoondurai Road	517	0	490	27	1
			Total	**603**				

Table 4.21Phasing of the untenable slums for the year 2016 -2017

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	3	38	Nethaji Nagar	94	17	64	13	1
2	3	41	Kallukkuzhi	64	0	61	3	1
3	3	41	Stony Bridge Huts	92	9	78	5	1
4	3	41	Kulathupannai	75	2	56	17	2
5	4	52	Kaliankadu	82	22	59	1	2
6	3	31	Therkupallam	14	9	3	2	2
7	3	41	Deva Nagar	19	0	19	0	2
8	4	48	Lakshmi Nagar (Shastri Nagar, Gandhi Nagar)	23	0	18	5	2
9	4	50	Kattapomman Street	92	5	80	7	2
			Total	**555**				

Table 4.22 Phasing of the untenable slums for the year 2017 -2018

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	1	11	Pithchaikkaran Pallam	38	13	20	5	3
2	4	52	Poyerikarai	62	13	46	3	2
3	4	54	KuyavanThittu	61	0	31	30	2
4	4	58	KuyilanThoppu	20	0	8	12	2
5	3	37	Bharathipuram	231	26	196	9	3
6	4	46	SenapathiPalayam	72	6	59	7	2
7	3	33	KaraparaiPudhu Colony	59	23	26	10	3
			Total	**543**				

Table 4.23 Phasing of the untenable slums for the year 2018 -2019

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	4	51	Manalmedu Good Shed Huts	545	70	451	24	2
2	3	41	SanthanKarukku	32	1	31	0	3
			Total	**577**				

Table 4.24 Phasing of the untenable slums for the year 2019 -2020

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	3	37	Ramamoorthy Nagar	102	9	89	4	3
2	3	37	Ramamoorthy Street(Anaikkattu)	209	27	173	9	3
3	3	45	Nethaji Nagar	68	6	50	12	3
4	3	31	Valliammai Nagar	78	13	49	16	3
5	4	46	Baladhandayutha Street	74	4	51	19	3
6	4	46	Petrol Bunk Anna Nagar	74	1	51	22	3
			Total	**605**				

Table 4.25 Phasing of the untenable slums for the year 2020-2021

S.No.	Zone	Ward	Slum	Total HHs	Pucca	Semi Pucca	Katcha	Rank
1	4	56	AyyanarappanKoil Street	24	2	22	0	3
2	4	60	KaveriKarai	60	8	39	13	3
3	4	46	Subramania Nagar	102	2	82	18	3
4	4	46	VaikkalmeduBharathi Nagar	94	2	75	17	3
5	4	48	Shastri Nagar	251	12	215	24	3
			Total	**531**				

Table 4.26 Detailed Investment Plan - Curative Strategy (Tenable)

Name of the City: Erode

Sl .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	6	3	3	6	7	14	12	3	54
	No of Households	1012	974	737	954	697	888	773	768	6803
	No of Households Proposed for intervention	824	766	544	831	624	713	650	615	5567
	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	6.8	6.95	5.43	9.14	7.54	9.49	9.52	9.91	64.78
	(ii) Housing (**at Rs. 5.5 lakh per Unit** with 10% escalation per annum)	45.32	46.34	36.23	60.91	50.29	63.24	63.44	66.05	431.82
	(iii) Social infrastructure	3.40	3.48	2.72	4.57	3.77	4.74	4.76	4.95	32.39
	Subtotal B	***55.52***	***56.77***	***44.38***	***74.62***	***61.60***	***77.47***	***77.72***	***80.91***	**528.99**
C	**Other costs**									
	(i) Preparation of DPRs (**at 0.75 % of B)**	0.42	0.43	0.33	0.56	0.46	0.58	0.58	0.61	3.97
	(ii) Design and Consultancy charges (**at 0.75 % of B**)	0.42	0.43	0.33	0.56	0.46	0.58	0.58	0.61	3.97
	(iii) Quality control (TIPMA) at 1% of ACA (**0.5% of B**)	0.28	0.28	0.22	0.37	0.31	0.39	0.39	0.40	2.64
	(iv) Ssocial audit 0.5% of ACA (**0.25% 0f B**)	0.14	0.14	0.11	0.19	0.15	0.19	0.19	0.20	1.31
	Sub total C	1.26	1.28	0.99	1.68	1.38	1.74	1.74	1.82	11.89
D	Overheads/Administrative costs (**at 5% of A+B+C**)	2.84	2.90	2.27	3.82	3.15	3.96	3.97	4.14	27.05
E	Tender Excess **@ 10 % of B**	5.55	5.68	4.44	7.46	6.16	7.75	7.77	8.09	52.90
F	**Total(A+B + C+D+E)**	65.17	66.63	52.08	87.58	72.29	90.92	91.20	94.96	620.83
G	Physical contingencies (**@ 2.5% of F**)	1.63	1.67	1.30	2.19	1.81	2.27	2.28	2.37	15.52
H	Total Investment Cost **H = (F+G)**	**66.80**	**68.30**	**53.38**	**89.77**	**74.10**	**93.19**	**93.48**	**97.33**	**636.35**
I	Operation and Maintenance cost (**at 4% of B**)	***2.22***	***2.27***	***1.78***	***2.98***	***2.46***	***3.10***	***3.11***	***3.24***	**21.16**
	Total Investment Cost (H+I)	**69.02**	**70.57**	**55.16**	**92.75**	**76.56**	**96.29**	**96.59**	**100.57**	**657.51**

