

Rajiv Awas Yojana (2013-2022)

2014

SLUM FREE CITY PLAN OF ACTION - TIRUPPUR CORPORATION



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ABBREVIATIONS

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

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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 slum dwellers and, 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 consent of slum dwellers. Hence, detailed socio economic survey has been carried out in Tiruppur 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 Tiruppur 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 future slums.

Tiruppur Corporation

Tiruppur is a textile city of Tamil Nadu. It is an important trade centre of India which is famous for cotton knitted garment wears. It is

located on the banks of the Noyyal River, which bifurcates the city into two-halves. Tiruppur is basically a traditional center for cotton ginning. Tiruppur exports many textiles items and clothing. Tiruppur is a major source of Foreign Exchange for the country because 90 % of India's

Year	Population	Increase	% of Variation
1961	79,773	27,294	52.0
1971	1,13,302	33,529	42.0
1981	1,65,205	51,903	45.8
1991	2,35,661	70,456	42.6
2001	3,46,551	1,10,890	47.1
2011	8,77,778	5,31,429	153.3 *
* - (Drastic increase in population is due to extension of corporation limit by adding two Municipalities and 8 nos of village panchayats.)Source: Census of India 2011			

cotton knitwear exports to all over the world. It is famous for the export of Hosiery, Knitted Garments, Casual Wear and Sportswear. In 2011 the Tiruppur Corporation area limit was

extended to 159 sq.km, which is encompassing 60 wards, by merging nearby Velampalayam Municipality, Nallur Municipality and Andipalayam, Chettipalayam, Mannarai, Muthanampalayam, Murugampalayam, Veerapandi, Neruperichal, Thottipalayam village panchayats. Tiruppur now has an area of 159 sq.km with the population of 8.78 lakhs as per 2011 census. The population of Tiruppur city has grown from 9,429 in 1911, 8.78 lakhs in 2011. The population has increased nearly 93 times from that it was in the year 1911. Drastic increase in population is due to extension of corporation. Influx people are denied essential services such as clean water, electricity and health care – even though they may live close to these services because of economic background. Too many are forced to live in dangerous and exploitative places in ramshackle dwellings and overcrowded settlements that are highly vulnerable to disease and disaster and face a constant threat of eviction.

Methodology

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

Slums in Tiruppur

Tiruppur Corporation is divided into four zones. Each zone is having 15 wards. City has a total of 129 pockets of slums with 15226 households which is shown in the below table.

After detailed deliberation with corporation officials, community organizers, TNSCB officials, elected representatives etc., list of slums for the project is finalized. Totally 92 slums have been identified for the enumeration purpose under RAY scheme. Details of the slums in Tiruppur (both notified and non-notified) have been collected from the Tiruppur Corporation through Tamil Nadu Slum Clearance Board.

S. No	Name of the Slum	No. of Slums	House Holds
1	Developed Slums by TNSCB (Housing & infrastructure)	2	278
2	Slums not covered under RAY due to Opposition from Slum Dwellers (To be Surveyed)	35	5225
3	Surveyed Slums under RAY	92	9723
Total		129	15226

Soosayapuram West is the largest slum of the city and has a population of 1384 with 360 households and is situated in ward No.46 of zone – IV. Because of various textile industries, 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 to be the important factors contributing to the growth of the slums in Tiruppur Corporation area. The

S.No.	Zones	Wards	Total No. of Slums	Area in sq.km
1	Zone - I	1 to 15	11	30.695
2	Zone - II	16 to 30	20	32.051
3	Zone - III	31 to 45	35	56.268
4	Zone - IV	46 to 60	26	40.245
		TOTAL	92	159 Sq.Km

socio economic survey shows there are 9723 slum households in Tiruppur Corporation covering an area of 159 sq.km

Basic definition of Slum clearly categorizes based on the housing condition and surrounding environment. Housing disadvantage is a complex concept. It usually refers to the adequacy of the structure and associated services; but it may also include aspects of security of tenure and affordability. Three most common indicators of housing adequacy are: (a) Space per person, (b)

Permanent Structures and (c) Housing in compliance with local standards. Main objective of the slum development programmes is to provide decent shelter of minimum acceptable size. Kutchha and Semi pucca houses need to be transformed to pucca structures with due consideration of the land ownership. In Tiruppur Corporation 88.58 % houses constitute are Semi Pucca & Kutchha categories which need to be transformed to Pucca structure to enhance housing status.

Sl.No	Type of Houses	No. of Houses	%
1	Pucca	1110	12
2	Semi Pucca	7718	79
3	Kutchha	895	9
Total		9723	

Water is one of the great necessities of human life. A supply of clean water is absolutely necessary for decent life and health. Yet many people of the world do not have access to clean water or can only obtain it at 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. There is a highest demand for water supply connection in the Zone – III, in which only 10% of households are having individual water tap connection.

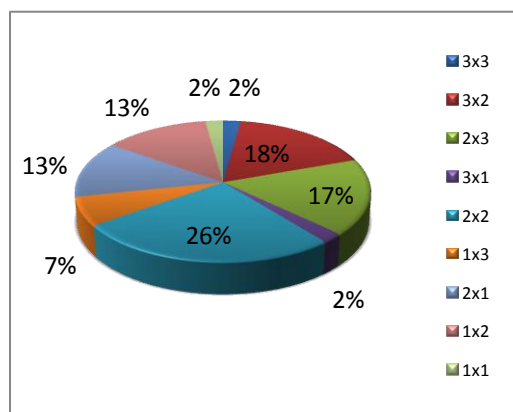
The difference among the levels of service largely owes to the availability of revenue. In Tiruppur Corporation, the corporation made arrangements to collect the solid waste from the slums in different frequency namely daily, alternate days, once in fortnight. Totally 18 slums are not having the facility to dispose off the solid waste. In the surveyed slums of the corporation a total of 87.46 % 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 Tiruppur 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 46 slums with 5948 households 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	08	527	15	1329	15	1048	08	871	46	3775
Untenable	03	631	05	399	20	2160	18	2758	46	5948
Total	11	1158	20	1728	35	3208	26	3629	92	9723

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 Tiruppur 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 2% of the slums in Tiruppur Corporation come under the category of 1x1 matrix and 26% of slums come under the category of moderate vulnerability and infrastructure. Hence,

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focus needs to be towards providing basic infrastructure to improve the living environment of slums. The following table lists the Tenable slums in Tiruppur city.

Tenable					
S.No.	Zone	Code	Slum Name	Total HHs	Matrix
1	01	012	Bharathidasan colony	53	2x2
2	01	012	Murugampalayam	50	1x1
3	01	013	Nathakadu	86	1x3
4	01	013	NathakaduThottam	10	1x3
5	01	013	Mascow Nagar	78	2x1
6	01	013	Sathya Nagar	85	1x2
7	01	014	KavilipalayamPudur	30	2x3
8	01	014	Sirupoluvapatti	135	2x2
9	02	018	Vavipalayam	84	3x2
10	02	018	May Nagar	68	2x2
11	02	018	Sedarpalayam	81	1x2
12	02	018	Bharathi Nagar	158	1x3
13	02	018	AD Colony (JJ Nagar Part - 1)	66	1x2
14	02	018	MGR Nagar part 2 (JJ Nagar Part- 2)	91	1x2
15	02	018	Thirunangaikal Street (JJ Nagar Part - 3)	15	1x2
16	02	020	Boyampalayam	69	2x3
17	02	021	Arvoli Nagar AD Colony	48	2x2
18	02	021	ThottiMannari	48	2x1
19	02	021	Arvoli Nagar	110	1x2
20	02	023	Kongu Nagar Harijan Colony	218	3x2
21	02	025	Lakshmi Ammal Nagar	41	2x2
22	02	030	Kumarasamy Nagar AD Colony	183	2x1
23	02	030	Keethampalayam	49	2x1
24	03	031	NGR Colony	86	2x2
25	03	032	KarumampalayamHarijan Colony	72	3x2
26	03	032	MannaraiHarijan Colony	63	3x2
27	03	035	Nallur	134	3x2
28	03	035	Pudupalayam	65	2x3
29	03	035	Chinimalaipalayam	23	2x2
30	03	035	Kuppandampalyam	54	2x3
31	03	035	Vanjiveranpudur MGR Nagar	57	2x3
32	03	035	Kalipalayam	23	2x2
33	03	036	Muthunampalayam	110	3x2
34	03	036	Amaravathipalayam	65	2x3
35	03	036	M. Pudupalayam	76	2x3

36	03	037	Savandhapalayam	58	3x3
37	03	042	Kattuvalu	48	2x2
38	03	044	Semmedu	114	2x1
39	04	046	Chinnannagar	259	2x2
40	04	046	Military colony	249	2x1
41	04	059	ChinnyaGoundarPudur	31	3x2
42	04	059	Chinnandipalayam AD Colony	60	2x2
43	04	060	Rajaganapathy Nagar AD Colony	28	3x2
44	04	060	Kuruji Nagar	100	2x3
45	04	060	Kamaraj Colony	86	3x1
46	04	060	Rajaganapathy Nagar (Kulathupudur)	58	2x2
Total				3775	

Untenable Slum Prioritization

In Tiruppur corporation 50% of slums are falling in untenable category, which is having 61% of slum households. When compare with other nearby cities, the Tiruppur is having more families in the untenable location. 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 Tiruppur city

Untenable					
S.No.	Zone	Code	Slum Name	Total HHs	Ranking
1	01	002	Thriuvallar Nagar	83	3
2	01	013	College Road & Railway Line & Jawan Nagar	352	2
3	01	013	Konganagiri	196	3
4	02	019	Anna Nagar	150	3
5	02	023	Railwayline (KuthoosPuram Anna Nagar)	91	3
6	02	025	Harvey Road	37	2
7	02	026	Muniyappan Colony	46	2
8	02	030	Poomparai	75	3
9	03	032	Palayakad River Side	34	1
10	03	032	Vaikalpalayam	63	2
11	03	035	KasiPalayam	36	1
12	03	036	Kovilvazhi	103	2
13	03	042	Anna Nagar	118	1
14	03	042	Dharapuram TMC Colony	77	2

EXECUTIVE SUMMARY

15	03	042	Nataraj Theatre East	27	1
16	03	042	Nethaji Nagar	128	2
17	03	042	Pattukottiar Nagar	96	2
18	03	042	Perichapalayam Annamar Colony South	84	2
19	03	042	PKR Colony	80	2
20	03	042	Rajiv Gandhi Nagar	44	2
21	03	042	Sangalipplam Part 1 & Part 2	47	1
22	03	042	TulasiRao Street	175	1
23	03	043	Periyathottam	87	1
24	03	044	AnnaiSathya Nagar	217	1
25	03	044	AnnaiSathya Nagar Extension	116	1
26	03	044	Quaith-E-Millath Nagar	313	1
27	03	044	Sukumar Nagar	267	2
28	03	045	Chelladi Amman Durai	48	1
29	04	046	Anaimedu	219	1
30	04	046	Indira Nagar Colony	142	3
31	04	046	Kallapalayam Road	114	2
32	04	046	MGR Nagar	196	3
33	04	046	Soosayapuram East	247	2
34	04	046	Soosayapuram West	360	2
35	04	049	Jammanai Street	11	1
36	04	049	LRG L/O	41	2
37	04	049	MGR Colony	85	1
38	04	049	Petichettipuram	64	2
39	04	049	Pon Nagar	11	1
40	04	050	Poombukar West	322	3
41	04	050	Santhaipettai (Dr. Ambedkar Nagar)	234	2
42	04	050	TMC Colony Kamarjar Road	224	2
43	04	056	Alankadu	124	2
44	04	056	KVR Nagar	149	2
45	04	056	Odaikarai (KVR Nagar Part -2)	176	1
46	04	056	ThanthaiPeriyar Nagar	39	1
Total No. of HHs in all slums				5948	

Totally 17 Nos. of untenable slums are falling in the rank 1 category. Hence, immediate action is to be taken to relocate these slums.

Slum Development Options

i. Objectionable Slums

Out of 92 slums, 46 slums are found to be located in objectionable zone. This constitutes 5948 of the households. Around 11.20 acres of vacant lands are identified by TNSCB, 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 analyze 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 120 housing units can be built in one acre land. Hence the requirement of the land for the curative measures is around 60 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 46 slums are falling under the stable land tenure. Even though more than 60% of slum dwellers are not possessing patta.

iii. Infrastructure

One of the tenable slums in Tiruppur Corporation is having very good infrastructure facility, but the housing condition is very poor. Hence it is falling in the 1x1 matrix. 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 cause the flood during the rainy season.

iv. Livelihood status

Livelihood status is mainly depending upon the educational status of the slum dwellers. The numbers 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 26%. Only 3% of slum dwellers are having diploma and higher qualification. Due to the vulnerable and weak socio-economic status, school dropouts are more in the Tiruppur slums. A total of 62% of households in slum area of Tiruppur 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 status of living condition of slum dwellers to meet the basic amenities without any vulnerability.

To improve the livelihood of the slum dwellers, the data from the socio economic survey at Tiruppur 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 compensation 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 Tiruppur 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. Most of the people living in poor structural quality of housing and in insecure place. Plan out slum improvement strategies with respect to infrastructure in 92slums under RAY in a phased manner.
2. Improve the livelihood conditions of slum people by providing training in operation of earth moving equipments, Motor mechanic, Carpentry, Deying, Embroidering 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 9723 households, 9010 HHs need to be intervened at total cost of Rs. 1042.18crores. Housing is not an obligatory duty of the local body though planning of city is highly influenced by the housing sector and regulation mechanism. Housing reflects the economy & quality of life of any urban area. Poor planning mechanism leads to slums & illegal growth. Therefore it is necessary to form housing strategy for better city and reduce the proliferation of slums, other illegal developments. For the preventive strategy, based on 2011 census the future house demand has been arrived. The projected housing demand at the end of 2022 is 4034 households which require cost of Rs. 488.30crores. For Tiruppur city total cost is arrived to Rs 1530.48 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

The problem of inadequately serviced and overcrowded urban housing dates back when the humanity first began to live in cities
-UN-Habitat 2010

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 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.

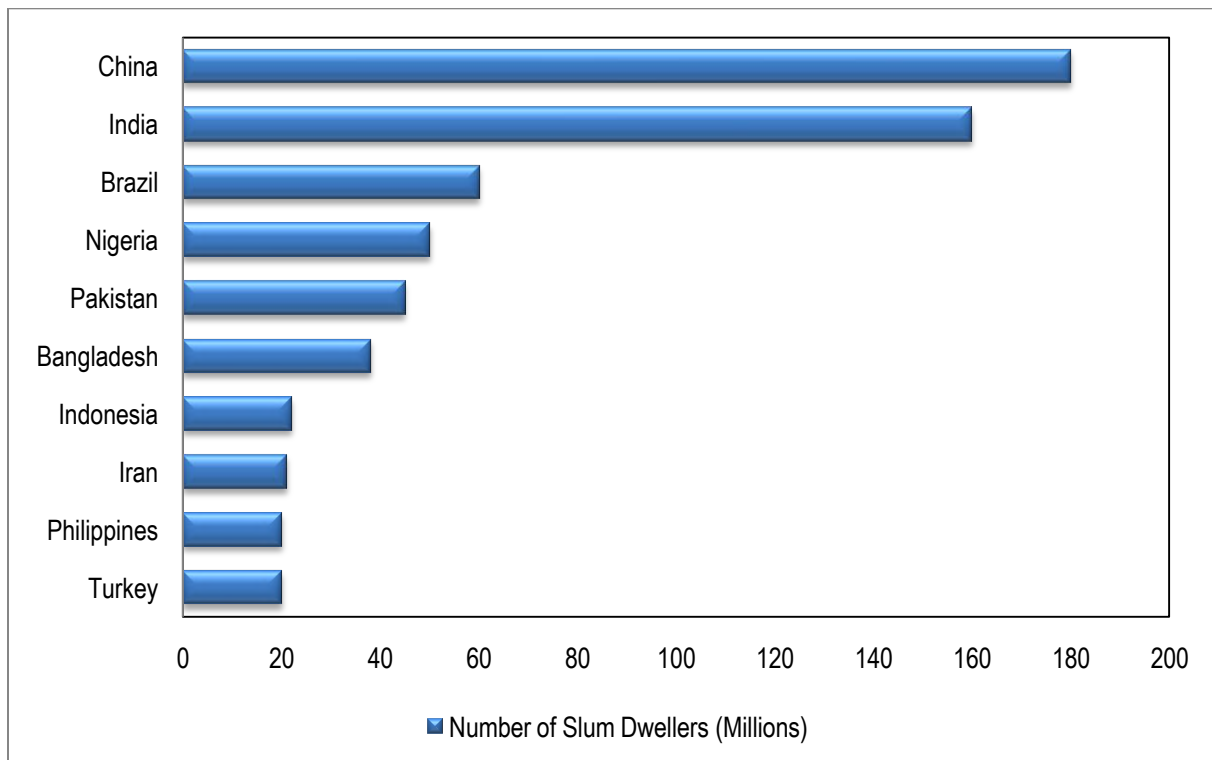


Fig.1.1 Number of slum dwellers - Top 10 countries (Source: UN Habitat Report, 2003)

The Global Hunger Index (GHI) report (2013) places India in 63rd position, 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

1.2.1 UNDERSTANDING SLUMS

The term 'slum' is used in this report in a general context to describe a wide range of low-income settlements and or poor human living conditions. There exists inadequate explanation about the definition of slums. 'Slum', at its simplest, is *'a heavily populated urban area characterized by substandard housing and squalor'*. This definition encapsulates the essential characteristics of slums: high densities and low standards of housing (structure and services), and 'squalor'. The first two criteria are physical and spatial, while the third is social and 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

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

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 inadequate light, air, toilet and bathing facilities; that are in bad repair, dump and improperly heated; that do not afford opportunity for family privacy; that are subject to fire hazard and that overcrowd the land, leaving no space for recreational use.

Registrar General 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.

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

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 1.1 Indicators 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 liters/person/day available within an acceptable collection distance.

Characteristics	Indicator	Definition
Access to Sanitation	Inadequate sanitation (MDG indicator 31)	<p>A settlement has an inadequate sanitation if less than 50% households have an improved sanitation:</p> <ul style="list-style-type: none"> a) Public sewer b) Septic tank c) Pour-flush latrine d) Ventilated improved pit latrine <p>The excreta disposal system is considered adequate if it is private or shared by a maximum of two households.</p>
Structural quality of housing	a. Location	<p>Proportion of households residing on or near a hazardous site. The following locations should be considered:</p> <ul style="list-style-type: none"> • 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	<p>Proportion of households living in temporary and/or dilapidated structures. The following factors should be considered when placing a housing unit in these categories:</p> <ul style="list-style-type: none"> • Quality of construction (e.g., materials used for wall, floor and roof); • Compliance with local building codes, standards and bylaws;
Overcrowding	Overcrowding	<p>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)</p>
Security of tenure	Security of tenure (MDG indicator 32)	<ul style="list-style-type: none"> • Proportion of households with formal title deeds to both land and residence; • Proportion of households with formal title 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 of 50,000 or more as per the Census 1991. Slum population was reported from

640 towns of 26 States/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.

1.3. 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 programs 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 Programs of this Ministry are:

- Jawaharlal Nehru National Urban Renewal Mission(JNNURM): Basic Services to the Urban Poor (BSUP) & Integrated Housing & Slum Development Programme (IHSDP)
- SwarnaJayanti 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	1070	294	101	163	29

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

Urban poverty and slums are emerging as critical issues of public policy. The locus of poverty appears to be shifting to cities. The conditions of the poor in slums are in some respect inferior to those in rural areas. Recognizing the need to focus on the development and up gradation of slums with basic amenities and affordable housing, The scheme of RAY is a very recent scheme, which evolved from the Scheme for Slum-Free City Planning (SFCP) under RAY, after the announcement of RAY by the President of India in June 2009 to the full-fledged scheme of RAY approved by the Cabinet Committee of Economic Affairs (CCEA) in June 2011. On 30th July 2011, the Mo HUPA organized a Conference of State Ministers of Housing, Urban Development, Municipal Administration Local Self-Government to announce the launch of, discuss, and solicit feedback on the scheme. Her Excellency the President of India has announced Rajiv Awas Yojana aimed at ushering in Slum-free Urban India.

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

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

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

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

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

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

The key suggestions that emerged from the RAY scheme include:

- Increase of central support from 50 per cent to a higher percentage (most suggested 80 per cent).
- Integrated Housing & Slum Development Programme (IHSDP) (under JNNURM) served the small and medium towns. However under RAY, there is no emphasis on the small and

medium towns. Therefore, there should be no mid-course change of IHSDP, and IHSDP should continue to service the small and medium towns not covered under RAY; RAY envisage covering cities with a population of 3 lakh persons and above.

- Basic minimum civic facilities to the urban poor should be guaranteed.
- RAY is technologically intensive and this may prove counter-productive especially for smaller cities.
- States should be given the flexibility to implement reforms and not be straitjacketed in this issue with prescriptions from the central government.
- In promoting the construction of houses under RAY, flexibility to states should be given in the norms of house construction across different city sizes.
- In hilly states and special category states, particular attention must be paid to the need for states to interact with the Forest Department in the acquisition of land for housing urban poor. Further escalation of cost of projects due to the hilly terrain should be considered at the time of both DPR preparation, as well as fund releases.
- 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. Fig.1.2 shows that the National Urban Poverty Alleviation Mission (NUPAM) for targeting reduction of vulnerabilities. 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.

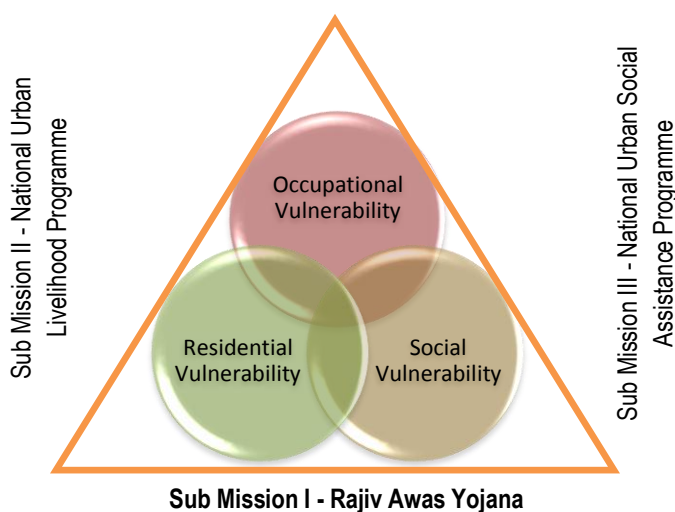


Fig.1.3 National Urban Poverty Alleviation Mission (NUPAM): targeting reduction of vulnerabilities

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 Tiruppur. 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 Tiruppur city (consisting of 4 zones) and development of road maps of activities that lead realization of Tiruppur 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.

1.4. OBJECTIVE AND SCOPE OF THE PROJECT

Global Objective: To implement the RAY guidelines and make the cities of Tamil Nadu SlumFree Cities. As per the scheme ten cities have been identified in Tamil Nadu (TN) namely Chennai, Madurai, Coimbatore, Tiruchirappalli, 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, Golas 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, Tiruchirappalli and Tiruppur. As per the scope of the project the survey had been carried out at the corporation of Tiruppur.

CHAPTER 2 TIRUPPUR CITY PROFILE

2.1 CITY AN OVERVIEW

Tiruppur is a textile city of Tamil Nadu. It is an important trade centre of India which is famous for cotton knitted garment wears. It is located on the banks of the Noyyal River, which bifurcates the city into two-halves. It is the administrative headquarters of Tiruppur district. Tiruppur is basically a traditional centre for cotton ginning. Tiruppur exports many textiles items and clothing's. Tiruppur is known as Dollar City, Knit City, Cotton City and Hosiery Centre. Tiruppur is a major source of Foreign Exchange for the country because 90 % of India's cotton knitwear exports to all over the world. It is famous for the export of Hosiery, Knitted Garments, Casual Wear and Sportswear.

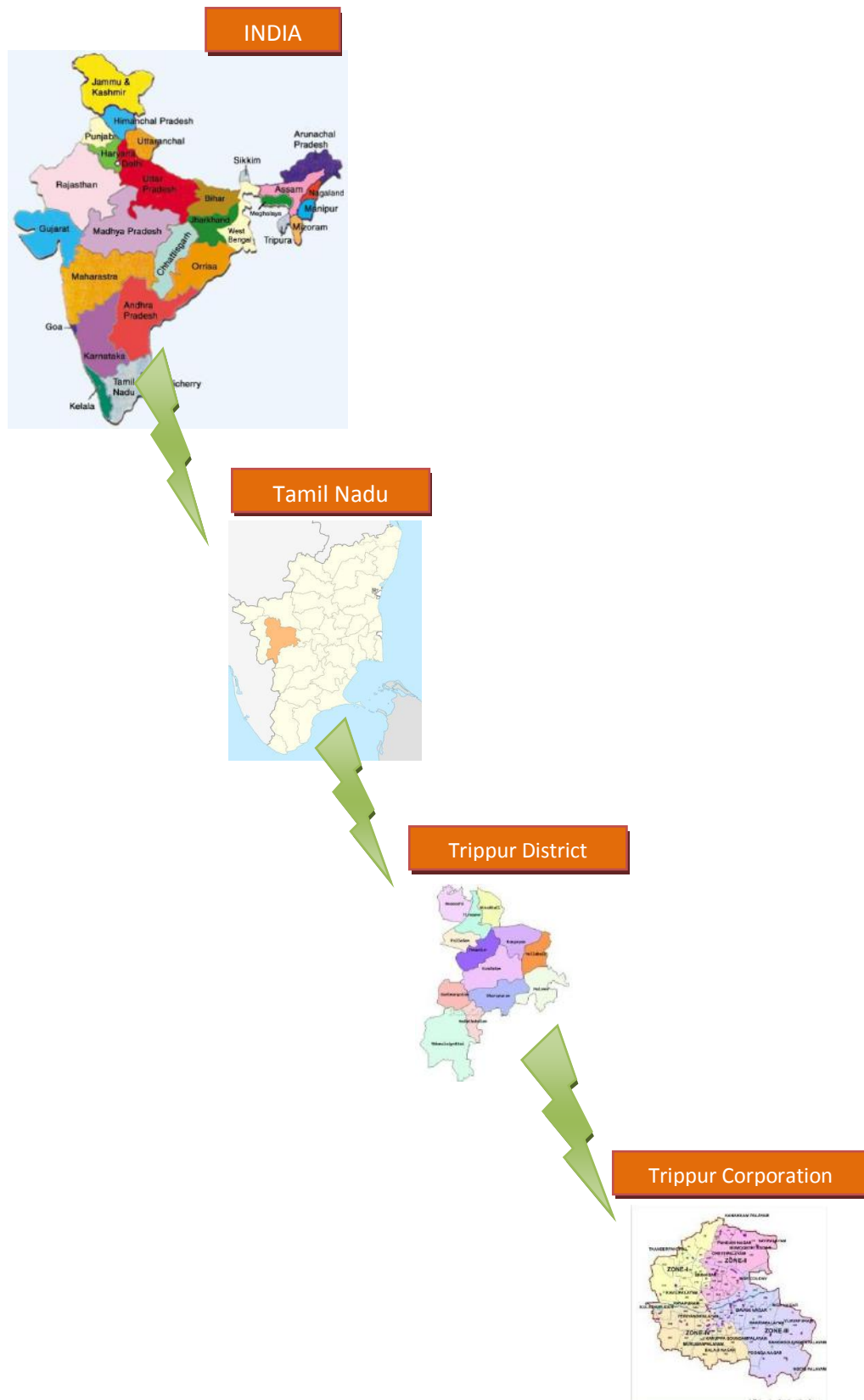
2.1.1 History

Tiruppur is located in a region that was a part of the ancient Chera Empire as well as the Kongu Nadu region. The region came under the control of the British at the conclusion of the Polygar War in 1805. It is evident from the earliest Chola stone carvings that the land around Tiruppur was fertile and thus agriculture flourished in the region.

The first baniyan factory in Tiruppur was started in 1925. With the advent of electricity in 1931, more knitting and weaving factories came into existence. There were only 34 hosiery factories in 1942, which is increased to 250 in 1968. Knitwear exports from Tiruppur continued to flourish throughout the 70s & 80. Due to the exponential industrial growth, since 1980s the vacancy for man power rose to surplus which became the source of living for people from other areas of Tamilnadu. Now Tiruppur also hosts workforce migrated from other areas of the country too.

2.1.2 Geography

The corporation is situated at a distance of 448 km to the South-West of Chennai and at the intersection of 70° 22' E Longitude and 11° 6' N latitude. River Noyyal is originating from the Velliangiri hills and flowing through the city, which bifurcate the corporation. The average Elevation of the city is ranging between 290m and 322m above MSL. The Western Ghats are located near west. The city is spread over an area of 159 sq.km, with a population of 8.78 lakhs as per 2011 census. Fig. 2.1 is showing the location map of the Tiruppur corporation.



2.1.3 Geology

With regards to geology, the town lies in the black cotton zone and black loam / black clay soils are predominant in the region. The water retention capacity of the black soil of the region is conducive for the cultivation of cotton. Also found in the region are alluvial rocks, few arterial formations and lime stone deposits.

2.1.4 Climate and Rain fall

The city has an area of 159 sq. km, the southern and south western parts gets maximum rainfall, due to the adjacent Western Ghats. The rest of the places of the city falls in the rain shadow region of the Western Ghats and experiences salubrious climate most parts of the year, except the extreme east part of the city. The mean maximum and minimum temperatures of Tiruppur city during summer and winter vary between 35°C to 18°C.

The average annual rainfall is around 700 mm with the North East and the South West monsoons which are contributing 47% and 28% respectively to the total rainfall. The major rivers flowing through the district are Noyyal and Amaravathi.

2.2 Overview of the ULB

Tiruppur started off as a small union and became a town with the addition of Karuvampalayam, Thennampalayam and Valipalayam villages on 1st of December 1917. One of the earliest activities of the Tiruppur Municipality was the setting up of a Cotton Market Committee. The Committee decided on utilizing the monetary benefits through the trade for improving the civic facilities in the town. Tiruppur was upgraded to grade I municipality in 1938. In 1976 the Local Planning Area was constituted. In 1983, it had been elevated to special grade municipality. The town was upgraded as a City Municipal Corporation with 52 Councillors from 1.1.2008. As per G.O.Ms.No.11, M.A.W.S. Department dt.06.01.2011, and G.O.Ms.No. 89, M.A.W.S. (Election) Department dt. 28.06.2011. Nearby 15 Velampalayam Municipality, Nallur Municipality and Andipalayam, Chettipalayam,



Mannarai, Muthanampalayam, Murugampalayam, Veerapandi, Neruperichal, Thottipalayam village panchayats are merged with Tiruppur City Municipal Corporation. w.e.f. 25.10.2011. Table 2.1 shows the information about Tiruppur ULB.

Table 2.1 Information about Tiruppur ULB

S. No.	Title	Information
1	Name of the ULB	Tiruppur corporation
2	Area of the Municipal Corporation (sq.km.)	159
3	No. of Zones	4
4	No. of Wards	60
5	Total Population (Census 2001) in Lakhs	3,46,551
6	Total Population (Census 2011) in Lakhs	8,77,778 *

* - (Drastic increase in population is due to extend of corporation limit by adding 2nos of Municipalities and 8nos of village panchayats.)

Source: Census 2011

The total area of the corporations is divided into 60 electoral sections. Total population of the city as per 2011 census is 8,77,778. The floating population of the town an average 1,50,000. The corporation is administered by City Municipal Corporation, headed by a Mayor and the executive body is looked after by the corporation commissioner.

Tiruppur has witnessed strong economic growth over the last decade. With a rapidly growing hosiery industry and an ever rising export demand for quality garments, the town has been in the limelight of the textile trade. There are about 4720 industrial units in Tiruppur town. Most of them are knitwear and related industries. Most of the dyeing and bleaching units are located in and around Veerapandi, Andipalayam and Nallur villages with the base of Jamanai Pallam, Noyyal River and other



channels. The other supporting service units like cartons, labels, polyethylene bags, elastic tapes and baniyan companies and mainly located along the main corridor like Avinashi road, Palladam road and Perumanallur road.

Table 2.2 Decade wise population growth and variation of Tiruppur city

Year	Population	Increase	% of Variation
1911	9,429		
1921	10,851	1,422	15.1
1931	18,059	7,208	66.4
1941	33,099	15,040	83.3
1951	52,479	19,380	58.6
1961	79,773	27,294	52.0
1971	1,13,302	33,529	42.0
1981	1,65,205	51,903	45.8
1991	2,35,661	70,456	42.6
2001	3,46,551	1,10,890	47.1
2011	8,77,778	5,31,227	153.3 *

* - (Drastic increase in population is due to extend of corporation limit by adding Two Municipalities and Eight village panchayats.)

Source: Census of India 2011

The population in Tiruppur is spread over an area of 159 sq. km with a density of 5,522persons/ sq.km. The population of Tiruppur city has grown from 9,429 in 1911 to 8.77 lakhs in 2011. The Table 2.2 shows the decadal growth and variation of population within corporation area, from 1911. It is seen that the population has increased nearby 93 times from that it was in the year 1911. The increase in population in the year 2011 is due to extension of City boundary. Fig. 2.2 shows the variation of population for the past five decades.

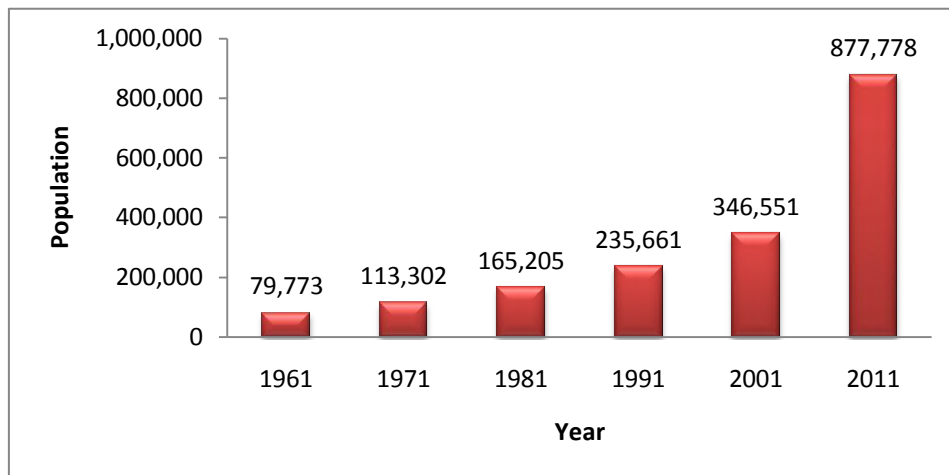


Fig. 2.2 Variation of city population for the five decades

2.3 Diagnostic assessment of slums

Population growth and governance are the two main reasons for the slum growth 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 Tiruppur Corporation.

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

Secure tenure provides chance to access economic and social facilities, including safety, public services and livelihood opportunities. It is particularly difficult for the urban poor to obtain tenure because property registration processes are complicated and expensive. Therefore, slum areas are coupled with a high number of cramped and not planned housing usually constructed using non-permanent materials such as wall with mud mortar, Asbestos sheet and roofs with straw, tiles. Floors are usually made of earth. Because of the



Poverty, slum dwellers are unable to afford decent housing structures. Such structures usually do not meet any building regulation requirements. This is often cited as one of the main characteristics of slums. This includes (a) lack or inadequate access to safe drinking water and sanitation; (b) Sub-standard housing and inadequate structure (c) Hazardous locations (d) Overcrowding and high density and (e) Security of tenure. This is a very common feature of the slums in the region of Tiruppur Corporation. Such conditions are better in some areas compared to others.

2.4 SURVEYS, INVESTIGATIONS AND CONSULTATIONS

Tiruppur city has a total of 129 pockets of slums with 15226 households are distributed in four zones. Detailed list of the slums in Tiruppur have been collected from the Tiruppur Corporation through TNSCB officials. The abstract of slums in Tiruppur Corporation is given in the Table 2.3

Table 2.3 Details of Slums in Tiruppur Corporation

S.No	Name of the Slum	No. of Slums	House Holds
1	Developed Slums by TNSCB(Housing & infrastructure)	2	278
2	Slums not covered under RAY due to Opposition from Slum Dwellers	35	5225
3	Surveyed Slums under RAY	92	9723
Total		129	15226

2.4.1 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, Tiruppur has housing and infrastructure facility in the below mentioned which are shown in the Table 2.4.

Table 2.4 Details of Slums in Tiruppur Corporation

S.No.	Name of the Slum	Remarks	House Hold
1	Ramamoorthy Nagar	Tenable Slum TNSCB Development under TNUDP	38
2	Chellandi Amman Koil Scheme	Tenable Slum TNSCB Development under TNUDP	240
Total			278

2.4.2 Slums not Surveyed under RAY due to Objection 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 5225 households of 35 slums. The slum details are given in the Tables 2.5 to 2.8.

Table 2.5 Slums in Zone - I not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Hold
1	1	Pattathuarasi Amman Koil Arunthathiar Colony	Tenable Slums	110
2	1	Pudu Colony	Tenable Slums	80
3	2	BharathiNagar	Tenable Slums	200
4	2	AmbedkarNagar	Tenable Slums	45
5	2	AmbedkarNagar Odai	Untenable Slums	50
6	2	AthupalayamAD colony	Tenable Slums	480
7	2	Thiruvalluvar Nagar	Tenable Slums	140
8	3	Chettipalayam AD Colony	Tenable Slums	85
9	3	Ottarpalayam	Tenable Slums	50
10	3	Koothampalayam AD Colony	Tenable Slums	30
11	3	Indira Nagar	Tenable Slums	275
12	4	Angeripalayam AD Colony West	Tenable Slums	52
13	4	Vengamedu AD Colony	Tenable Slums	48
14	4	Hangeripalayam AD Colony East	Tenable Slums	43
15	4	V P Chinthan Nagar	Tenable Slums	68
16	5	Sathya Nagar	Tenable Slums	80
17	5	Kamaraj Colony	Tenable Slums	60
18	6	Nethaji Nagar	Tenable Slums	95
19	6	Murugan Colony	Tenable Slums	30
20	8	Ashamillabour Colony	Tenable Slums	100
21	8	BharahidasanNagar	Tenable Slums	160
22	4	Thiyagi Palanisamy Nagar	Tenable Slums	45
Total No. of HHs				2326

Table 2.6 Slums in Zone - II not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Hold
1	18	MAY Nagar Nesavalur Colony	Untenable Slums Objectionable land	120
2	18	Nadar Colony	Untenable Slums Objectionable land	25
3	18	Pappanaickanur	Untenable Slums Objectionable land	45
4	21	Kanjampalayam	Untenable Slums Objectionable land	60
5	23	AS Pandit Nagar	Untenable Slums Objectionable land	200
Total No. of HHs				450

Table 2.7 Slums in Zone - III not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Hold
1	43	Anna nagar, Tirupur	Tenable Slum TNSCB Development under TNUDP	75
2	44	Sugumar Nagar	Tenable Slum TNSCB Development under TNUDP	491
Total No. of HHs in South Zone				566

Table 2.8 Slums in Zone - IV not covered under RAY due to Opposition from Slum Dwellers

S.No.	Ward No	Name of the Slum	Remarks	House Hold
1	47	Periathottam MGR Nagar	Tenable Slum TNSCB Development under TNUDP	67
2	49	Jammani	Tenable Slum TNSCB Development under TNUDP	54
3	50	Muthaian Nagar	Tenable Slum TNSCB Development under TNUDP	201
4	56	KVR Nagar	Tenable Slum TNSCB Development under TNUDP	125
5	56	KVR Nagar Anna Nagar	Tenable Slum TNSCB Development under	36

			TNUDP	
6	LPA	Arumuthampalayam Phase - I & II	Tenable Slum TNSCB Development under TNUDP	1400
Total No. of HHs in South Zone				1883

After detailed deliberation with corporation officials, community organizers, TNSCB officials, elected representative etc., list of slum for the project is finalized. Totally 92 slums have been enumerated under RAY scheme. The details of the slums are shown in Table. 2.9. Henceforth, statistical analysis presented in the report will reflect only the survey slums.