Table 4.27 Detailed Investment Plan - Curative Strategy(Untenable)

Name of the City :Erode

Sl .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	3	4	9	7	2	6	5	0	36
	No of Households	526	603	555	543	577	605	531	0	3940
	No of Households Proposed for intervention	526	603	555	543	577	605	531	0	3940
	Cost per Unit	5.5	6.05	6.66	7.33	8.06	8.87	9.76	0	
A	**Land Cost**									
B	Housing & Infrastructure									
	(i) Physical Infrastructure **(at 15% of B (ii))**	4.34	5.47	5.54	5.97	6.98	8.05	7.77	0	44.12
	(ii) Housing (**at Rs. 5.5 lakh per Unit** with 10% escalation per annum)	28.93	36.48	36.96	39.8	46.51	53.66	51.83	0	294.17
	(iii) Social infrastructure (**at 7.5 % of B (ii)**)	2.17	2.74	2.77	2.99	3.49	4.02	3.89	0	22.07
	Subtotal B	***35.44***	***44.69***	***45.27***	***48.76***	***56.98***	***65.73***	***63.49***	0	**360.36**
C	**Other costs**									
	(i) Preparation of DPRs (**at 0.75 % of B)**	0.27	0.34	0.34	0.37	0.43	0.49	0.48	0	2.72
	(ii) Design and Consultancy charges (**at 0.75 % of B**)	0.27	0.34	0.34	0.37	0.43	0.49	0.48	0	2.72
	(iii) Quality control (TIPMA) at 1% of ACA (**0.5% of B**)	0.18	0.22	0.23	0.24	0.28	0.33	0.32	0	1.80
	(iv) Social audit 0.5% of ACA (**0.25% 0f B**)	0.09	0.11	0.11	0.12	0.14	0.16	0.16	0	0.89
	Sub total C	0.81	1.01	1.02	1.10	1.28	1.47	1.44	0	8.13
D	Overheads/Administrative costs (**at 5% of A+B+C**)	1.81	2.29	2.31	2.49	2.91	3.36	3.25	0	18.42
E	Tender Excess **@ 10 % of B**	3.54	4.47	4.53	4.88	5.70	6.57	6.35	0	36.04
F	**Total(A+B + C+D+E)**	41.60	52.46	53.13	57.23	66.87	77.13	74.53	0	422.95
G	Physical contingencies (**@ 2.5% of F**)	1.04	1.31	1.33	1.43	1.67	1.93	1.86	0	10.57
H	Total Investment Cost **H = (F+G)**	**42.64**	**53.77**	**54.46**	**58.66**	**68.54**	**79.06**	**76.39**	0	**433.52**
I	Operation and Maintenance cost (**at 4% of B**)	***1.42***	***1.79***	***1.81***	***1.95***	***2.28***	***2.63***	***2.54***	0	**14.42**
	Total Investment Cost (H+I)	**44.06**	**55.56**	**56.27**	**60.61**	**70.82**	**81.69**	**78.93**	0	**447.94**

Table 4.28 Detailed Investment Plan - Curative Strategy (Tenable& Untenable)

Sl.No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	9	7	12	13	9	20	17	3	90
	No of Households	1538	1577	1292	1497	1274	1493	1304	768	10743
	No of Households Proposed for intervention	1350	1369	1099	1374	1201	1318	1181	615	9507
A	Land Cost									
B	Housing & Infrastructure									
	(i) Physical Infrastructure	11.14	12.42	10.97	15.11	14.52	17.54	17.29	9.91	108.9
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	74.25	82.82	73.19	100.71	96.8	116.9	115.27	66.05	725.99
	(iii) Social infrastructure	5.57	6.22	5.49	7.56	7.26	8.76	8.65	4.95	54.46
	Subtotal B	***90.96***	***101.46***	***89.65***	***123.38***	***118.58***	***143.20***	***141.21***	***80.91***	**889.35**
C	Other costs									
	i. Preparation of DPRs (at 0.75 % of B)	0.69	0.77	0.67	0.93	0.89	1.07	1.06	0.61	6.69
	ii. Design and Consultancy charges (at 0.75 % of B)	0.69	0.77	0.67	0.93	0.89	1.07	1.06	0.61	6.69
	iii. Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.46	0.50	0.45	0.61	0.59	0.72	0.71	0.40	4.44
	iv. social audit 0.5% of ACA (0.25% 0f B)	0.23	0.25	0.22	0.31	0.29	0.35	0.35	0.20	2.20
	Sub total C	2.07	2.29	2.01	2.78	2.66	3.21	3.18	1.82	20.02
D	Overheads/Administrative costs (at 5% of A+B+C)	4.65	5.19	4.58	6.31	6.06	7.32	7.22	4.14	45.47
E	Tender Excess @ 10 % of B	9.09	10.15	8.97	12.34	11.86	14.32	14.12	8.09	88.94
F	Total (A+B + C+D+E)	106.77	119.09	105.21	144.81	139.16	168.05	165.73	94.96	1043.78
G	Physical contingencies (@ 2.5% of F)	2.67	2.98	2.63	3.62	3.48	4.20	4.14	2.37	26.09
H	Total Investment Cost H = (F+G)	**109.44**	**122.07**	**107.84**	**148.43**	**142.64**	**172.25**	**169.87**	**97.33**	**1069.87**
I	Operation and Maintenance cost (at 4% of B)	***3.64***	***4.06***	***3.59***	***4.93***	***4.74***	***5.73***	***5.65***	***3.24***	**35.58**
	Total Investment Cost (H+I)	**113.08**	**126.13**	**111.43**	**153.36**	**147.38**	**177.98**	**175.52**	**100.57**	**1105.45**

CHAPTER 5: STRATEGIES FOR SLUM PREVENTION AND POLICY REFORMS

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 dweller 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 allotters 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 10th five year plan (2007-2008). 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.