Table 2.9 Zone and Ward details of Tiruppur City

S.No.	Zones	Wards	Total No. of Slums with wards	Area in sq.km
1	Zone - I	1 to 15	11 (2,12,13,14)	30.695
2	Zone - II	16 to 30	20(18,19,20,21,22,23,25,26,30)	32.051
3	Zone - III	31 to 45	35(31,32,35,36,37,42,43,44,45)	56.268
4	Zone - IV	46 to 60	26(46,48,49,50,56,59,60)	40.245
	Total		92 slums in 29 wards	159 sq.km

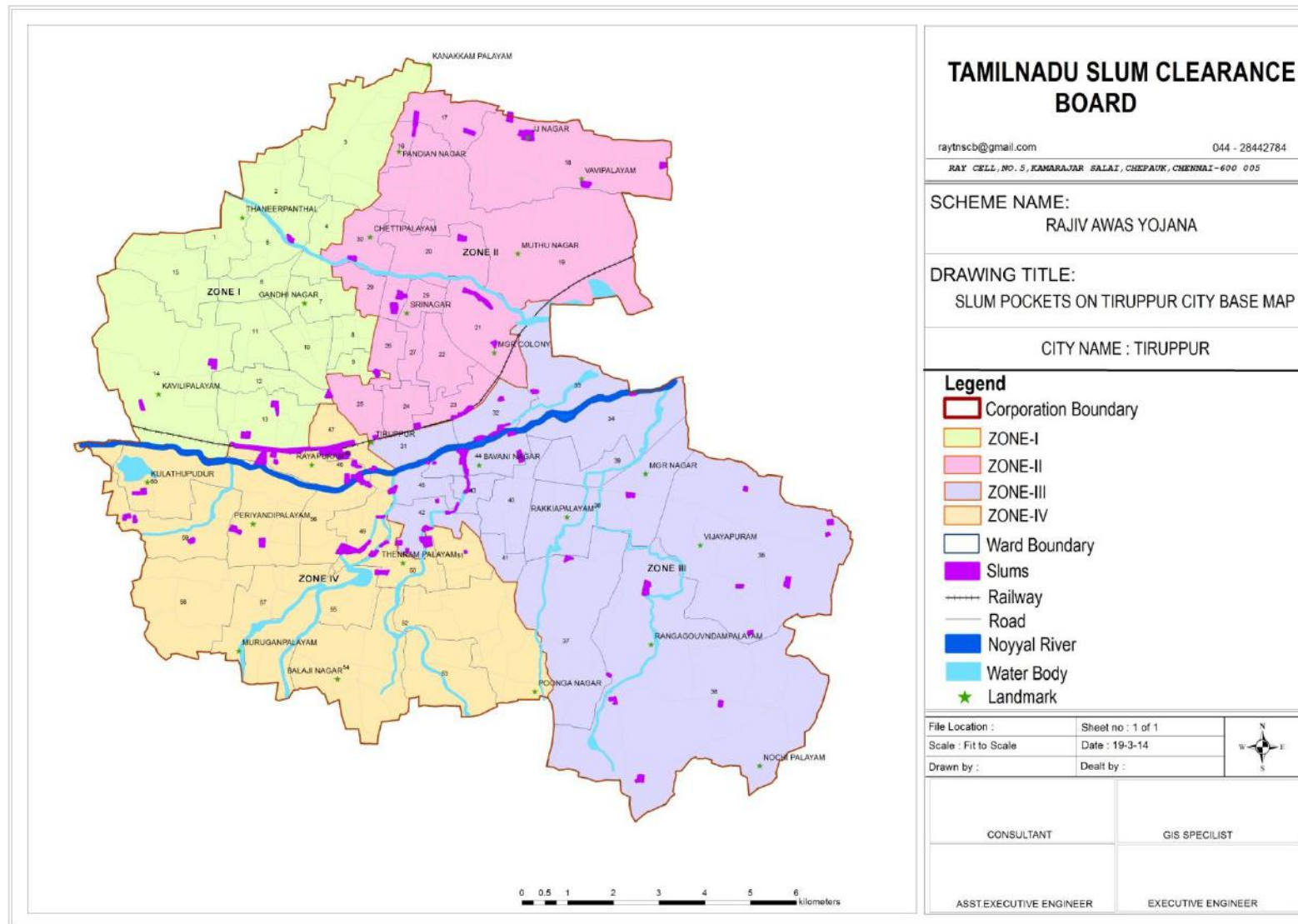


Fig. 2.3 Base Map with location of slums

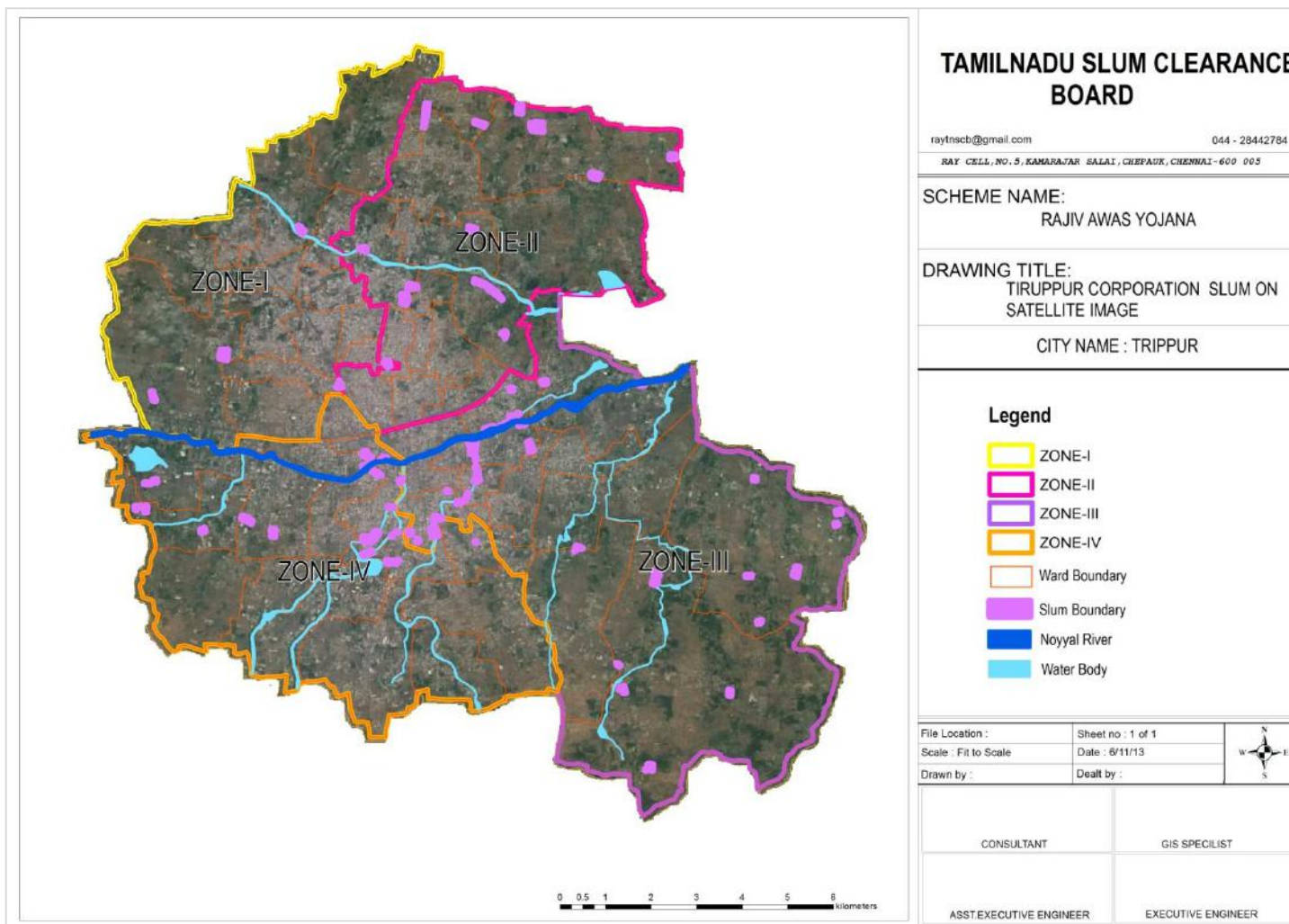


Fig. 2.4 Spatial distribution of slums on satellite imagery

Satellite map of Tiruppur Corporation along with locations of slums is shown in Fig. 2.4. Base map of Tiruppur 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, ground verification 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.

Step 5: Preparation of Slum Map of the city and its fringes using GIS with Quick Bird images, ground level spatial data collected through GPS, collating spatial information with respect to boundaries, network of basic infrastructure like roads, sewerage, storm drainage and water

lines, etc. and superimposing this on the satellite image and importing them into GIS platform.

Step 6: Entry of data from Slum Surveys in the web-enabled MIS application, compilation and collation of data, preparation of slum-wise. The MIS will assist in developing a robust Slum and Slum Households Information System. Methodology followed for enumeration is shown in Fig. 2.5

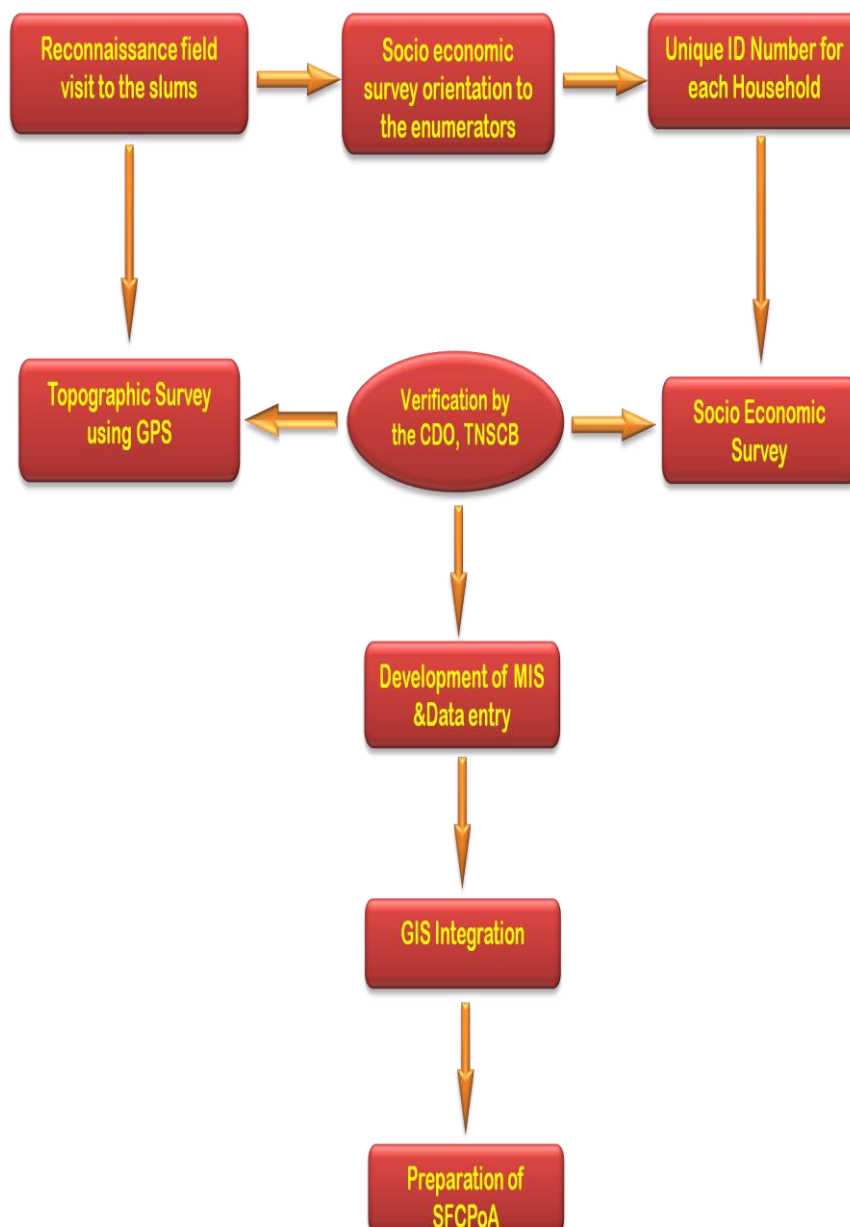


Fig 2.5 Methodology deployed for preparing SFCPoA

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

First Slum Enumeration Block (EB) is demarcated based on the information provided by TNSCB officials as well as information obtained from Tiruppur 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 government officials including the Mayor of Tiruppur 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 requirement and support required for the project at various stage. In addition to the programme slum dwellers and local NGOs are also consulted

(ii) City level consultation:

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

(iii) Ward level consultation:

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



Fig 2.6 Consultative Meeting with Mayor, Commissioner and Councillors

(iv) Slum level consultation:

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

The Tamil Nadu Slum Clearance Board confers with ULB, public and private agencies and conducts consultative meetings to obtain essential input for Slum Free City Plan of Action, from elected people representatives as well as from progressive citizens. In Tiruppur consultative meeting with stake holders, public and other government official has been conducted in connection with Rajiv Awas Yojana. Fig 2.6 shows the consultative meeting which conducted in Tiruppur Corporation with Mayor, Commissioner, Councillors and other government officials.

Tiruppur city presents lots of scope for employment in various textile industries sectors. Owing to rapid development in and around the city, the rural poor have been attracted, which has resulted in formation of slums. Totally 92 slums have been identified for the enumeration purpose under RAY scheme. Table 2.10 lists the name of the slums in the four zones of Tiruppur Corporation with number of households.

Table 2.10 Slums in Tiruppur Corporation

S.No	Zone	Ward	Name of slum	Number of Households
1	01	012	Bharathidasan Colony	53
2	01	013	College Road & Railway Line &Jawan Nagar	352

3	01	014	Kavilipalayam Pudur	30
4	01	013	Konganagiri	196
5	01	013	Mascow Nagar	78
6	01	012	Murugampalayam	50
7	01	013	Nathakadu	86
8	01	013	NathakaduThottam	10
9	01	013	Sathya Nagar	85
10	01	014	Sirupoluvapatti	135
11	01	002	Thriuvalluvar Nagar	83
12	02	018	AD Colony (JJ Nagar Part - 1)	66
13	02	019	Anna Nagar	150
14	02	021	Arvoli Nagar	110
15	02	021	Arvoli Nagar AD Colony	48
16	02	018	Bharathi Nagar	158
17	02	020	Boyampalayam	69
18	02	025	Harvey Road	37
19	02	030	Keethampalayam	49
20	02	023	Kongu Nagar Harijan Colony	218
21	02	030	Kumarasamy Nagar AD Colony	183
22	02	025	Lakshmi Ammal Nagar	41
23	02	018	May Nagar	68
24	02	018	MGR Nagar part 2 (JJ Nagar Part- 2)	91
25	02	026	Muniyappan Colony	46
26	02	030	Poomparai	75
27	02	023	Railway Line (KuthoosPuram Anna Nagar)	91
28	02	018	Sedarpalayam	81
29	02	018	Thirunagaikal Street (JJ Nagar Part - 3)	15
30	02	021	ThottiMannari	48
31	02	018	Vavipalayam	84
32	03	036	Amaravathipalayam	65
33	03	042	Anna Nagar	118

34	03	044	AnnaiSathya Nagar	217
35	03	044	AnnaiSathya Nagar Extension	116
36	03	045	Chelladi Amman Durai	48
37	03	035	Chennimalaipalayam	23
38	03	042	Dharapuram TMC Colony	77
39	03	035	Kalipalayam	23
40	03	032	KarumarampalayamHarijan Colony	72
41	03	035	Kasipalayam	36
42	03	042	Kattuvalu	48
43	03	036	Kovilvazhi	103
44	03	035	Kuppandampalyam	54
45	03	036	M. Pudupalayam	76
46	03	032	MannaraiHarijan Colony	63
47	03	036	Muthunampalayam	110
48	03	035	Nallur	134
49	03	042	Nataraj Theatre East	27
50	03	042	Nethaji Nagar	128
51	03	031	NGR Colony	86
52	03	032	Palayakad River Side	34
53	03	042	Pattukottiar Nagar	96
54	03	042	PerichapalayamAnnamar Colony South	84
55	03	043	Periyathottam	87
56	03	042	PKR Colony	80
57	03	035	Pudupalayam	65
58	03	044	Quaith-E-Millath Nagar	313
59	03	042	Rajiv Gandhi Nagar	44
60	03	042	Sangalipllam Part 1 & Part 2	47
61	03	037	Savandhapalayam	58
62	03	044	Semmedu	114
63	03	044	Sukumar Nagar	267
64	03	042	Tulasirao Street	175

65	03	032	Vaikalpalayam	63
66	03	035	VanjiveranPudur MGR Nagar	57
67	04	056	Alankadu	124
68	04	046	Anaimedu	219
69	04	046	Chinnan Nagar	259
70	04	059	Chinnandipalayam AD Colony	60
71	04	059	ChinnyaGoundarPudur	31
72	04	046	Indira Nagar Colony	142
73	04	049	Jammanai Street	11
74	04	046	Kallapalayam Road	114
75	04	060	Kamaraj Colony	86
76	04	060	Kuruji Nagar	100
77	04	056	KVR Nagar	149
78	04	049	LRG L/O	41
79	04	049	MGR Colony	85
80	04	046	MGR Nagar	196
81	04	046	Military Colony	249
82	04	056	Odaikarai (KVR Nagar Part -2)	176
83	04	049	Petichettipuram	64
84	04	049	Pon Nagar	11
85	04	050	Poombukar West	322
86	04	060	Rajaganapathy Nagar (Kulathupudur)	58
87	04	060	Rajaganapathy Nagar AD Colony	28
88	04	050	Santhaipeitai (Dr. Ambedkar Nagar)	234
89	04	046	Soosayapuram East	247
90	04	046	Soosayapuram West	360
91	04	056	ThanthaiPeriyar Nagar	39
92	04	050	TMC Colony Kamarjar Road	224
			Total	9723

The boundary of each slum is demarcated with the help of TNSCB engineers. The unique number has been given to each dwelling unit within the boundary of slum, for the purpose of socio economic survey. Once the number is assigned, the enumeration is carried out using the questionnaire provided by the TNSCB which was subsequently modified by NITTTR and got vetted by TNSCB. While allotting numbers to buildings, following situations existed, (a) where houses are numbered systematically by the municipal or local authorities; (b) where numbers to open sites are given on property basis but there are number of sites where the buildings have not so far been constructed or where building numbers are existing but incomplete and not systematic, and (c) no numbering to houses exists. As per CENSUS guidelines and also based on the instruction of TNSCB official, a number is assigned with 20 digits to each family, even in same household. Based on the slum profile and information collected from the officials the physical locations of slums are given in the Table 2.11. Fig 2.7 shows the percentage of distribution of slums in city with respect to physical location.

Table 2.11 Distribution of Slums with reference to Physical Location

S.No.	Physical Location of Slums	Number of slums
I. Objectionable Locations		
1	Along Nallah	25
2	Along other drains	0
3	Along Railway lines / Railway land	8
4	Along Major / Minor Transport Alignment	4
5	Along River / Water body	3
6	On River Bed / Water body bed	0
7	Others (Vulnerable or Objectionable)	6
	Total	46
II. Non Objectionable		
8	Others (Non Hazardous or Non Objectionable)	46
	Grand Total	92

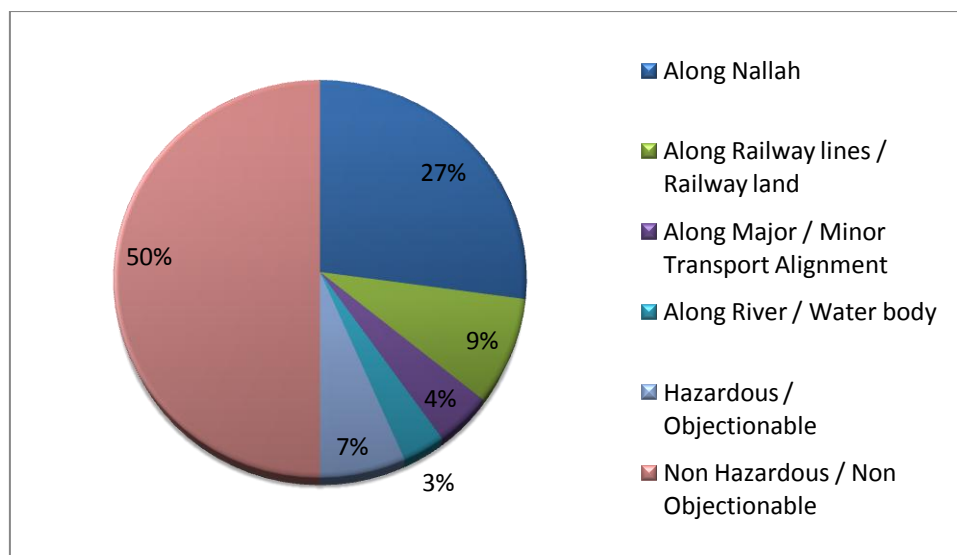


Fig. 2.7 Percentage of slums with reference to physical location

2.7 Categorization of Slums based on Tenability Analysis.

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

2.7.1 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 (High Way)
- River or water bodies Bank / bed
- Others (Hazardous or Objectionable or Vulnerable) including 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 has been categorized into tenable and Non-Tenable. Table 2.12 provides the criteria used for evaluating the tenability of slums in Tiruppur City. Fig. 2.8 shows the tenability assessment of the slums in the Tiruppur Corporation.

Table 2.12 Criteria for Tenability Assessment

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

Tenability analysis for the Tiruppur Corporation slums has been carried out as per the standard procedure. Fig. 2.8 shows the tenable and untenable slums in order to determine whether the area is fit for human settlement. Tenability analysis clearly shows the status fitness of land for human habitation and void of health hazards.

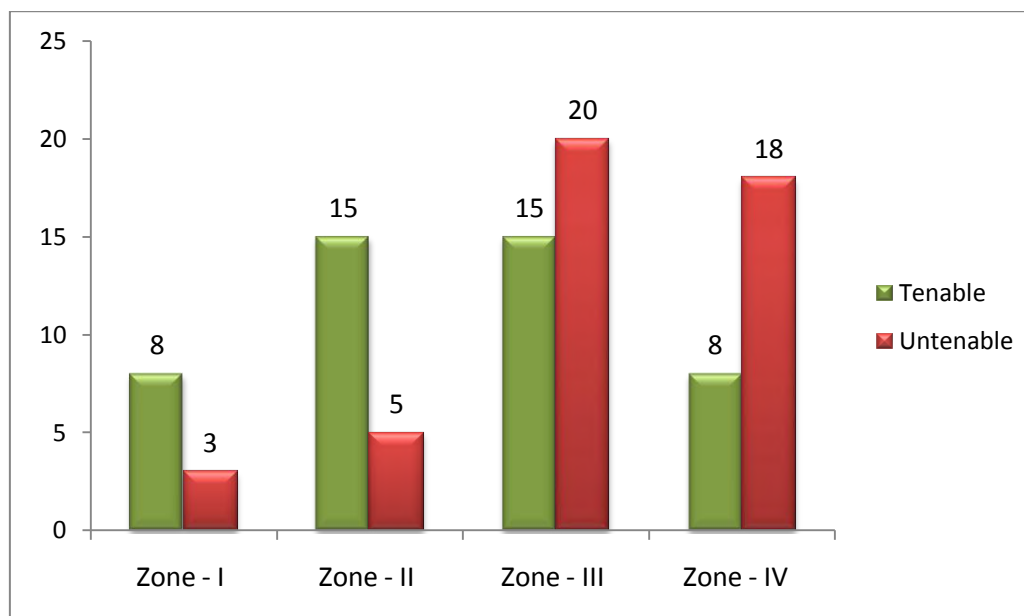


Fig. 2.8 Tenability of Slums in Tiruppur city

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 2.13 lists the zone wise number of slums and households with respect to tenable and untenable. Fig.2.9 represents the tenability status of the slums.