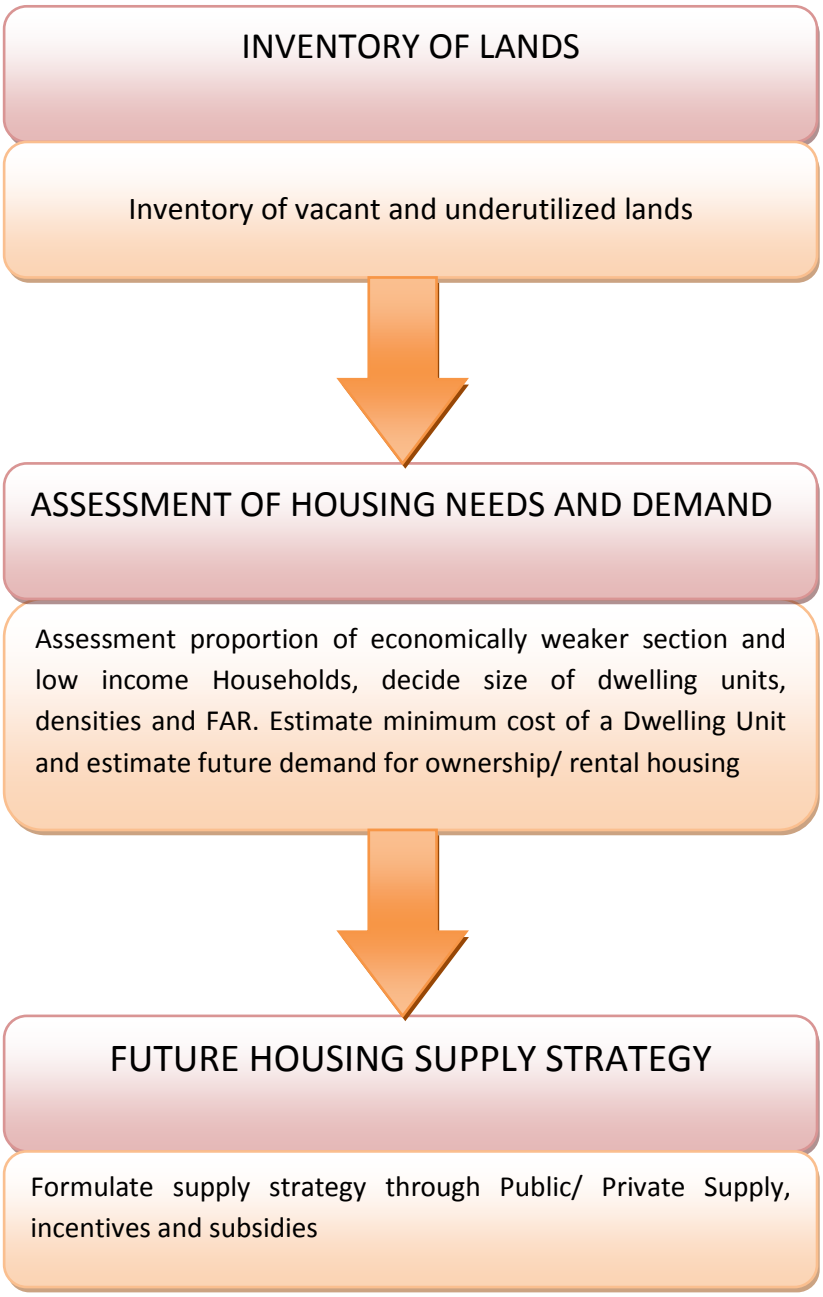


Fig. 5.1 Preventive Strategy for Slums

Those who live on streets are 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

5.2 LAND AVAILABILITY FOR HOUSING IN ERODE

In Erode, TNSCB identified around 14 acres for constructing dwelling units for the people living in un-tenable. Further land will have to be identified for construction of new houses to meet the future housing demand.

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 and 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 20 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, other illegal developments.

5.3.1 Population Growth in Erode

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 Erode 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 on-going 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 5.1 and Fig.5.2 project the population of Erode as 6.32 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

$$x_t = x_0(1+r)^t \quad \text{..... (5.1)}$$

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, Erode city population and slum households are 499645 and 21501 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 5.1 and shown in Fig 5.2 & 5.3. From this, it is observed that the city population projected is 6.21 lakhs in 2022. It has been observed from Table 5.1 that, every year the projected housing requirement is increasing in an average 490. It is also observed that total number of slum households projected is 26734 in 2022. Hence, 3916 household have been considered for the preparation of estimation for preventive strategy which is furnished in the Table 5.2 & 5.3.

Table 5.1 Projected Slum Household and population for Erode City

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Projected Slum Household	22370	22817	23273	23739	24214	24698	25192	25696	26210	26734
Projected Additional Household	-	-	456	466	475	484	494	504	514	524

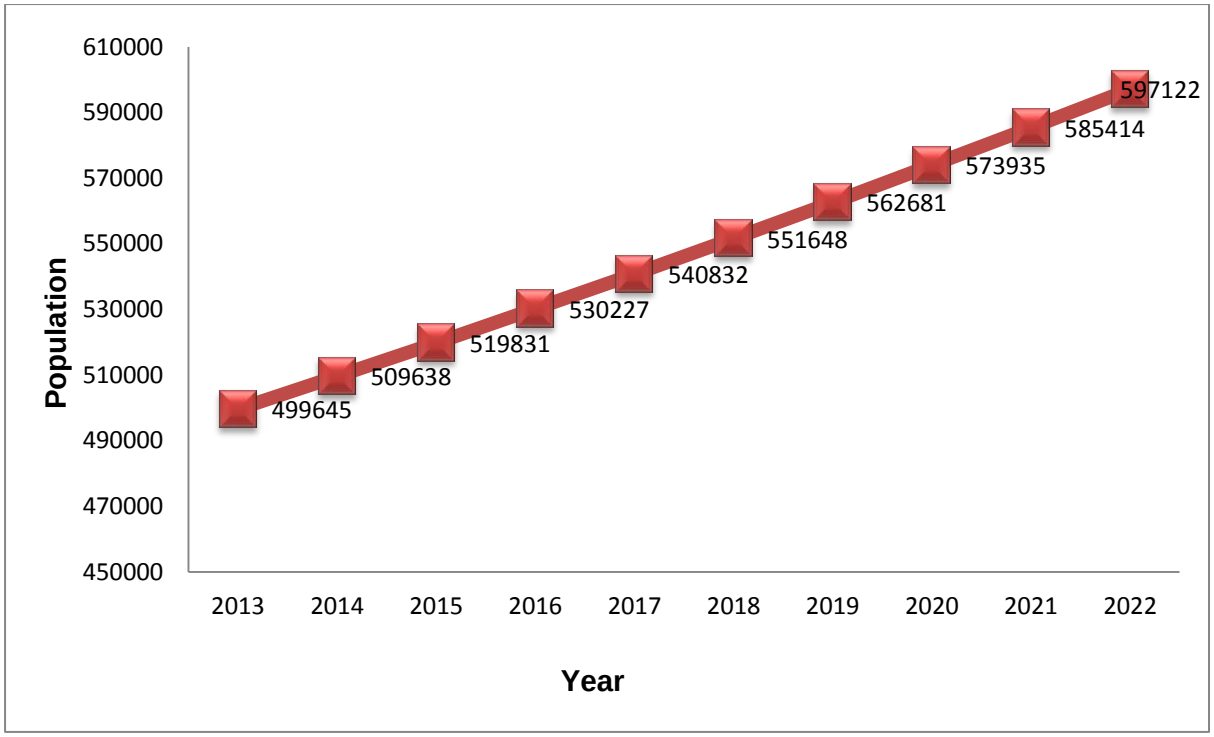


Fig. 5.2 Projected population of Erode City

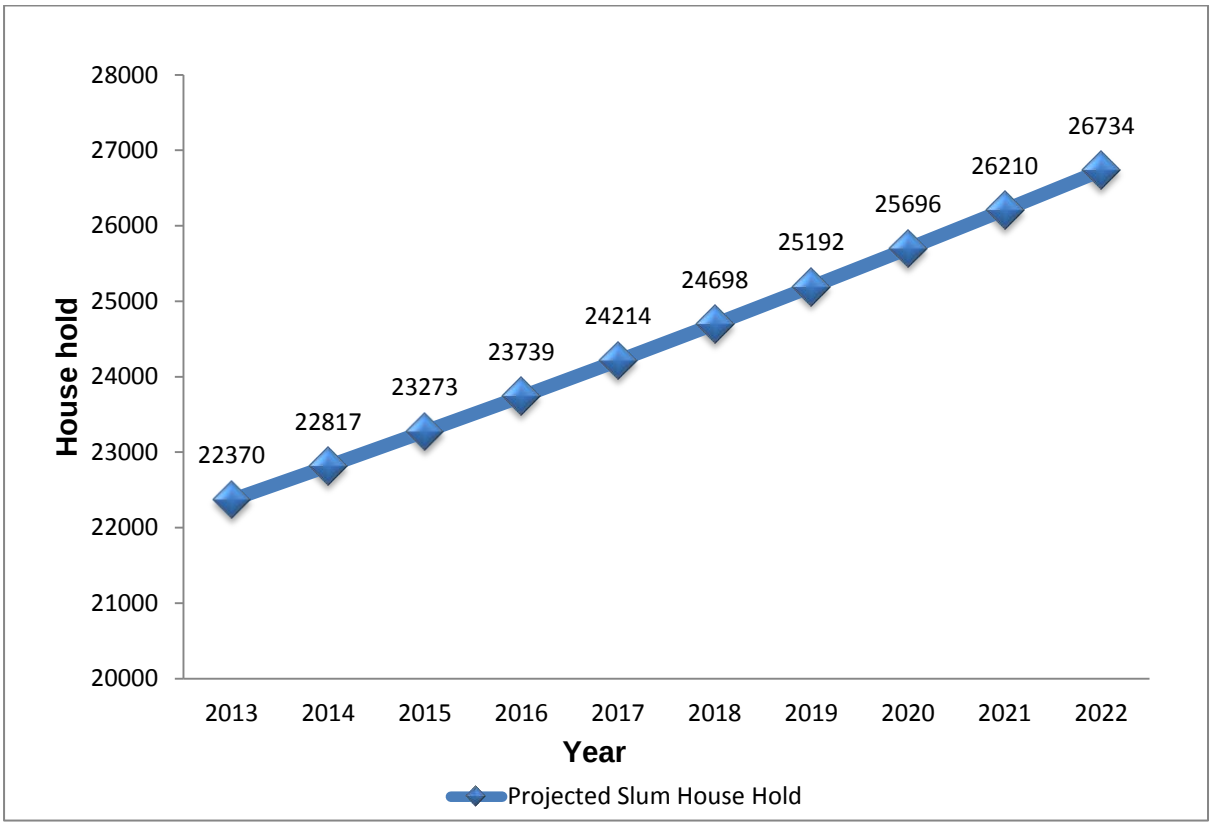


Fig. 5.3 Projected Slum Households of Erode City

5.4 HOUSING AUGMENTATION 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 