Table 2.13 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	08	527	03	631	11	1158
2	Zone - II	15	1329	05	399	20	1728
3	Zone - III	15	1048	20	2160	35	3208
4	Zone - IV	08	871	18	2758	26	3629
	Total	46	3775	46	5948	92	9723

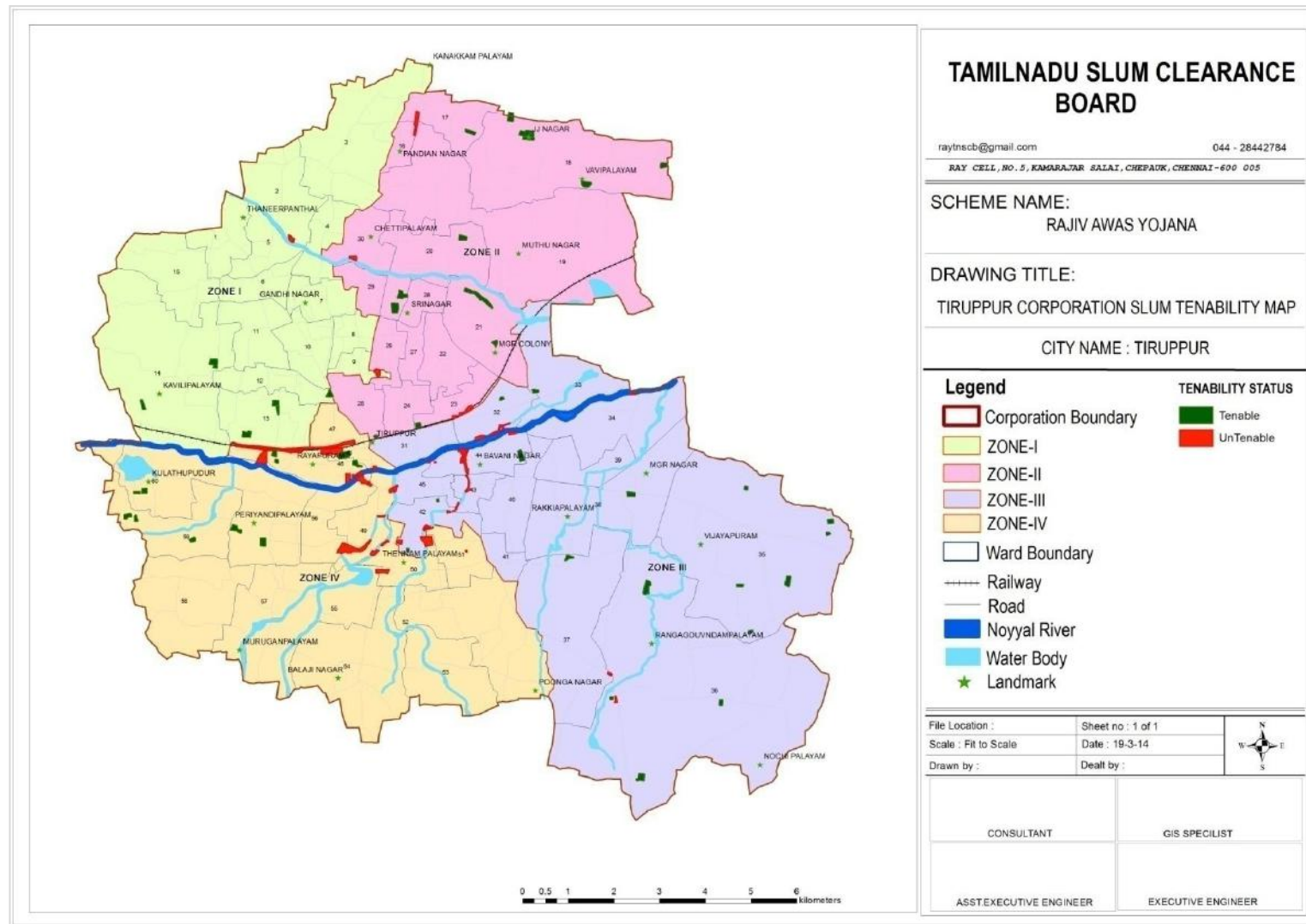


Fig.2.9 Map of Tenability Status of Slums in Tiruppur Corporation

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.

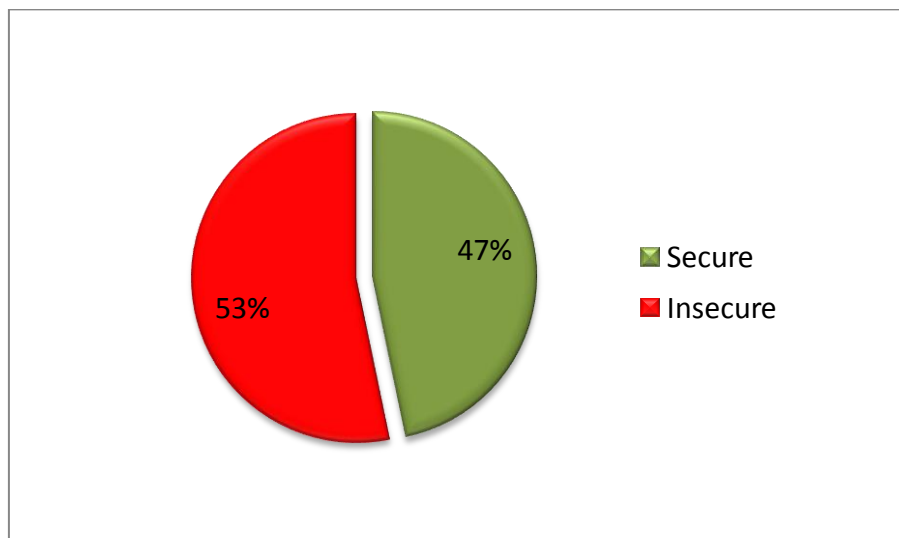


Fig.2.10 Tenure status of Tiruppur Slums

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 Tiruppur corporation, 43 slum dwellers are living in secure tenure. Fig. 2.10 is showing the tenure of Tiruppur corporation slums.

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

mobilization of household resources at the settlement level. Fig. 2.11 shows the Tenure of Tiruppur slums in 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 government, 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 Tiruppur Corporation slums from Fig. 2.11 to Fig. 2.16. The detail analysis of present status of slums is discussed in the chapter 3.