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 Yojana.

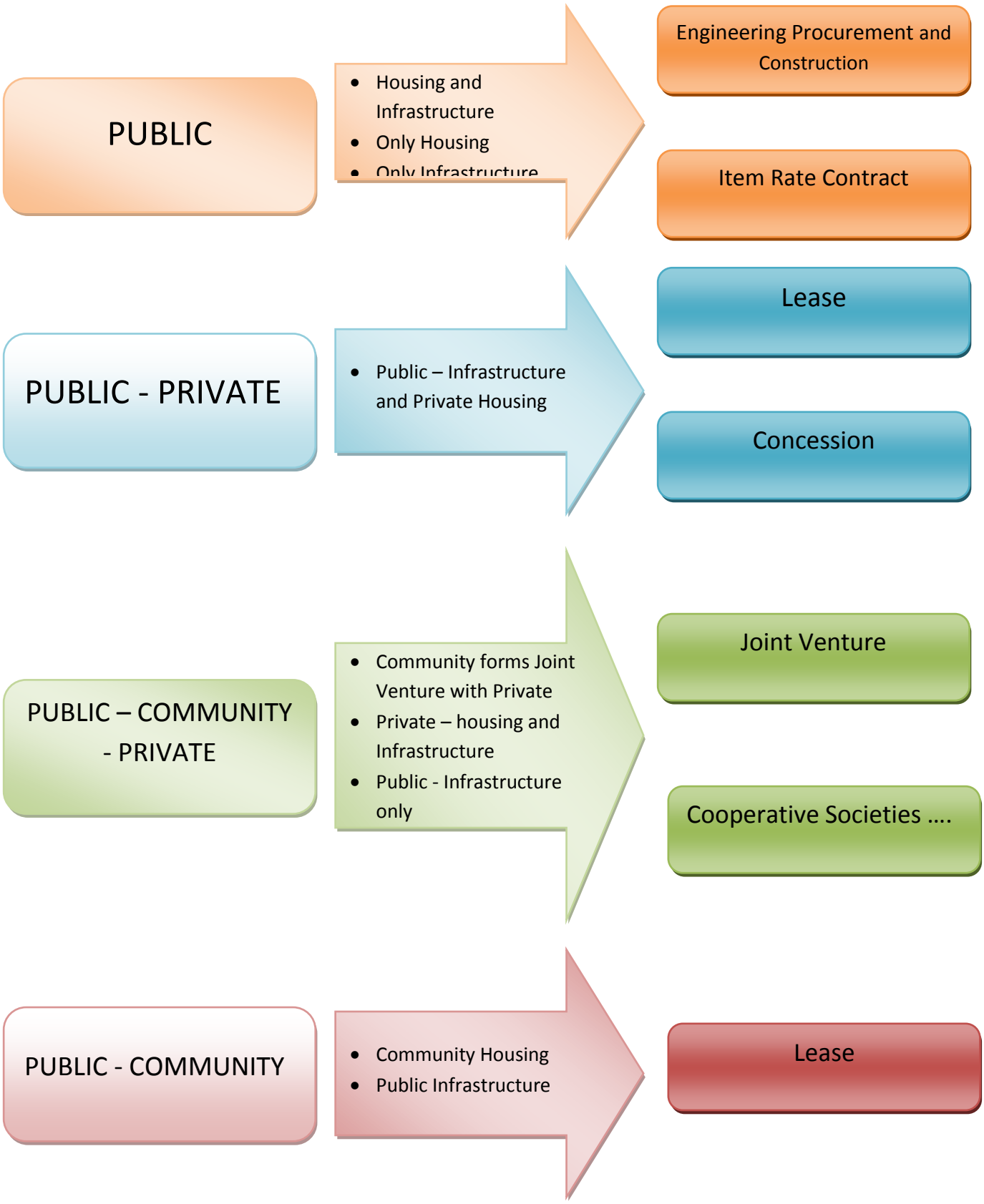


Fig. 5.4 Housing Augmentation Strategic Models

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 logistics 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.

The following six policy areas have been identified,

1. Social housing
2. Land policy
3. Planning and regulation
4. Information
5. Governance and
6. 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 out dated and inappropriate.

Policies and/or regulations as well as public authorities' approach are not conducive to regularization of tenure due to the reason that 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 unauthorized 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 level 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. Computerization of land transaction and publishing the same in the government owned website would avoid illegal or underrated transaction.

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 RinnYojana (RRY)

MoHUPA, GOI has revised interest subsidy scheme – renamed as Rajiv RinnYojana 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, sweat 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 demands and income of the poor. Households can make their own trade-offs 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 & 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 microenterprises 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 are not affected much and towards this, it is suggested that free and non-transferable (with photo identity) bus passes and rail 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 labor 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 work 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 the assistance from the 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 most 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.

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Table 5.2 Detailed Investment Plan - Preventive Strategy

Name of the City: Erode

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	456	465	475	484	494	504	514	524	3916
	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))**	3.76	4.22	4.75	5.32	5.97	6.71	7.53	8.44	46.7
	(ii) Housing (**at Rs. 5.5 lakh per Unit** with 10% escalation per annum)	25.08	28.13	31.64	35.48	39.82	44.7	50.17	56.28	311.3
(iii)	(iii) Social infrastructure (**at 7.5 % of B (ii)**)	1.88	2.11	2.37	2.66	2.99	3.35	3.76	4.22	23.34
	Subtotal B	***30.72***	***34.46***	***38.76***	***43.46***	***48.78***	***54.76***	***61.46***	***68.94***	**381.34**
C	**Other costs**									
	(i) Preparation of DPRs (**at 0.75 % of B**)	0.23	0.26	0.29	0.33	0.37	0.41	0.46	0.52	2.87
	(ii) Design and Consultancy charges (**at 0.75 % of B**)	0.23	0.26	0.29	0.33	0.37	0.41	0.46	0.52	2.87
	(iii) Quality control (TIPMA) at 1% of ACA (**0.5% of B**)	0.15	0.17	0.19	0.22	0.24	0.27	0.31	0.34	1.89
	(iv) Social audit 0.5% of ACA (**0.25% 0f B**)	0.08	0.09	0.10	0.11	0.12	0.14	0.15	0.17	0.96
	Subtotal C	0.69	0.78	0.87	0.99	1.10	1.23	1.38	1.55	8.59
D	Overheads/Administrative costs (**at 5% of A+B+C**)	1.57	1.76	1.98	2.22	2.49	2.80	3.14	3.52	19.48
E	Tender Excess **@ 10 % of B**	3.07	3.45	3.88	4.35	4.88	5.48	6.15	6.89	38.15
F	**Total(A+B + C+D+E)**	36.05	40.45	45.49	51.02	57.25	64.27	72.13	80.90	447.56
G	Physical contingencies (**@ 2.5% of F**)	0.90	1.01	1.14	1.28	1.43	1.61	1.80	2.02	11.19
H	Total Investment Cost **H = (F+G)**	**36.95**	**41.46**	**46.63**	**52.30**	**58.68**	**65.88**	**73.93**	**82.92**	**458.75**
I	Operation and Maintenance cost (**at 4% of B**)	***1.23***	***1.38***	***1.55***	***1.74***	***1.95***	***2.19***	***2.46***	***2.76***	**15.26**
	Total Investment Cost (H+I)	**38.18**	**42.84**	**48.18**	**54.04**	**60.63**	**68.07**	**76.39**	**85.68**	**474.01**

Table 5.3 Detailed Investment Plan -Curative and Preventive Strategy - Erode Corporation