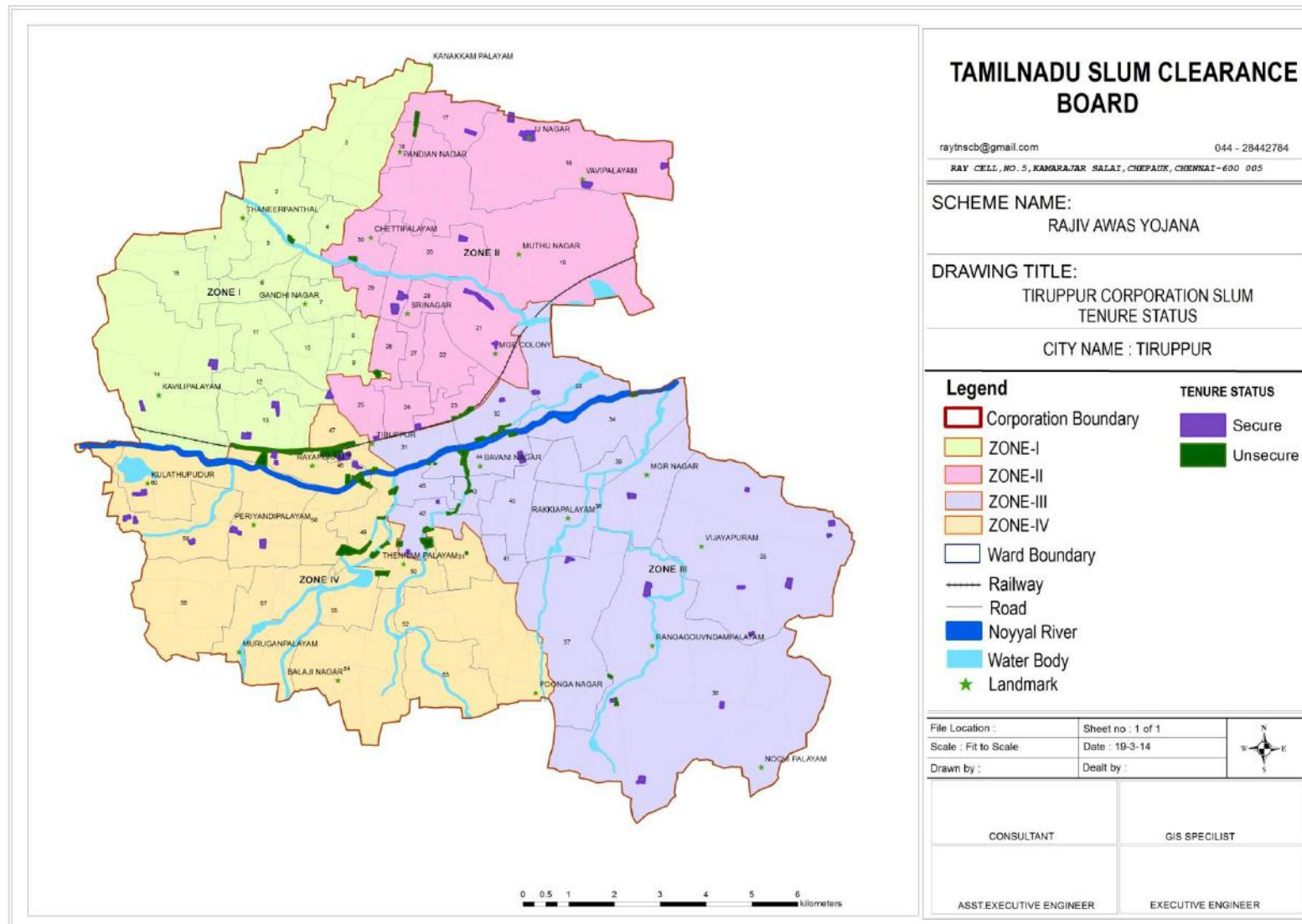


Fig.2.11 Map of Tenure Status of Slums in Tiruppur Corporation

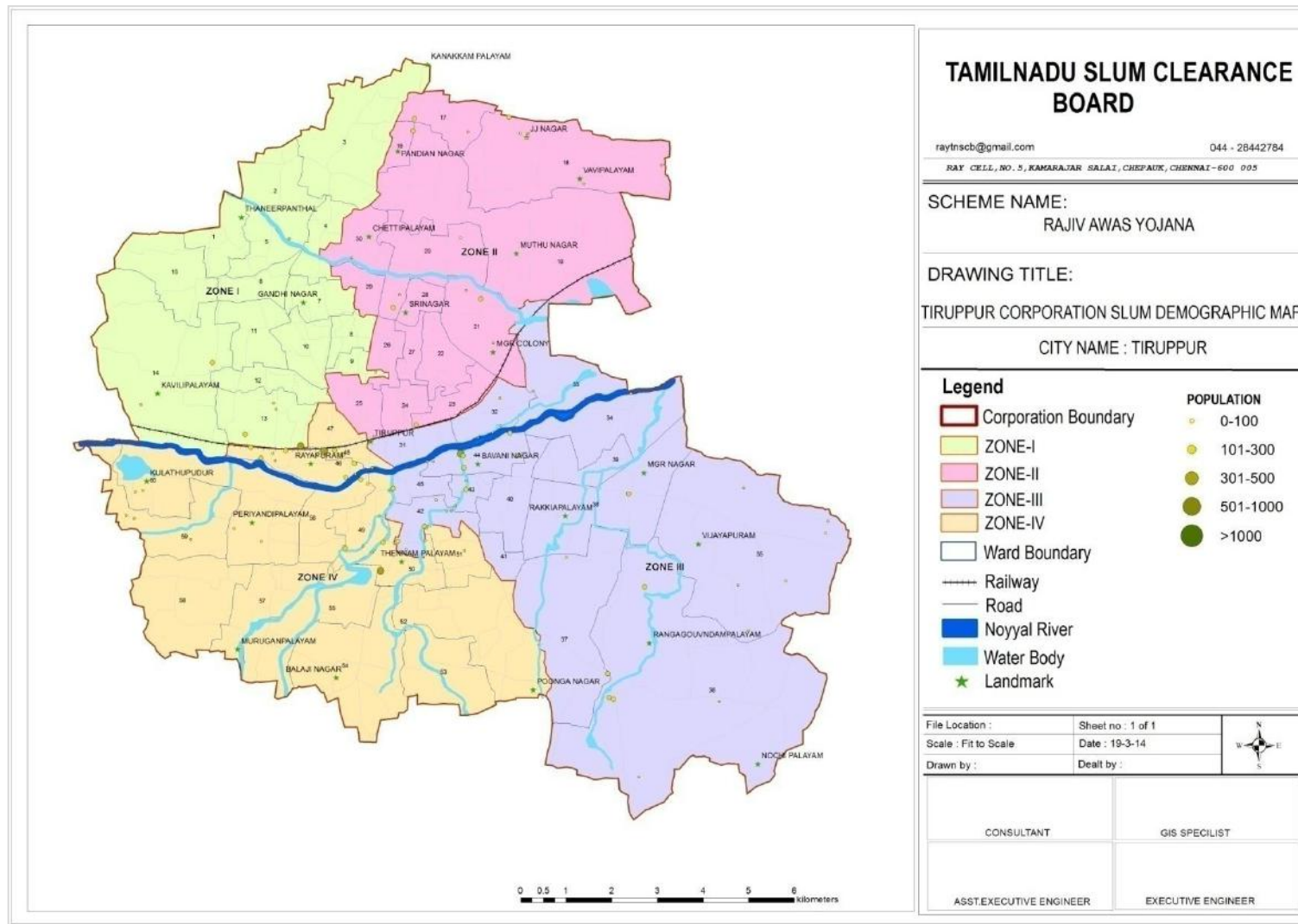


Fig.2.12. Demography of Slums in Tiruppur Corporation

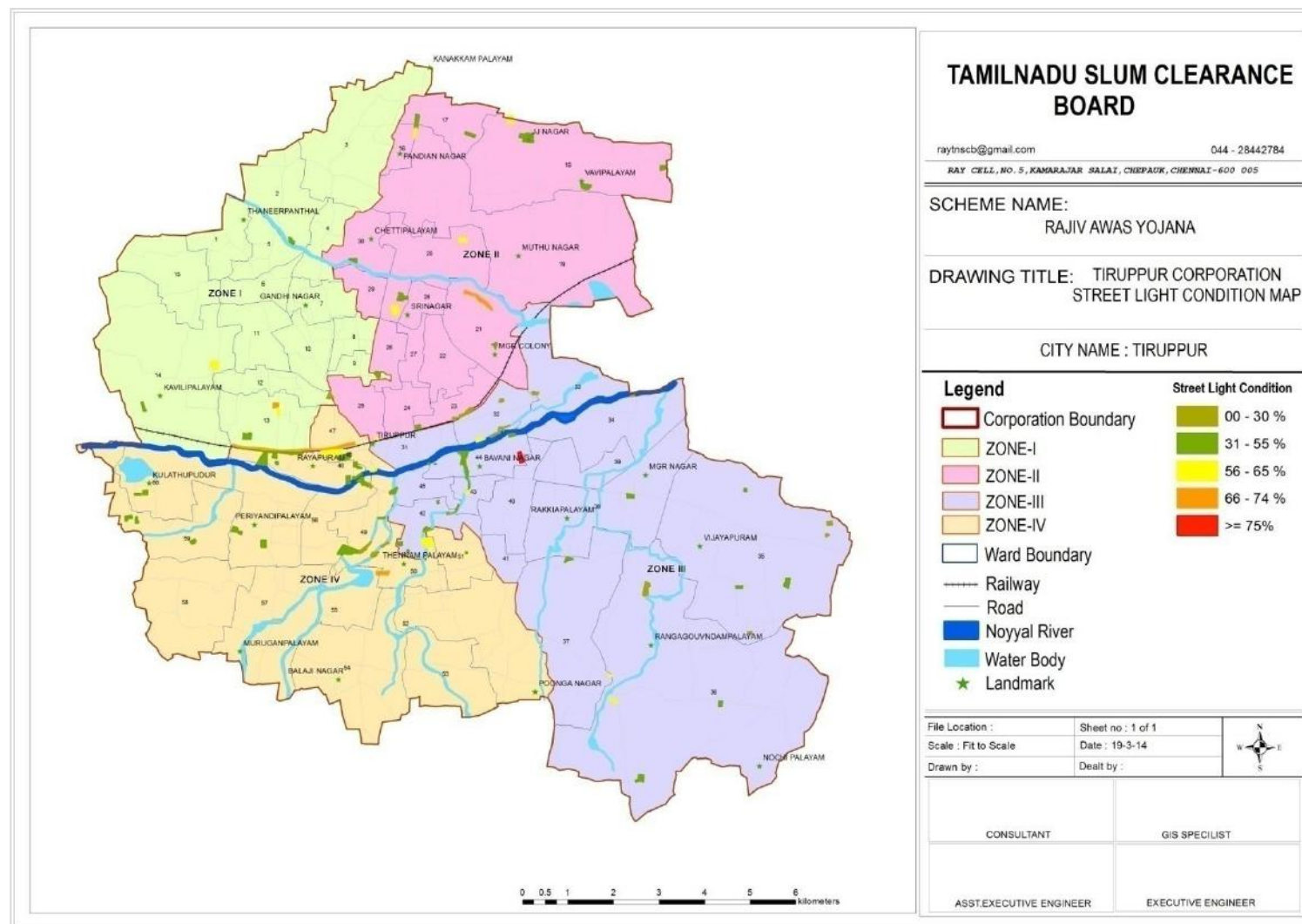


Fig.2.13. Map representing percentage of availability of Street lights in slums

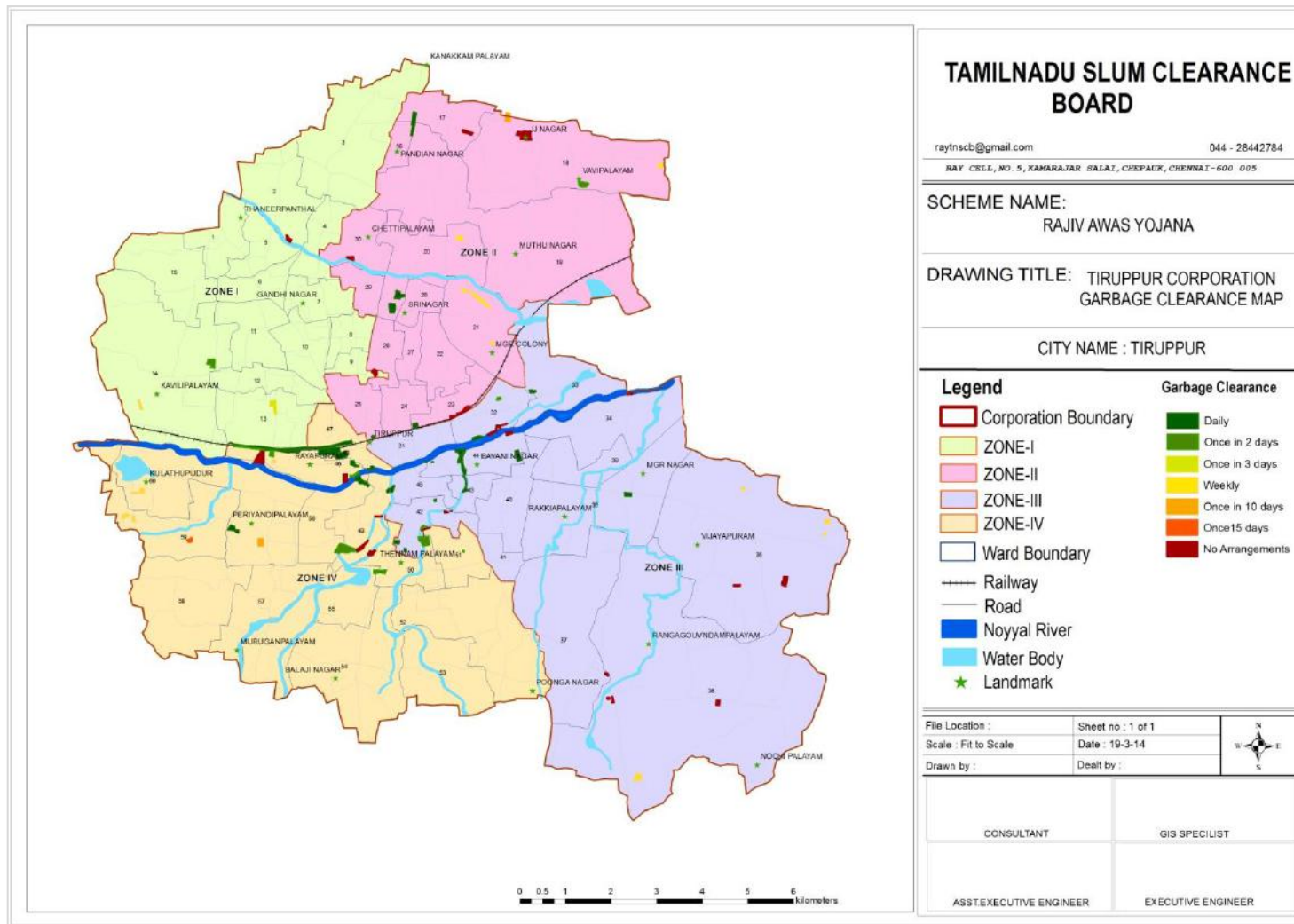


Fig.2.14. Map representing Garbage clearance frequency in slums

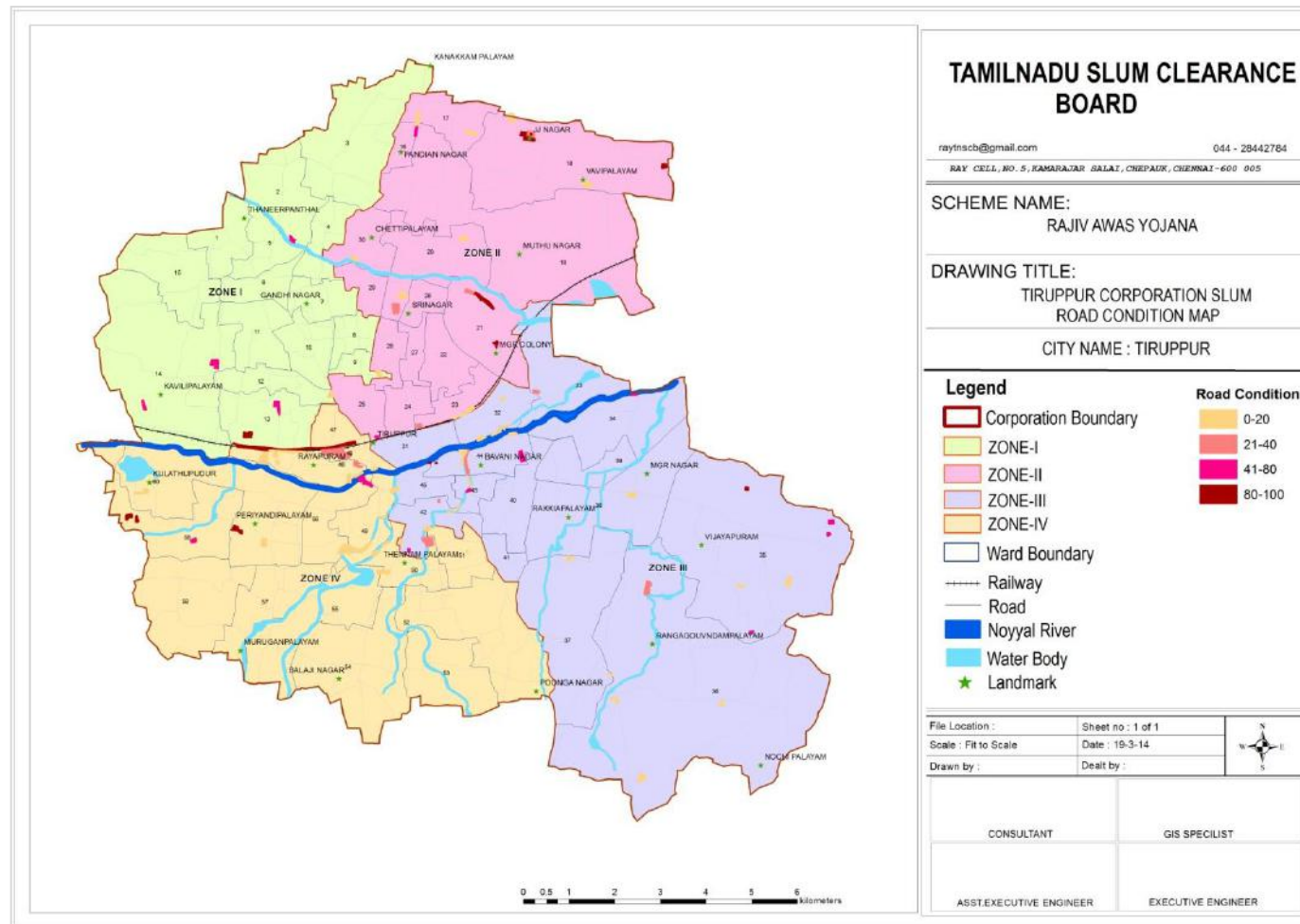


Fig.2.15. Map representing approach road condition in slums

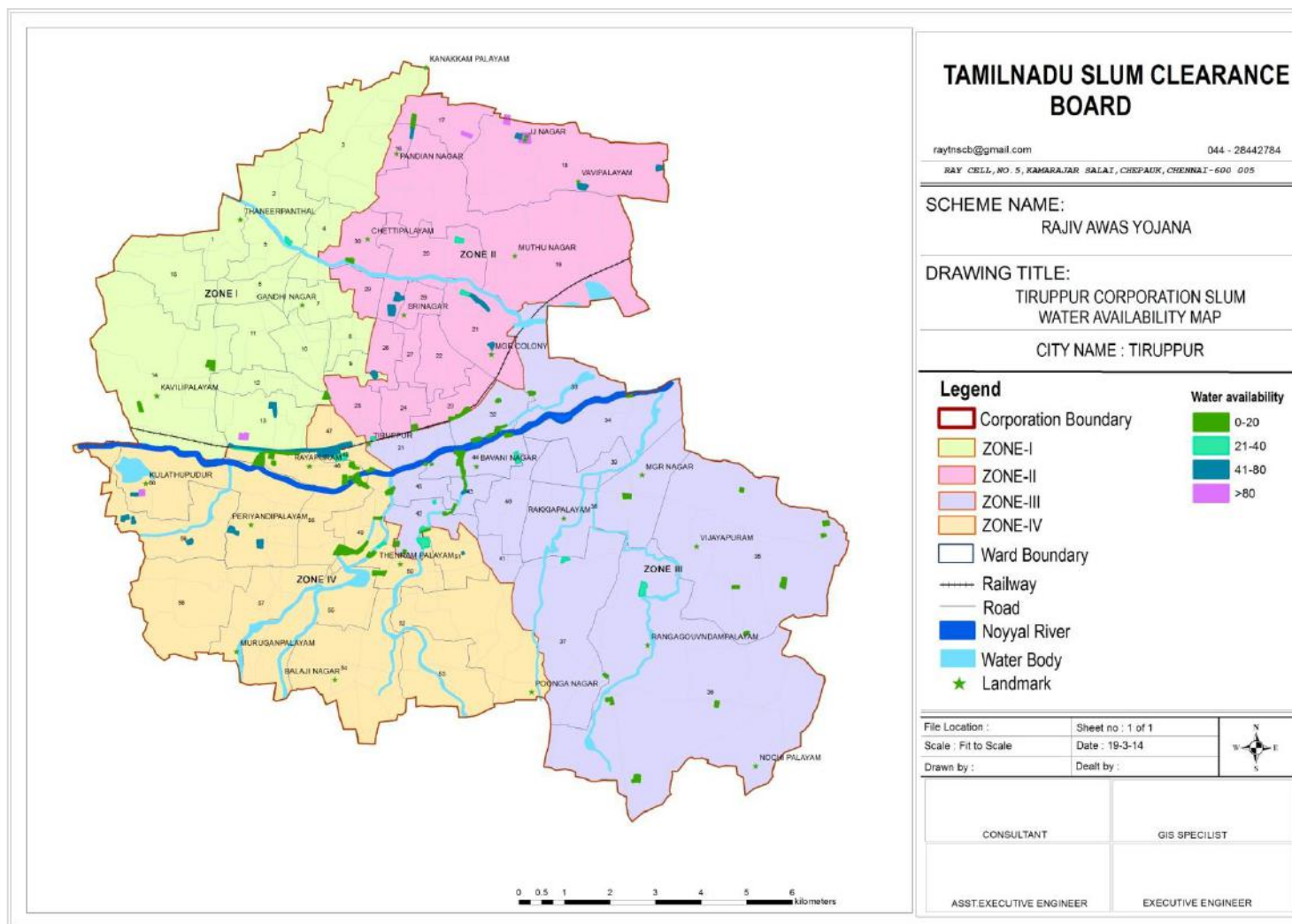


Fig.2.16. Availability of water supply connection for individual household in slums

CHAPTER 3 ASSESSMENT OF PRESENT STATUS OF SLUMS

3.1 Introduction

As discussed in the earlier chapters, socio economic survey was conducted in the Tiruppur Corporation under RAY scheme in 92 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 Tiruppur Corporation are analysed by the three interrelated parameters namely (i) Poverty, (ii) Vulnerability of housing and (iii) Other Infrastructure deficiency. During the field survey the enumerators collected socio-economic data of each slum dweller family and slum profile data for each slum through respective questionnaire. Based on these field data, poverty, housing vulnerability and infrastructure deficiency for all tenable and untenable slums have been worked out and discussed in detail.

3.1.1 Vulnerability Parameters

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

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

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

- 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 Tiruppur corporation 2258 Slum households out of 9723 (23.22 %) are living Below Poverty Line. The details of BPL households for Tiruppur city corporation are given in Table 3.1. It has been observed from table 3.1 that the third and fourth zones are having maximum of BPL household 25.75 %.and 23.06 % respectively. Fig. 3.1 shows the number of BPL households, zone wise.

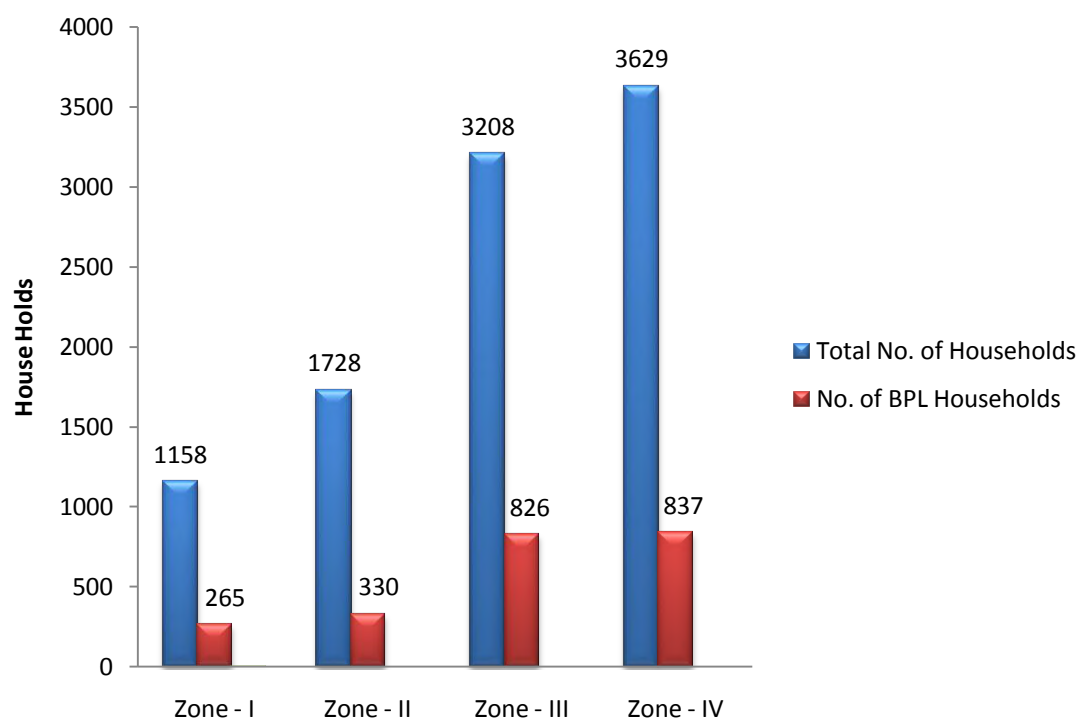


Figure 3.1 Zone wise BPL House Holds details of Tiruppur Corporation

Table 3.1 Percentage of BPL households of Tiruppur Corporation

S.No.	Zone	Total No. of Households	No. of BPL Households	% of BPL Households
1	Zone - I	1158	265	22.88
2	Zone - II	1728	330	19.10
3	Zone - III	3208	826	25.75
4	Zone - IV	3629	837	23.06
	Total	9723	2258	23.22

In the slum wise data, the percentage of BPL Households varies from 0% to 71%. Sederpalayam and Lakshmiammal Nagar slums are having the lowest percentage of BPL household (0%). Savandhapalayam slum is having the highest percentage (71%) of BPL

household. The BPL household ranking is done by dividing the difference between the highest and lowest values into three ranges as shown in Table 3.2

Table: 3.2 BPL Classification

Range	BPL Households	Score
1st	From 0.00 % to 23.00 %	1
2nd	From 24.00 % to 47.00 %	2
3rd	From 48.00 % to 71.00 %	3

3.2.2 SC/ST Population Analysis

In India, Scheduled Caste (SC) and Scheduled Tribe (ST) are most socio economically backward community. In general, Scheduled caste / Scheduled tribe population is more in slum areas than in other areas. Totally ten slums are having 100% of SC/ST population, in which 5 slums are falling in the Zone – III. The zone wise distribution of population under major community are listed in Table 3.3

Table 3.3 Zone wise community distribution

S.No	Zone	Total House holds	Household belongs to					SC/ST	% of SC/ST
			OC	BC	MBC	SC	ST		
1	Zone - I	1158	67	508	240	340	3	343	29.62
2	Zone - II	1728	62	438	323	831	74	905	52.37
3	Zone - III	3208	207	847	283	1860	11	1871	58.32
4	Zone - IV	3629	178	815	527	2080	29	2109	58.12
	Total	9723	514	1373	1373	5111	117	5228	53.77

According to the survey, the SC/ST population have found in all slums except Pon Nagar slum in Zone - IV. From the Fig. 3.2, it is observed that Zone – I is having only 343 families

under SC/ST categories which comes 29.62% of total population in Zone - I. It is observed from the survey that 54 slums are having more than 50% of SC/ST population. The scoring of SC/ST population for tenable slums has been worked out and are shown in Table 3.2.

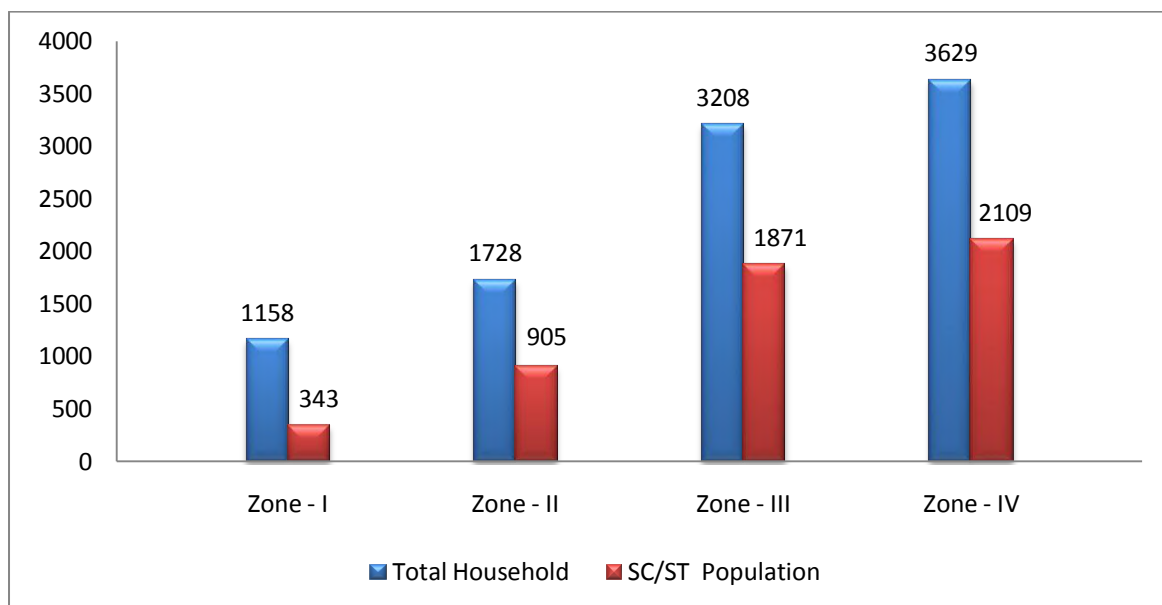


Fig. 3.2. Zone wise SC/ST population details of slums in Tiruppur Corporation

Table 3.4 SC /ST Classification

Range	SC/ST Population	Score
1 st	From 4 % to 35 %	1
2 nd	From 36 % to 67 %	2
3 rd	From 68 % 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. Housing Structure Analysis

Slums are classified as pucca, semi-pucca and katcha based on the type of housing structure of the slum. The number of pucca, semi pucca and katcha houses are listed in Table 3.5 for each zone. The highest percentage of semi pucca and katcha houses is 94.11% in Zone – III of the City.

Table 3.5. Zone wise distribution of housing structure

S.No.	Zone	Total Households	Pucca	Semi Pucca	Katcha	Semi Pucca & Katcha Hhs	Semi Pucca & Katcha Hhs
1	Zone - I	1158	107	985	66	1051	90.76
2	Zone - II	1728	269	1258	201	1459	84.43
3	Zone - III	3208	189	2728	291	3019	94.11
4	Zone - IV	3629	545	2747	337	3084	84.98
	Total	9723	1110	7718	895	8613	88.58

*Total number households to be intervened 9010 which includes 397 households from untenable slums

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

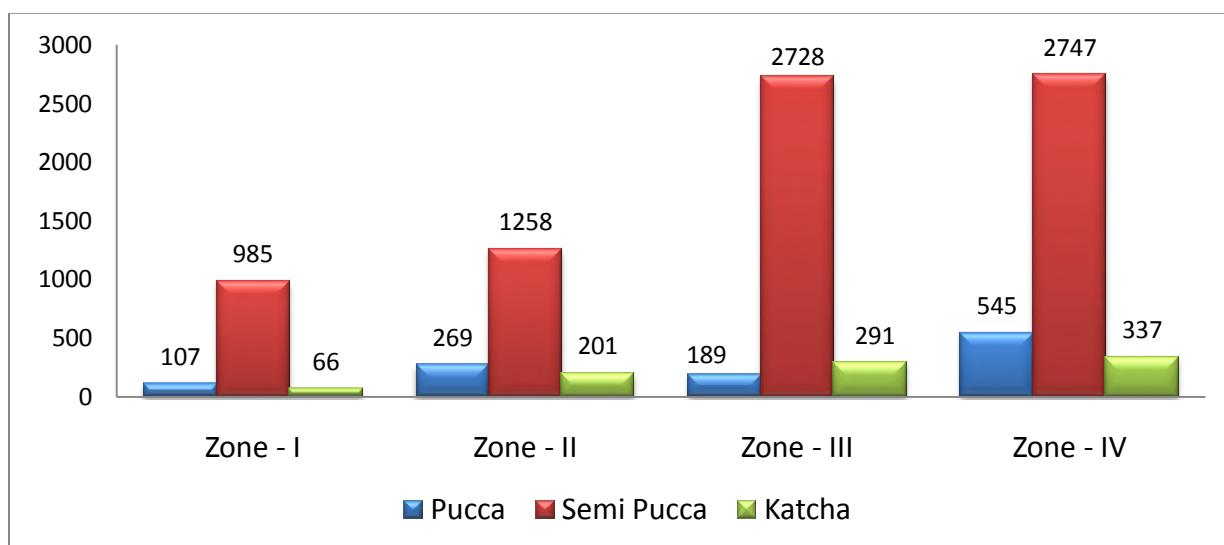


Fig. 3.3. Housing status in Tiruppur Corporation slums

It can be seen from Table 3.5 that majority of the slum dwellers are residing in semi pucca house irrespective of the Zone. Twenty slums are having 100 % of semi pucca and katcha housing structure, majority of slums are in Zone – III. 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 0 % to 33 %	1
2nd	From 34 % to 66%	2
3rd	From 67 % 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. 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 subsequently.

3.3.1 Water supply

Every household should get portable drinking water through individual water supply connections, for hygienic and healthy condition. Fig. 3.4 shows the zone wise percentage of individual water supply connection in the Tiruppur corporation.

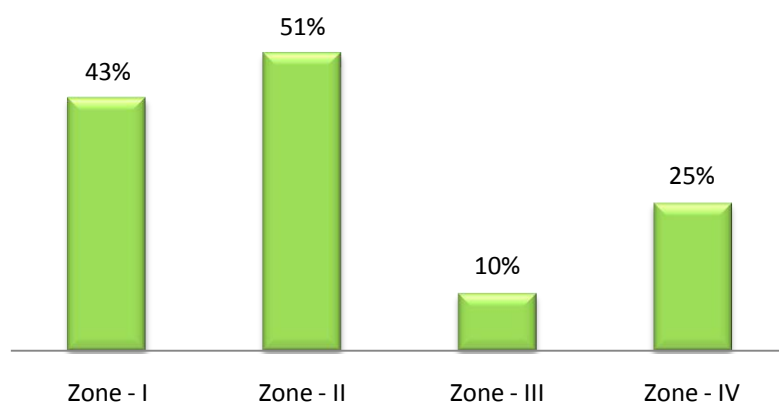


Fig.3.4. Zone wise percentage of individual water tap connection

There is a highest demand for the water supply connection in the Zone - III, in which only 10% of households are having individual water top connection. The percentage of households not covered with individual water supply connection for slums is varying from 9% to 100%. The ranges of the water supply connection are given in the Table 3.8.

Table 3.8 Deficiency in Water Supply Connection

Range	Water supply Deficiency Percentage range	Score
1 st	9 % to 26 %	1
2 nd	27 % to 44 %	2
3 rd	45 % to 62 %	3
4 th	63 % to 81 %	4

5 th	82 % to 100 %	5
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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 Tiruppur Corporation slums are woefully inadequate.

Table 3.9. Zone wise distribution of % of HH with individual toilet

S.No.	Zone	Total Households	No. of households with individual toilet connection	% of households with individual toilet connection
1	Zone - I	1158	523	45.16
2	Zone - II	1728	223	12.91
3	Zone - III	3208	156	4.86
4	Zone - IV	3629	317	8.74
	Total	9723	1219	12.54

Table 3.9 indicates that overall 87.46 % of households are not having the individual toilet facility in the Tiruppur corporation slums. The percentage of households not covered with individual toilet for slums is varying from 13% to 100% which is ranked in the Table 3.10.

Table: 3.10 Percentage of Households not having Toilet facility

Range	Toilet Facility Status Percentage Range	Score
1	13 % to 29 %	1
2	30 % to 46 %	2
3	47 % to 64 %	3
4	65 % to 82 %	4
5	83 % to 100 %	5

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

3.3.3 Drainage facility

Improper wastewater disposal causes worst environmental sanitation in slum communities. The slums without drainage facility vary from the lowest value of 30 % to the highest value of 100%. The range difference is 14%. The range of the drainage facility is given in Table 3.11.