Sl .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	6	3	3	6	7	14	12	3	54
	(ii) No of Households	1012	974	737	954	697	888	773	768	6803
	(iii) No of Households proposed for intervention	824	766	544	831	624	713	650	615	5567
	(iv) Investment Cost - InsituUpgradation	69.02	70.57	55.16	92.75	76.56	96.29	96.59	100.57	657.51
B	**Untenable**									
	(i) No of Slums	3	4	9	7	2	6	5	0	36
	(ii) No of Households	526	603	555	543	577	605	531	0	3940
	(iii) No of Households proposed for intervention	526	603	555	543	577	605	531	0	3940
	(iv) Investment Cost - Relocation	44.06	55.56	56.27	60.61	70.82	81.69	78.93	0.00	447.94
C	**Curative Strategy - (A+B)**									
	(i) No of Slums (A(i)+B(i))	9	7	12	13	9	20	17	3	90
	(ii) No of Households (A(ii)+ B(ii))	1538	1577	1292	1497	1274	1493	1304	768	10743
	(iii) No of Households Proposed for intervention (A(iii) + B(ii))	1350	1369	1099	1374	1201	1318	1181	615	9507
	(iv) Investment Cost – Curative Strategy (A(iv) +B(iv))	113.08	126.13	111.43	153.36	147.38	177.98	175.52	100.57	1105.45
D	**Preventive Strategy**									
	(i) No of housing units to be constructed	456	465	475	484	494	504	514	524	3916
	(ii) Investment Cost – Preventive Strategy	38.18	42.84	48.18	54.04	60.63	68.07	76.39	85.68	474.01
	Total Investment Cost (C(iv) + D(ii))	**151.26**	**168.97**	**159.61**	**207.40**	**208.01**	**246.05**	**251.91**	**186.25**	**1579.46**

Table 5.4 Financial Plan for Curative and Preventive Strategy – Erode Corporation

S. No	ITEM	Year (Rs. in Crores)								Total
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-2022	
1	SFCP INVESTMENT	151.26	168.97	159.61	207.40	208.01	246.05	251.91	186.25	1579.46
1.2	No of affordable housing stock proposed including dormitories and night shelters.									
2	SOURCES OF FUNDING									
2.1	Central Assistance	71.09	79.42	75.02	97.48	97.76	115.64	118.4	87.54	742.35
2.2	State Contribution	69.58	77.73	73.42	95.4	95.68	113.18	115.88	85.68	726.55
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	10.59	11.83	11.17	14.52	14.56	17.22	17.63	13.04	110.56
2.4	Sources to be identified during implementation									
3	**TOTAL SOURCES**	151.26	168.98	159.61	207.40	208.00	246.04	251.91	186.26	1579.46

Tamil Nadu Slum Clearance Board
Coimbatore Division

Minutes of the Co-ordination meeting conducted at Erode City Municipal Corporation Hall on 08.01.2014.

The following Representatives and officials were present.

1. Erode City Municipal Corporation

a. Mayor
b. Deputy mayor
c. Commissioner
d. Executive Engineer
e. Assistant Executive Engineer's
f. Ward Councilors and other officials.

2. Tamil Nadu Slum Clearance Board

a. State level co-coordinator (RAY)
b. Superintending Engineer
c. Executive Engineer
d. Assistant Executive Engineer
e. Community Development Officer and other officials

3. Socio Economic Survey Consultant

a. Director NITTTR
b. Professor's

In general state level RAY Coordinator, RAY Consultants and officials of Tamil Nadu Slum Clearance Board have briefed the activities of Tamil Nadu Slum Clearance Board and motives of RAY schemes in all respects.

Inter action among the representatives of Local body and officials.

1. As suggested by the deputy Mayor, numbers of families in certain schemes have to be verified and included if any left out.
2. Mayor and Deputy Mayor have suggested to include the few schemes which have yet to be identified and surveyed and added in this scheme.
3. The scattered huts in particular scheme may also be included under this scheme as requested by the Ward Councilors.

4. Few schemes which are not located within a Corporation limit and within the LPA limit may also be included in this scheme as suggested by the representatives.
5. Construction of Individual houses may be carried out in accordance with the availability of land ownership so as to attend the plinth area not less than 21.00 Sqm.
6. All the Kucha and semi pacca houses are to be covered under this scheme.

Finally representatives of local body, officials at Tamil Nadu Slum Clearance Board and consultants have gathered and discussed to give further details if any left out the slums to be added under the scheme.

08/01/14.

Executive Engineer
Coimbatore Division