Table: 3.11 Status of Slums without Drainage facility

Range	Without Drainage	Score
1	From 30 % to 43 %	1
2	From 44 % to 57 %	2
3	From 58 % to 72 %	3
4	From 73 % to 86 %	4
5	From 87 % 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 Tiruppur 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. The Table 3.12 is lists the ranges of solid waste disposal facility.

Table: 3.12 Solid waste disposal facility

Range	Solid waste disposal	Score
1	Daily	1
2	Alternate Days	2
3	Weekly	3
4	Fortnight	4
5	No Arrangements	5

3.3.5. Street Light Facility

In Tiruppur Corporation, the non availability of street Light facility varies from 10 % to 75 %. The range of value is fixed as 12 % and the scores are assigned in Table 3.13.

Table: 3.13 Percentage of non availability of Street Light

Range	Without Street Light	Score
1	From 10 % to 22 %	1
2	From 23 % to 35 %	2
3	From 36 % to 48 %	3
4	From 49 % to 61 %	4
5	From 62 % to 75 %	5

3.3.6. Road facility

In Tiruppur Corporation, most of the slums are not having proper road facilities for the emergency access. It is observed from the socio economic survey data that the motorable pucca and motorable katcha is 30% and 29% respectively which is shown in Fig 3.5

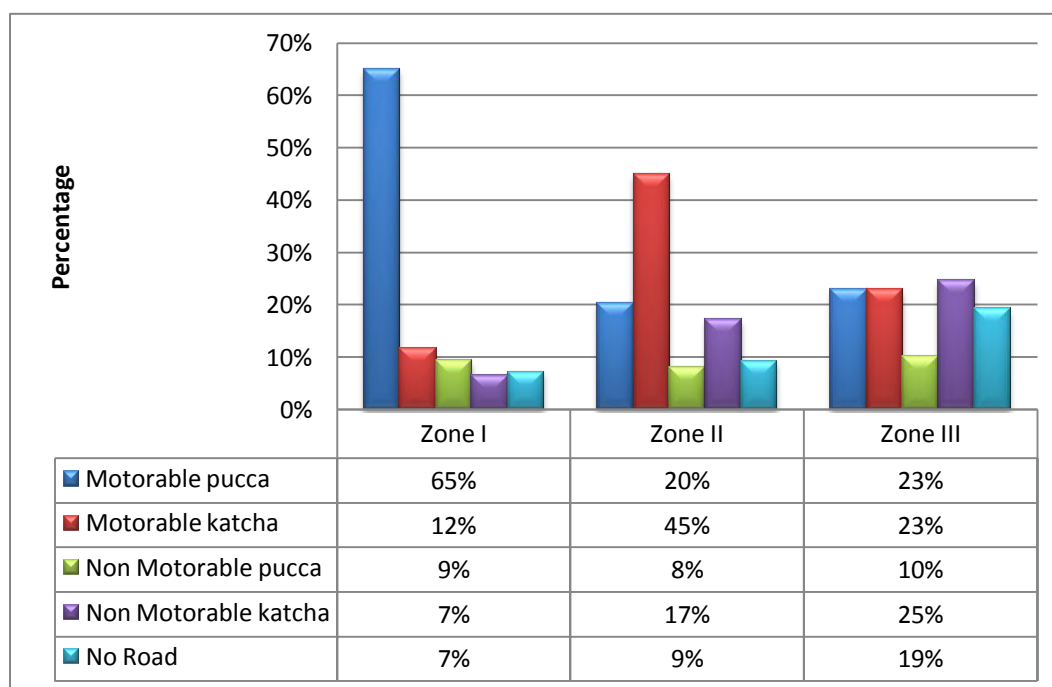


Fig.3.5. Road condition in the slums

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 15 to 28 which is given in Table 3.15. The ranking for the infrastructure index is done by dividing the scores into three ranges.

Table: 3.15 Infrastructure index

Range	Infrastructure score	Rank
1st	From 15to 18	1
2nd	From 19 to 23	2
3rd	From 24 to 28	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.

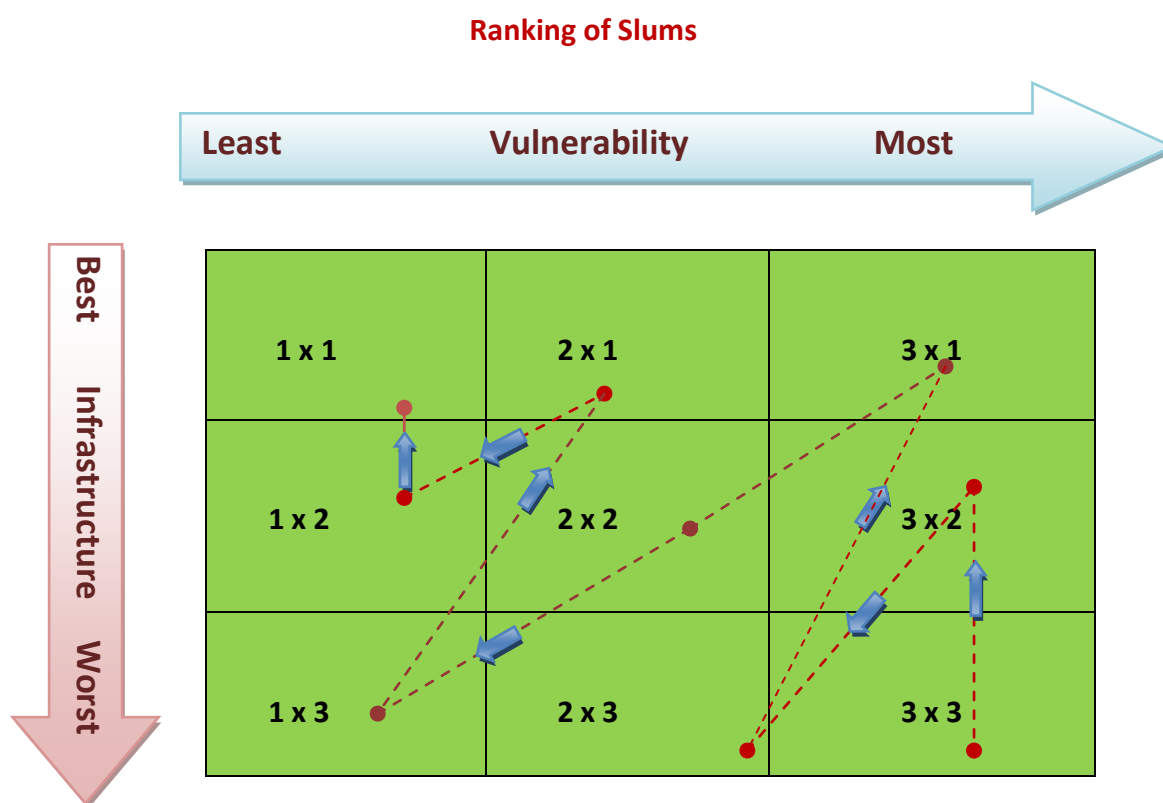


Fig.3.6. Represents the order of prioritisation of slums

Infrastructure	Vulnerability		
	1x1 (01Slum)	2x1 (06 Slums)	3x1 (01 Slum)
	1x2 (06 Slums)	2x2 (12 Slums)	3x2 (08 Slums)
	1x3 (03Slums)	2x3 (08 Slums)	3x3 (01 Slum)

Based on the tenability analysis, it is estimated that the total number of tenable and untenable slums in Tiruppur Corporation are 46 and 46 respectively. The developed deficiency matrix for tenable slums with priority ranking is shown in Table 3.16. The tenable slums deficiency classification for each zone is given in Table 3.17.

Table: 3.16 Slums Distribution based on deficiency Matrix – for Tenable Slums

Developed slum is falling in this category which is having better infrastructure and livelihood condition. It may be recommended for delisting. (1 Slum)	Considerable development needs to be given for livelihood improvement of the slum dwellers (6 Slums)	An immediate care is needs to reduce the vulnerability index by providing in house training to the slum dwellers to improve their livelihood. (1 Slum)
Moderate attention needs to be given on infrastructure to provide access to all amenities, similar to the urban people. (6Slums)	Immediate attention needs to be given to facilitate the infrastructure service to the slum and livelihood of the slum dwellers. (12Slums)	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. (8 Slums)
An immediate measures needs to be taken to reduce the infrastructure deficiency by providing basic amenities to the slum dwellers. (3 Slums)	Special attention is needed to provide infrastructure facilities for better environment and care to be taken for the livelihood improvement through better employment. (8 Slums)	An immediate attention is required to improve the infrastructure as well as livelihood condition. (1 Slum)

It is observed that 26 % of tenable slums are falling under the 2 x 2 matrix which are having moderate infrastructure facility and medium vulnerability. The distribution Tenable slums in the deficiency matrix is shown in Fig. 3.7. The location of slums in city base map with deficiency matrix analysis is shown in Fig 3.8.

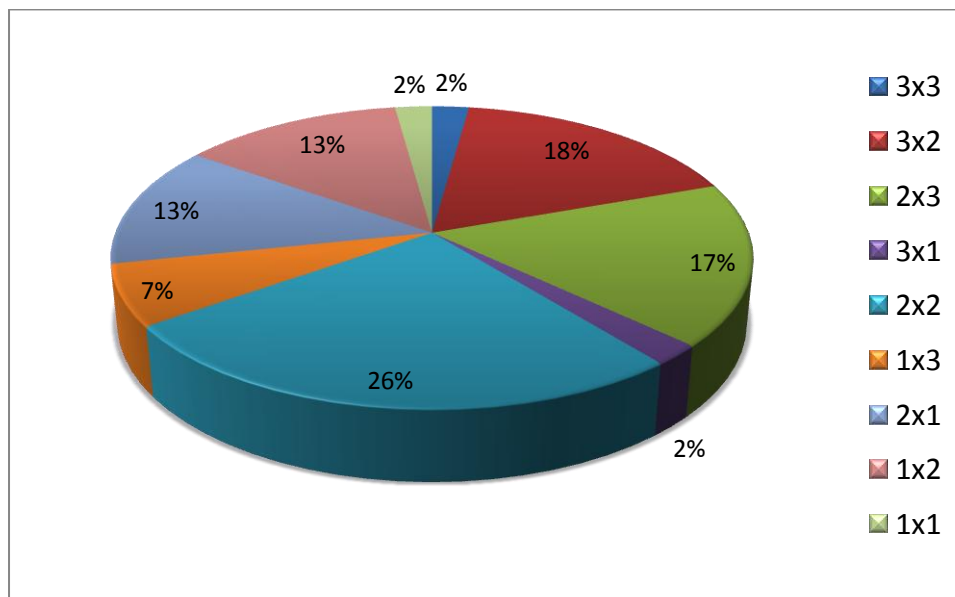


Fig. 3.7 Tenable slum distribution with deficiency Matrix

Totally 46 slums are falling in the untenable category. The ranking of untenable slums based on prioritization criteria has been done. Table 3.17 shows the ranking of untenable slums.

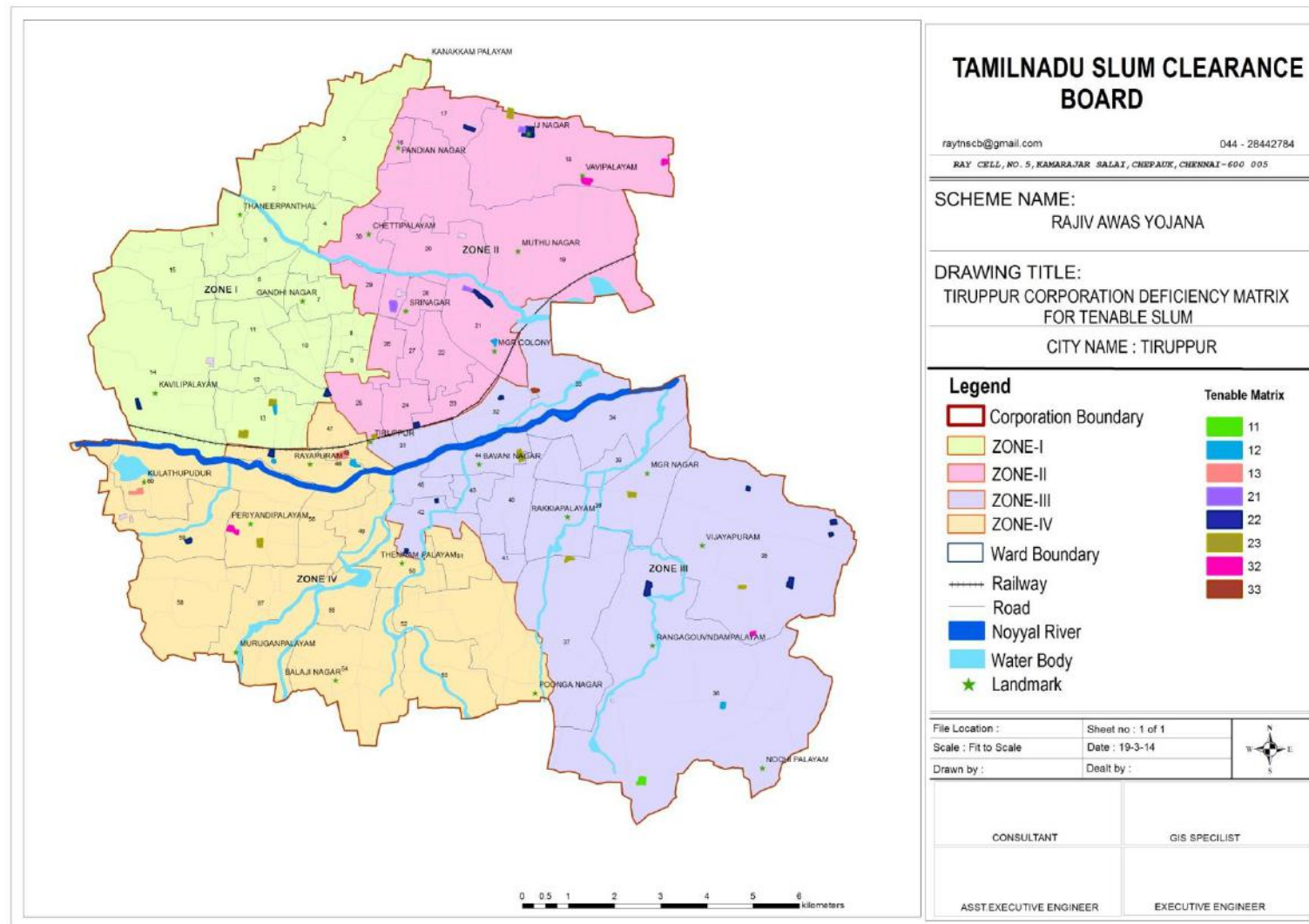


Fig. 3.8 Map Representing the Deficiency Analysis of slums

Table 3.17 Deficiency Matrix Analysis for Tenable Slums

S.No.	Zone	3x3	3x2	2x3	3x1	2x2	1x3	2x1	1x2	1x1	Total
1	Zone - I	0	0	1	0	2	2	1	1	1	8
2	Zone - II	0	2	1	0	3	1	3	5	0	15
3	Zone - III	1	4	5	0	4	0	1	0	0	15
4	Zone - IV	0	2	1	1	3	0	1	0	0	8
	Total	1	8	8	1	12	3	6	6	1	46

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 3.18 to 3.25). In Zone – I, Murugampalayam slum is comes under the 1x1 category, even though the infrastructure good in the slum, the housing have to be improved lot.

Table: 3.18 Tenable Slums with Deficiency Matrix of (v3,i3)

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone - III	37	Savandhapalayam	58	An immediate attention is required to improve the infrastructure as well as livelihood condition.

Table: 3.19 Tenable Slums with Deficiency Matrix of (v2,i3)

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone - I	14	Kavilipalayam Pudur	30	Special attention is needed to provide infrastructure facilities for better environment and care to be taken for the livelihood improvement through better employment.
2	Zone - II	20	Boyampalayam	69	
3	Zone -III	035	Pudupalayam	65	
4		036	Amaravathipalayam	65	
5		035	Kuppandampalyam	54	
6		036	M. Pudupalayam	76	
7		035	Vanjiveran Pudur MGR Nagar	57	
8	Zone -IV	60	Kuruji Nagar	100	

Table: 3.20 Tenable Slums with Deficiency Matrix (v3,i2)

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone - II	18	Vavipalayam	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		23	Kongu Nagar Harijan Colony	218	
3	Zone - III	32	Karumarampalayam Harijan Colony	72	
4		32	Mannarai Harijan Colony	63	
5		35	Nallur	134	
6		36	Muthunampalayam	110	
7	Zone - IV	59	Chinnya Goundar Pudur	31	
8		60	Rajaganapathy Nagar AD Colony	28	

Table: 3.21 Tenable Slums with Deficiency Matrix (v2,i2)

S.No	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone - I	12	Bharathidasan Colony	53	Immediate attention needs to be given to facilitate the infrastructure service to the slum and livelihood of the slum dwellers.
2		14	Sirupoluvapatti	135	
3	Zone - II	18	May Nagar	68	
4		21	Arvoli Nagar AD Colony	48	
5		25	Lakshmi Ammal Nagar	41	
6	Zone - III	31	NGR Colony	86	
7		35	Chinimalaipalayam	23	
8		35	Kalipalayam	23	
9		42	Kattuvalvu	48	
10	Zone - IV	46	Chinnan nagar	259	
11		59	Chinnandipalayam AD Colony	60	
12		60	Rajaganapathy Nagar (Kulathupudur)	58	

Table: 3.22 Tenable Slums with Deficiency Matrix (v1,i3)

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone - I	13	Nathakadu	86	An immediate measures needs to be taken to reduce the infrastructure deficiency by providing basic amenities to the slum dwellers.
2		13	Nathakadu Thottam	10	
3	Zone - II	18	Bharathi Nagar	158	

Table: 3.23 Tenable Slums with Deficiency Matrix (v1, i2)

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone – I	13	Sathya Nagar	85	Moderate attention needs to be given on infrastructure to provide access to all amenities, similar to the urban people.
2	Zone – III	18	AD Colony (JJ Nagar Part - 1)	66	
3		18	MGR Nagar part 2 (JJ Nagar Part- 2)	91	
4		18	Sedarpalayam	81	
5		18	Thirunangaikal Street (JJ Nagar Part - 3)	15	
6		21	Arvoli Nagar	110	

Table: 3.24 Tenable Slums with Deficiency Matrix (v2,i1)

S.No	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone – I	13	Mascow Nagar	78	Considerable development needs to be given for livelihood improvement of the slum dwellers
2	Zone – II	21	Thotti Mannari	48	
3		30	Keethampalayam	49	
4		30	Kumarasamy Nagar AD Colony	183	
5	Zone – III	44	Semmedu	45	
6	Zone - IV	46	Military colony	249	

Table 3.25 Tenable Slums with Deficiency Matrix (1,1)

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone – I	12	Murungampalayam	50	Developed slum is falling in this category which is having better infrastructure and livelihood condition. It may be recommended for delisting.

3.4.2 Prioritization of Untenable Slum

The prioritization of all 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

Similar to the tenable slums, the cumulative score for each untenable slum have been arrived based on the above five criteria. The ranking for the untenable slum is done by dividing the total 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	1	2	3
2	Zone - II	0	2	3	5
3	Zone - III	11	9	0	20
4	Zone - IV	6	9	3	18
	Total	17	21	8	46

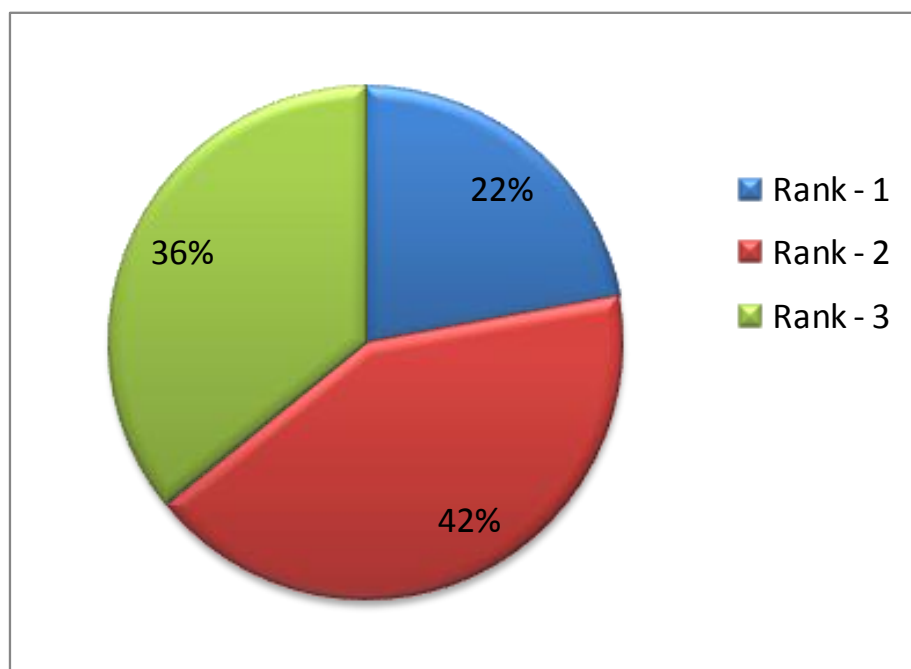


Fig. 3.9 Ranking of Untenable slum

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 Holds	Remarks
1	Zone – III	032	Palayakad River Side	34	An immediate attention needs to be given to resettle the slum dwellers as well as livelihood improvement.
2		035	KasiPalayam	36	
3		042	Anna Nagar	118	
4		042	Nataraj Theatre East	27	
5		042	Sangalipallam Part 1 & Part 2	47	
6		042	Tulasi Rao Street	175	
7		043	Periya Thottam	87	
8		044	Annai Sathya Nagar	217	
9		044	Annai Sathya Nagar Extension	116	
10		044	Quaith-E-Millath Nagar	313	

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
11	Zone – IV	045	Chelladi Amman Durai	48	
12		046	Anaimedu	219	
13		049	Jammanai street	11	
14		049	MGR Colony	85	
15		049	Pon Nagar	11	
16	Zone – IV	056	Odaikarai (KVR Nagar Part -2)	176	
17		056	Thanthai Periyar Nagar	39	

Table 3.28 Untenable Slums – Rank – 2

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone – I	13	College Road & Railway Line & Jawan Nagar	352	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 – II	25	Harvey Road	37	
3		26	Muniyappan Colony	46	
4	Zone – III	032	Vaikalpalayam	63	
5		036	Kovil Vazhi	103	
6		042	Dharapuram TMC Colony	77	
7		042	Nethaji Nagar	128	
8		042	Pattukottiar Nagar	96	
9		042	Perichapalayam Annamar Colony South	84	
10		042	PKR Colony	80	
11		042	Rajiv Gandhi Nagar	44	
12		044	Sukumar Nagar	267	
13	Zone – IV	046	Kallapalayam Road	114	
14		046	Soosayapuram East	247	
15		046	Soosayapuram West	360	
16		049	LRG L/O	41	
17		049	Petichettipuram	64	
18		050	Santhai Pettai (Dr. Ambedkar Nagar)	234	

19		050	TMC Colony Kamarjar Road	224	
20		056	Alankadu	124	
21		056	KVR Nagar	149	

Table 3.29 Untenable Slums – Rank – 3

S.No.	Zone	Ward No.	Slum Name	House Holds	Remarks
1	Zone – I	002	Thriuvallar Nagar	83	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		013	Konganagiri	196	
3	Zone – II	019	Anna Nagar	150	
4		023	Railway Line (Kuthoos Puram Anna Nagar)	91	
5		030	Poomparai	75	
6	Zone – IV	046	Indira Nagar Colony	142	
7		046	MGR Nagar	196	
8		050	Poombukar West	322	

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

i. Objectionable Slums

Out of 92 slums, 46 slums are identified in hazardous zone which is requiring their re-location. This constitutes 5948 of the households in all zones. The 39% of untenable households are falling in the Zone - IV. Table 4.1 shows the zone wise number of households, need to be relocated.

Table 4.1 Distribution of households in Untenable Slums

S.No.	Zone	No. of Slums	No. of HHs
1	Zone - I	03	631
2	Zone - II	05	399
3	Zone - III	20	2160
4	Zone - IV	18	2758
Total		46	5948

The Number of households in untenable slums of Tiruppur Corporation is 5948 which consist of 61 % of total households of slums. Option of relocation depends upon the availability of land and number of slum dwellers. Residential density and FSI to analyse

whether the slum would be able to take additional population that may be shifted in case of necessary resettlement of nearby untenable slums/ high density slums.

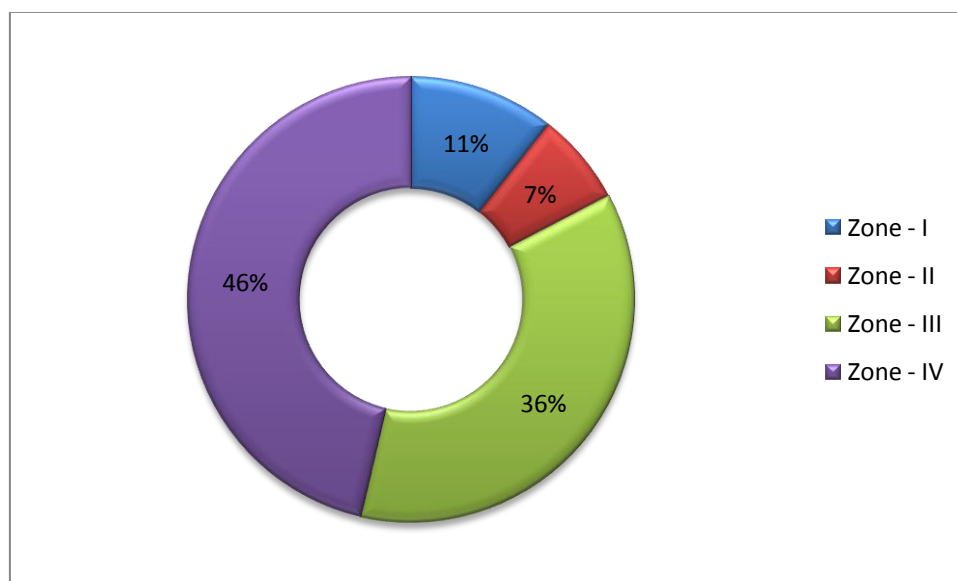


Fig. 4.1 Percentage of households needs to be relocated

ii. Unstable Land Tenure

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

iii. Educational Qualification

Education is not a problem especially in Tiruppur Corporation. The no. of educational institutions are quite high. However, only the supply of educational facility does not ensure the education of the children in the slum area. The socio economic survey result declares that the population of uneducated people in slum is 26 in the survey slums. Less than one percent of slum dwellers are having degree and higher qualification. Figure 4.2 shows the educational status of slum dwellers.

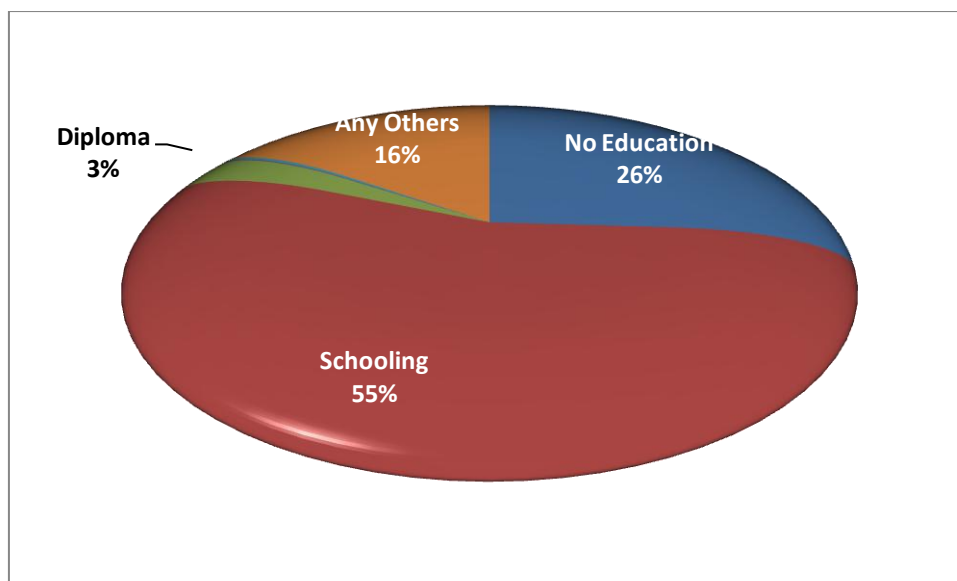


Fig. 4.2 Educational Status of slum dwellers

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

iv. Financial Status

Most of the slum dwellers are uneducated and unskilled. Due to this real fact the slum dwellers are getting low income. Tiruppur city is hub of textile industry, which required only skilled labours. Figure 4.3 shows that 6% of slum population in Tiruppur city getting income more than Rs. 7,500 and 6% of slum population getting monthly income less than Rs. 2500 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 Tiruppur Corporation.

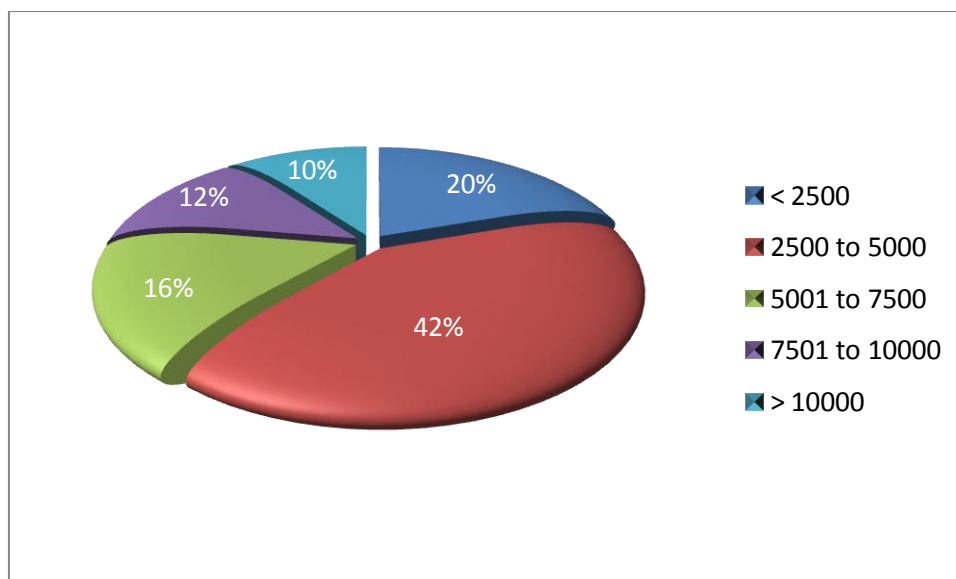


Fig. 4.3 Earning Status of Slum dwellers

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

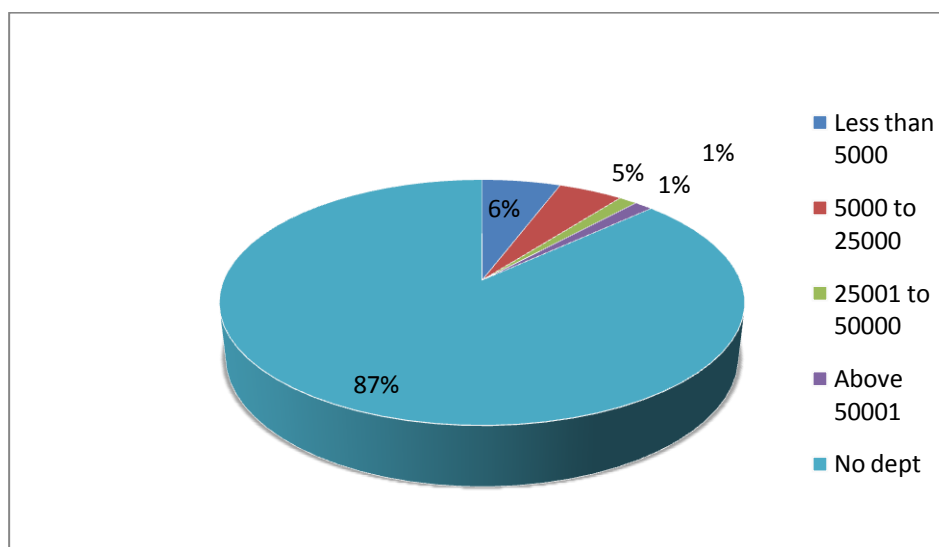


Fig. 4.4 Debt outstanding of Slum dwellers

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 Tiruppur city, further helped to evolve different schemes that would be needed to improve their livelihood income, living-environment, and their education. Based on the discussion with the slum community, the following three schemes have been evolved and proposed for implementation.

1. Community development Training Institute
2. Employment Web portal

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

- Development of infrastructure without housing like roads, street 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 Tiruppur City. The second is to provide a platform and train them become skilled workers such as carpenter, electrician, plumber and mason, to improve their income/livelihood.

4.3.1 Community Development Training Institute

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

Community Development Training Institutes (CDTIs) has to be established in each zone of Tiruppur 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 individual communities and better able to respond rapidly and flexibly to opportunities identified by network members. CDTIs will get the both logistical and financial supports for the slum development programmes but it has its own legal entity as an organization under TNSCB. This would provide CDTIs with greater possibilities (for instance, being able to apply for funds to the annual government budget, facilitation of submission of Infrastructural

projects etc), greater flexibility, wider linkages and new possibilities for supporting collaboration between urban and rural groups. CDTI is also the responsible for implementing the government programme to support upgrading the slums through projects like RAY, TNUDP etc.

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

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

Thus, major activities envisaged of CDTI are listed below:

- Poverty Alleviation (Supporting communities in savings, credits and loans and community development plan, etc.)
- Community Welfare
- Assisting in setting up of Community Development 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

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.

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

Without a refocusing of governance, the failures of the past will simply be repeated. Fig. 4.5 shows the community training activities carried out by polytechnics under the

guidance of NITTTTR Chennai. Similar model is proposed through CDTI for improving the livelihood of slum dwellers.

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

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

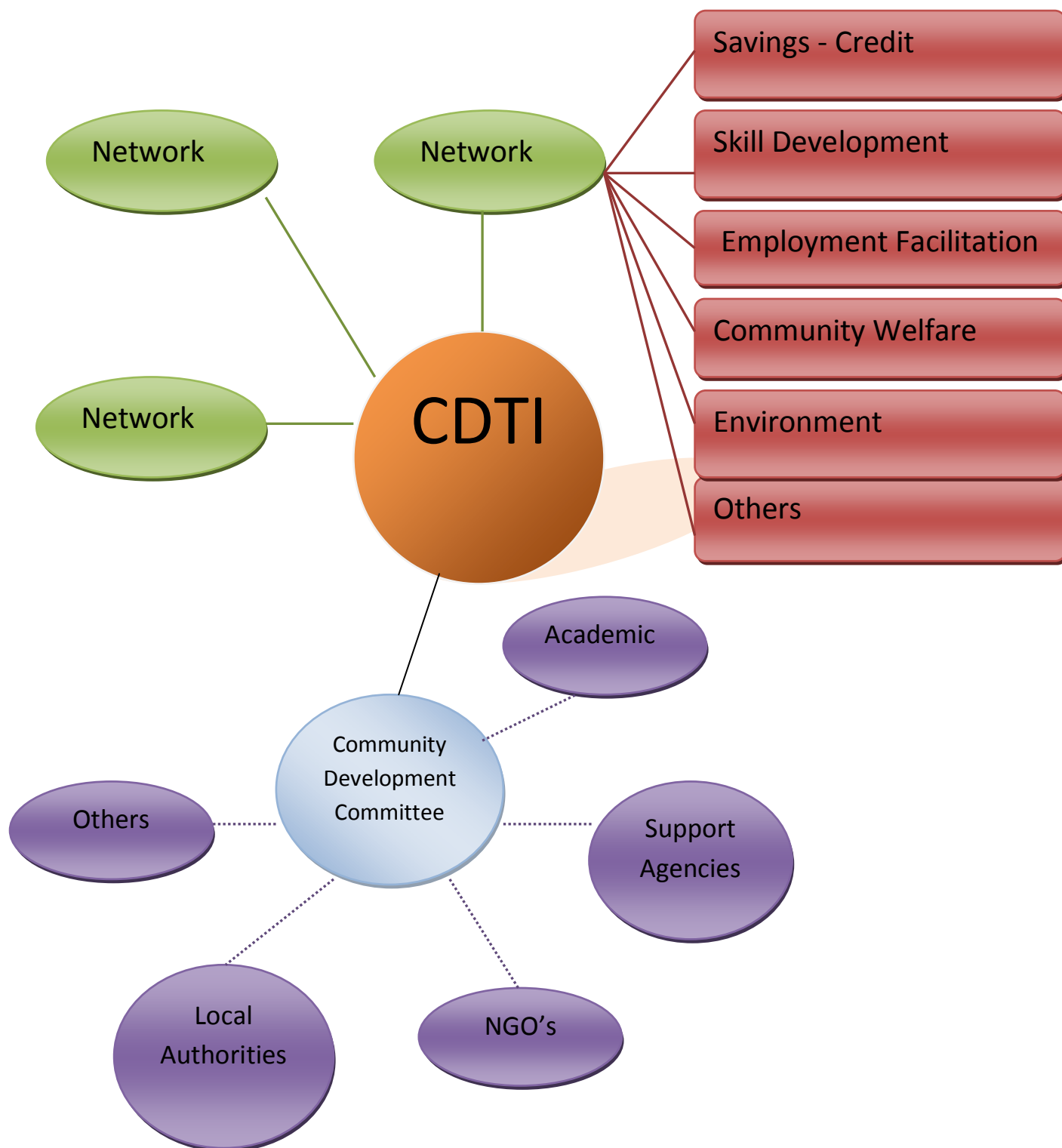


Fig. 4.6 Model of Community Development Institute

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

In Tiruppur, more than 5,000 small, medium, large scale knitwear and related industries are situated. The major industries include stitching, Dyeing, Printing, Embroidery units. These industries require fully trained skilled labours to operate. During the socio economic survey, it observed that, most of the skilled workers are from other states who are working in printing, embroidery unit. Hence, the Tiruppur city has floating population of 1,50,000.

Still there is a lot of demand in the stitching, printing and embroidery section. The separate training may be provided to school dropout of slum dwellers to enhance their skill which will helpful to enhance their livelihood which is shown in fig 4.7. Many number of industry need lot of front end officer. Already Tamil Nadu Slum Clearance Board is giving training for the slum dwellers in the area of Automobile service, Computer service, Mobile service for male and DTP operator, Nursing, Front office assistant for female. The same kind of training may be continued to the slum dwellers to improve their livelihood.



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

Because of the rapid growth of the Tiruppur 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 equipments, Construction, Embroidery and Dyeing

Training on earth moving equipments and driving of four wheelers will provide more employment opportunities to the youth living in slums. Training on embroidery and dyeing skill will provide better employability are shown in fig 4.8.

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 is observed that, many young people living in the slums are aware of the government portal and it is not well used by slum dwellers, who are having 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.

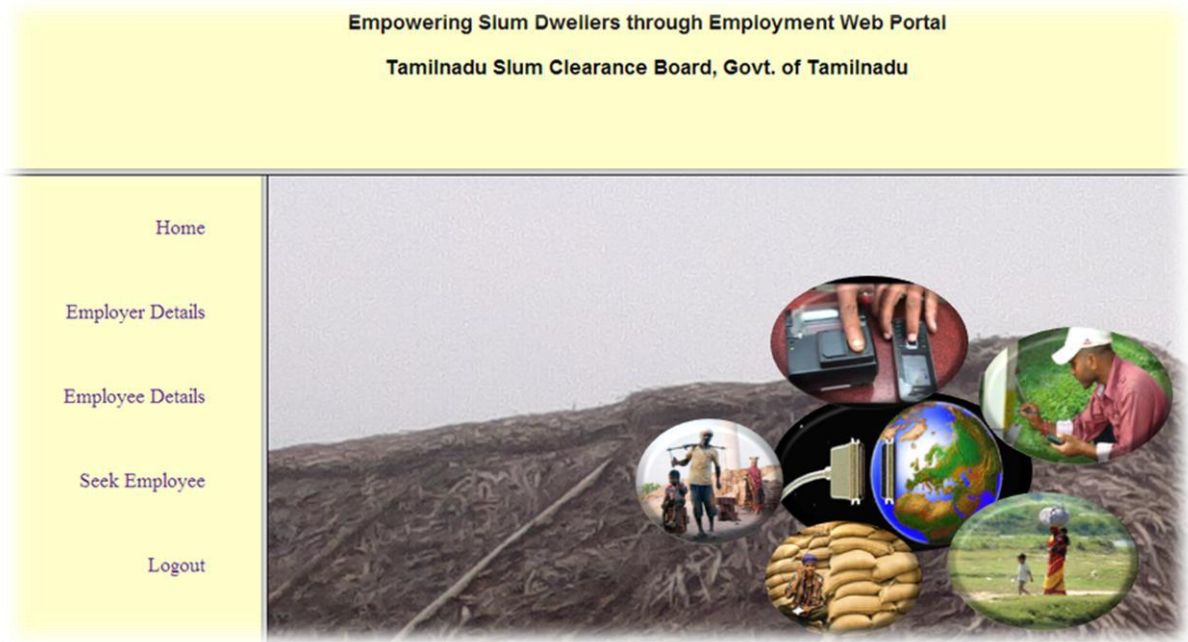


Fig.4.9 Empowering Slum Dwellers through Employment Web Portal

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, NITTTTR demonstrated a web-portal for a typical slum in Tiruppur.

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 committees under the chairmanship of the district collector.

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

4.4 STATUS OF SLUMS IN TIRUPPUR CORPORATION

While collecting the Slum profile information and socio-economic survey data, the formal and non-formal interactions with slum dwellers, Councillors and the community leaders, many valid points are brought out for improvement of slums. Some of the

important points need to be focused during the planning of an effective slum improvement, slum rehabilitation and slum development programmes:

1. One of the basic amenities for the day to day life is water. It is found that 18 slums in Tiruppur Corporation do not have the individual water supply connection to the households which consists of totally 868 households. Out of 18 slums, 11 slums are located in zone - III. Even though, all the slums in Tiruppur Corporation having the public fountain facility, the quantity of water supplied to the slums are not sufficient.
2. Majority of the households in slums of Tiruppur Corporation not at all having individual toilet facility (7561 households). Totally 58 slums are not having public toilet facilities in the slum as well as individual toilet facility.
3. From our socio economic survey, it is observed that, 7 slums are not having inner roads for the emergency access.
4. It is observed that most of the slums are having the street light facilities. Even though the number of lamp post have to be increased to provide sufficient lighting facility for the dwellers
5. In Tiruppur few slums are located in heart of the city with higher densities which are prone to the natural calamities like flood and fire. The land encroached by these slums are low level which will be intended during the rainy days. The density of the slum population is nearly six times greater than the density of city population. In some houses, more than one family are staying.
6. In Tiruppur, it is observed that many higher education institutions especially engineering and arts/science are available. Even though, the graduates in the slums are very nominal. Hence, the efforts have to be initiated to provide awareness among the slum dwellers. Also it is observed that the yearly age marriage is more in

the slums which contribute more in the dropouts of girl students, from the schools before completion of the study.

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

Table 4.2 Curative measures for Housing development

Sl. No	Problem	Solutions
1	<p>Land & Housing</p> <p>Flooding due to river water rise near the banks of the river & canals. Dwelling units near railway lines may face problem due to the expansion of railway project. Night shelters near cantonment area are not occupied due to inception of the project. Slums near national highways may face problem due to frequent accidents</p>	<ul style="list-style-type: none"> Shifting of houses from the river / canal banks to higher elevated areas. Provide freehold land rights. TNSCB/Tiruppur Corporation to assist in reworking the lease/freehold agreements. Slums near National highways should be avoided.
2	<p>Environment</p> <p>Breeding of mosquitoes near canals & Pond, Open defecation due to shortage of toilets. Waste water from house hold units and washer man area are mixed with canal/ river water. Accumulation of garbage due to improper collection/ absence of dustbin.</p>	<ul style="list-style-type: none"> Mosquito repellent should be frequently sprayed by the City. More public toilet facilities to be provided. Tiruppur 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.

Sl. No	Problem	Solutions
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.	<ul style="list-style-type: none"> • Depth of drains needs to be increased with proper slopes. • Inner drains need to be connected to the bigger drains. • Sewer lines need to extended to all slums
4	Water Supply Overall 90% of households are not having individual water supply connection. During the survey following points had been observed. <ul style="list-style-type: none"> • Water supply through public tap is once in a week. • The water supply is inconsistent. • Insufficient pressure. 	<ul style="list-style-type: none"> • Water supply should be frequent and supply timings need to be increased and pipelines repaired. • Damaged lines may be repaired • 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. <ul style="list-style-type: none"> • Drains are open in every settlement, leading to health risks. • Drains become blocked or clogged, causing water logging. 	<ul style="list-style-type: none"> • Tiruppur 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 92 slums, 39 slums are not having facility to dispose the garbage. <ul style="list-style-type: none"> • Inadequate placement of dust bins • Dumping of solid waste in to drains and road sides leads clogging and unhygienic conditions. 	<ul style="list-style-type: none"> • Private sector participation is to be encouraged for waste collection and transportation. • Dustbins to be provided by Corporation of Tiruppur

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:-

Table 4.3 Affordability Ratio of Different Income Groups

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

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

We would like to separate out the EWS and LIG since in most Government and Institutional programs these are taken as separate categories. 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 is shown in Table4.3.

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. Percentage of urban population living in slums had increased from 17 per cent in 1981 to 27.8 per cent in 2001. The Technical Group constituted for assessment of housing shortage at the end of 10th Five Year Plan (2007) estimated the total (urban) housing shortage in the country to be 24.7 million dwelling units. Approximately 98 to 99 per cent of this shortage pertains to EWS-LIG. In terms of 'quality' of structure (defined as permanent) housing 79 per cent of housing stock was permanent (in 2001). A mere 5.3 per cent was temporary and within that even a smaller portion (2 per cent) was unserviceable temporary. The situation was more critical in terms of large sized families living in small house. Only 12 per cent of households were 1-2 members but 37 per cent lived in one or less room. 48 per cent of married couples did not have independent room. 68 per cent lived in 2 or less rooms including a significant

percentage of large sized families. Comparing the number of households living in permanent / semi permanent /temporary housing with the number of housing units in each category, the excess of number of households over number of housing units in three categories is 3 million, 1 million and 0.8 million respectively. Thus, a larger proportion of households living in permanent housing shares accommodation with other households. Congestion factor was higher in permanent housing than in non permanent. This is understandable since a large number of non-pucca houses would be too small in size to accommodate more than one household. The problem however is not only of number of liveable housing units equalling or exceeding number of household. Unless the supply responds to requirement in different segments, we might have surpluses in some segments and shortage in others. This is evidenced by high vacancy rate (at 9 per cent) in urban housing.

A clear understanding of the nature of housing problem is an essential pre-requisite for formulating appropriate policies. Even though the need for housing is the highest at the lower end, it is not to say that need for housing for MIGs/HIGs has been exhausted. The housing policies thus have to be directed towards meeting requirements of all sections of population. The Government of India has adopted a dual policy for providing Affordable Housing for all. The fiscal incentives and housing sector reforms mainly target the middle and upper income groups who will be provided housing through the market processes. Special housing programs had been devised for the poor both at the centre and state level. In fact there has been a succession of such programs. In the beginning of the planning period, social housing schemes were devised for EWS-LIG-MIGs. Later programs however have been directed towards the poor only. These included Integrated Subsidised Housing Scheme for Industrial workers and economically weaker sections (1952); Low Income Group Housing Scheme (1956); Slum improvement/Clearance Scheme (initiated in 1956 and discontinued in 1972 at national level). Environmental Improvement of Urban Slums (1972); National slum development Program (1996), Scheme for Housing and Shelter Upgradation (SHASHU as part of Nehru Rozgar Yojna, introduced in 1989 and discontinued in 1997); the Shelter Upgradation 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 operationalise the programs will have to be substituted by a different mechanism devised for the new program. Further, hardly would have the administrators acquired the requisite skills for operationalising the program that they have to unlearn these and learn new skills. It is therefore very important that any new policy/program is well thought of and carefully designed. The experience from the old programs should be a definite input while designing any new program. Same holds for housing policies.

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

4.5.4 National Urban Housing and Habitat Policy 2007

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

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

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

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

4.5.5.2 SUBSIDIES

Since a very large section of population lives in abysmal housing conditions, the government effort must be directed towards making available minimal standard of housing for most of the population. With limited resources, it is important to prioritise the elements in the housing package. There can be no two opinions that infrastructure will score over permanent housing. If all the funds available could be utilized for providing better infrastructure in all habitats, housing conditions will improve on their own over time. Whereas individuals are not averse to invest in improving their house, they are quite reluctant to spend any money for infrastructural improvement. Within infrastructure, highest importance needs to be given to provision of water and sanitation facilities. These have significant external economies attached to them. Provision of these will have multiple benefits in terms of better health, higher productivity and income. A graduated scale of subsidy may be applied with highest rate of subsidy being provided for water and sanitation and lowest for shelter structure.

A key component to provision of Affordable Housing would be a more efficient functioning housing market which can respond to changes in demand as quickly as possible and with the least cost. Easing of government regulation has to be a first step in this direction. Improved mobility of households by reducing transaction cost of moving house (sale/purchase/renting) will be another. It is important that there are a multiple of options available to match the distinct requirements of different categories of population and there is mobility between different types and sizes of housing. It is not necessary to think of individuals/households only in terms of income categories and then plan to provide (say) larger sized houses for MIGs as compared to those for EWS-LIG. Non availability of preferred housing leads to suboptimal (read wasteful) choices. Thus single male/female or newly married couple (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 Tiruppur City, TNSCB identified only 9 acres for constructing dwelling units for the people living in un-tenable and poor infrastructure environment. It is estimated that around 5950 household units are required to meet the demand in the phasing of the un-tenable slums. Site to be selected / approved should preferably be in the vicinity of existing infrastructure, so as to minimize delay and cost in extending various services to the scheme area.

- Proper Approach.
- Availability of Local Transport.
- Availability of Water & 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 Tiruppur 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 TIRUPPUR DIVISION FROM 1987-88

4.8.1 Tamil Nadu Urban Development Project

The Tamil Nadu Urban Development Project was implemented by Tamil Nadu Slum Clearance Board with World Bank Assistance from 1988-89. This scheme envisages providing basic amenities like roads, access pathways, P.C. units, drainage, street lights, Water supply etc.,. After the transfer of land to TNSCB, sale deeds are being given to the beneficiaries. As on date 278 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.	Ramamurthy Nagar	38
2.	Chellandi Amman Kovil Street	240
	Total	278

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 337 families were benefited in Tiruppur Corporation which is furnished in Table 4.5.

Table 4.5 TNSCB – Cash Loan Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Pulluvampatii	20
2.	Thottimannarai	13
3.	Maniyakarampalayam	05
4.	Jammanai	02
5	KVR Nagar	04
6	Ramamurthy Nagar	01
7	Muthaian Nagar	11

8	Anna Nagar	29
9	Nallur	08
10	Periathottam MGR Nagar	08
11	Arivoli Nagar	40
12	Bharathi Nagar	21
13	KVR Nagar	05
14	Velampalayam	24
15	Annaisathya Nagar	46
16	Kongu Nagar	02
17	Athupalayam	25
18	Barber's Colony	11
19	Karumarampalayam	01
20	Perichipalayam	13
21	MS Nagar	03
22	NGR Nagar	02
23	Nethaji Nagar	02
24	Indira Nagar	01
25	Thennampalayam	05
26	Kulathupalayam	06
27	Palavanchipalayam	06
28	Sultanpettai	12
29	Chettipalayam	11
30	Andipalayam	13
Total		337

4.8.3 Nehru Rozgar Yojana

Under this scheme an amount of Rs. 4000/- was given to the beneficiaries for improving their dwelling units, which includes government grant of Rs. 1000 and balance is repayable by the beneficiary in EMI over a period of 10 Years. Under this scheme 612 families were benefited (Table 4.6).

Table 4.6 Nehru Rozhar Yojana Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Karumampalayam	38
2.	Karuvampalayam	39
3.	Jammanai	28
4.	KVR nagar	61
5	Ramamurthy Nagar	10
6	Muthaiannagar	75
7	Annanagar	14
8	K V R nagar-Patta	8
9	Kongunagar	53
10	Perichipalayam	40
11	M S Nagar	46
12	Indira Nagar	2
13	Royapuram	13
14	S V Colony	4
15	Thennampalaym- Kattuvalavu	15
16	Padmavathipuram	11
17	Chinnan Nagar	2
18	Poompugar Nagar	9
19	Murugampalayam	4
20	Mannarai	29
21	Thennampalayam	48
22	Kangeyanpalayam	39
23	Susaiyapuram	24
Total		612

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 allottees are required to pay a sum of Rs. 150/- per month over a period of

20 years. A total of 240 tenements have been constructed in Tiruppur Corporation is shown in table 4.7.

Table 4.7 TNSCB – Tenement Scheme

Sl. No.	Name of Scheme	No. of Units
1.	Chellandi Amman Koil	240
	Total	240

4.8.5 Integrated Housing & Slum Development Programme (IHSDP)

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 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.

4.8.5.1 Main Objectives of the Scheme

The basic objective of the scheme is to strive for slum free 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 Tiruppur Corporation IHSDP is implemented to upgrade the old structure as well as to construct the new houses in the slums. The details are furnished in the Table 4.8 to 4.11

Table 4.8 IHSDP – New Houses

S.No	Name of the slum	No of houses
1	A. S. Pandit Nagar	4
2	Annaikadu	15
3	Annamar Colony	64
4	Bharathidasan Colony	9
5	Chinnanan Nagar	56
6	K. G. Pudhur 1	7
7	K. G. Pudhur 2	8
8	Kongu Nagar	18
9	Kumarappapuram	25
10	M. S. Nagar	33
11	Mangalam Road	4
12	Military Colony	7
13	Murungapalayam	4
14	Murungapalayam Extension	1
15	Perichipalayam North	14
16	Perichipalayam South	10
17	PoolavariSukumar Nagar	76
18	Ramamoorthy Nagar	12
19	SathickBatcha Nagar	4
20	Soosaiyapuram East	6
21	Soosaiyapuram West	4
22	Spider Palanisamy Nagar	16
23	ThiyagiPalanisamy Nagar	4
24	Mission St. (Alternative)	20
25	Semedu (Alternative)	11
26	Moscow Nagar (Alternative)	7
27	K.V.R. Nagar (Alternative)	25
28	Thennampalayam	12
29	MuniyappamKoil St.	2
		478

Table 4.9 IHDSP – Up gradation

S.No	Name of the slum	Total houses
1	A. S. Pandit Nagar	97
2	Annamar Colony	31
3	Bharathidasan Colony	93
4	Chinnanan Nagar	30
5	College Road	1
6	Fire Service Colony	6
7	K. G. Pudhur 1	13
8	K. G. Pudhur 2	8
9	Kongu Nagar	70
10	Kumarappapuram	43
11	M. S. Nagar	51
12	Mangalam Road	41
13	Military Colony	78
14	Murungapalayam	6
15	Perichipalayam North	9
16	Perichipalayam South	14
17	Poolavari Sukumar Nagar	68
18	Ramamoorthy Nagar	28
19	Sathick Batcha Nagar	9
20	Soosaiyapuram East	116
21	Soosaiyapuram West	92
22	Spider Palanisamy Nagar	76
23	Thiyagi Palanisamy Nagar	27
24	Mission St. (Alternative)	35
25	Sathya Colony (Alternative)	12
26	Mannarai (Alternative)	41
27	Karumarampalayam (Alternative)	14
28	Semedu (Alternative)	3

S.No	Name of the slum	Total houses
29	Muniyappa Koil Street (Alternative)	34
30	Moscow Nagar (Alternative)	67
31	K V R Nagar (Alternative)	314
32	Poompuhar Nagar West	30
33	Rajiv Nagar	9
34	Thennampalayam Pattathuarasi Amman	16
		1582

Table 4.10 IHSDP Scheme – New Construction Expenditure

S.No	Details	No. of Houses x Subsidy Amount	Total
1	Completed	416 x 72000	2,99,52,000
2	Basement Level	20 x 18000	3,60,000
3	Brickwork Level	27 x 36000	9,72,000
4	Roof Level	12 x 54000	6,48,000
		475	3,19,32,000
		Three houses yet to receive the funds	

Table 4.11 IHSDP Scheme – Up-Gradation Expenditure

S.No	Details	No. of Houses x Subsidy Amount	Total
1	Completed	1553 x 36000	5,59,08,000
2	Basement Level	29 x 18000	5,22,000
		1582	5,64,30,000

4.9 VACANT LAND DETAILS AND RESETTLEMENT

Around 11.3 acres of vacant lands are identified by TNSCB, Tiruppur for the resettlement of the untenable slums. The details of the vacant lands are given in the following Table 4.12.

Table 4.12 Vacant Land Details

S.No	Name of the Scheme	Extent of land in (Acres)	Classification
1	Veerapandi	9	Karadu
2	Arivoli Nagar – Palladam	2.3	MeichalNadaipathai
	Total	11.3	

As per the already existing TNSCB guideline, approximately 100 housing units can be built in one acre land. Hence the requirement of the land for the curative measures is around 60 acres. The lands have to be procured or to be allotted by the Government for the curative as well as for the preventive measure at Tiruppur Corporation. As per the deficiency matrix and due consultation with TNSCB Coimbatore Division, the phasing have been prepared for the Tiruppur slums. Tables 4.13 to 4.20 are furnishing the details about, the suggested number of household and slums for year wise phasing from 2013 to 2022. The Resettlement phasing for un-tenable slums and Improvement of the infrastructure and livelihood, are shown from Tables 4.21to 4.27.

Table 4.13 Phasing of the tenable slums for the year 2014 -2015

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	03	037	Savandhapalayam	58	25	29	4	33	3x3
2	03	036	Muthunampalayam	110	18	75	17	92	3x2
3	03	035	Nallur	134	2	123	9	132	3x2
4	2	18	May Nagar	68	1	27	40	67	2x2
5	2	18	Bharathi Nagar	158	12	97	49	146	1x3
			Total	528	58	351	119	470	

Table 4.14 Phasing of the tenable slums for the year 2015 -2016

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	02	020	Boyampalayam	69	18	48	3	51	2x3
2	03	035	Chinimalaipalayam	23	0	21	2	23	2x2

3	03	044	Semmedu	114	36	76	2	78	2x1
4	02	023	Kongu Nagar Harijan Colony	218	58	148	12	160	3x2
5	03	35	Pudhupalayam	65	2	56	7	63	2x3
			Total	489	114	349	26	375	

Table 4.15 Phasing of the tenable slums for the year 2016 -2017

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	03	032	Karumarampalayam Harijan Colony	72	12	59	1	60	3x2
2	02	018	Sedarpalayam	81	9	67	5	72	1x2
3	04	060	Rajaganapathy Nagar AD Colony	28	11	16	1	17	3x2
4	03	032	Mannarai Harijan Colony	63	8	55	0	55	3x2
5	04	059	ChinnyaGoundar Pudur	31	1	29	1	30	3x2
6	2	18	Vavipalayam	84	7	71	6	77	3x2
			Total	359	48	297	14	311	

Table 4.16 Phasing of the tenable slums for the year 2017 -2018

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	03	036	M. Pudupalayam	76	18	49	9	58	2x3
2	03	035	Kuppandampalyam	54	4	47	3	50	2x3
3	01	014	Kavilipalayam Pudur	30	1	27	2	29	2x3
4	03	036	Amaravathipalayam	65	2	30	33	63	2x3
5	03	035	Vanjiveran Pudur MGR Nagar	57	1	50	6	56	2x3
6	04	060	Kamaraj Colony	86	6	76	4	80	3x1
7	04	060	Kuruji Nagar	100	65	24	11	35	2x3
			Total	468	97	303	68	371	

Table 4.17 Phasing of the tenable slums for the year 2018 -2019

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	01	012	Bharathidasan Colony	53	18	25	10	35	2x2
2	02	021	Arvoli Nagar AD Colony	48	2	38	8	46	2x2
3	01	014	Sirupoluvapatti	135	1	120	14	134	2x2
4	04	046	Chinnan Nagar	259	109	126	24	150	2x2
5	02	025	Lakshmi Ammal Nagar	41	8	30	3	33	2x2
			Total	536	138	339	59	398	

Table 4.18 Phasing of the tenable slums for the year 2019 -2020

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	03	042	Kattuvalu	48	6	40	2	42	2x2
2	03	031	NGR Colony	86	5	74	7	81	2x2
3	03	035	Kalipalayam	23	0	19	4	23	2x2
4	04	060	Rajaganapathy Nagar (Kulathupudur)	58	10	44	4	48	2x2
5	04	059	Chinnandipalayam AD Colony	60	4	51	5	56	2x2
6	02	030	Kumarasamy Nagar AD Colony	183	17	151	15	166	2x1
			Total	458	42	379	37	416	

Table 4.19 Phasing of the tenable slums for the year 2020 -2021

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	01	013	Nathakadu	86	17	66	3	69	1x3
2	01	013	NathakaduThottam	10	0	10	0	10	1x3
3	02	021	Thotti Mannari	48	26	15	7	22	2x1
4	02	030	Keethampalayam	49	16	30	3	33	2x1
5	04	046	Military Colony	249	51	194	4	198	2x1
6	01	013	Mascow Nagar	78	7	69	2	71	2x1
			Total	520	117	384	19	403	

Table 4.20 Phasing of the tenable slums for the year 2021-2022

S.No	Zone	Ward	Slum	Total House Holds	Pucca	Semi Pucca	Katcha	Houes ehold (SP+K)	Matrix
1	02	018	AD Colony (JJ Nagar Part - 1)	66	54	9	3	12	1x2
2	02	018	Thirunangaikal Street (JJ Nagar Part - 3)	15	15	0	0	0	1x2
3	02	018	MGR Nagar part 2 (JJ Nagar Part- 2)	91	12	57	22	79	1x2
4	01	013	Sathya Nagar	85	8	76	1	77	1x2
5	02	021	Arvoli Nagar	110	9	86	15	101	1x2
6	01	012	Murugampalayam	50	1	47	2	49	1x1
Total				417	99	275	43	318	

Table 4.21 Phasing of the untenable slums for the year 2014 -2015

TirS. No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	03	044	Quaith-E-Millath Nagar	313	3	286	24	1
2	03	45	Chelladi Amman Durai	48	0	48	0	1
3	03	42	Sangalipllam Part 1 & Part 2	47	1	44	2	1
4	03	32	Palayakad River Side	34	1	32	1	1
5	03	32	Vaikalpalayam	63	1	61	1	2
6	04	50	Poombukar West	322	7	266	49	3
Total				827	13	737	77	

Table 4.22 Phasing of the untenable slums for the year 2015 -2016

S.No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	03	042	Tulasi Rao Street	175	11	130	34	1
2	04	046	Anaimedu	219	7	158	54	1
3	03	044	Annai Sathya Nagar Extension	116	0	109	7	1
4	03	042	Nataraj Theatre East	27	0	21	6	1
5	03	035	Kasi Palayam	36	0	26	10	1
6	04	049	Pon Nagar	11	1	2	8	1
7	04	056	Odaikarai (KVR Nagar Part - 2)	176	16	141	19	1
Total				760	35	587	138	

Table 4.23 Phasing of the untenable slums for the year 2016 -2017

S.No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	04	056	ThanthaiPeriyar Nagar	39	1	30	8	1
2	03	044	Sukumar Nagar	267	2	248	17	2
3	03	042	Pattukottiar Nagar	96	0	71	25	2
4	03	042	Perichapalayam Annamar Colony South	84	0	76	8	2
5	04	049	Jammanai Street	11	0	9	2	1
6	04	046	Soosayapuram East	247	63	157	27	2
7	04	046	Kallapalayam Road	114	21	85	8	2
			Total	858	87	676	95	

Table 4.24 Phasing of the untenable slums for the year 2017 -2018

S.No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	03	042	PKR Colony	80	1	75	4	2
2	02	025	Harvey Road	37	0	35	2	2
3	03	042	Rajiv Gandhi Nagar	44	0	40	4	2
4	02	026	Muniyappan Colony	46	0	45	1	2
5	03	042	Nethaji Nagar	128	0	115	13	2
6	04	046	Soosayapuram West	360	105	242	13	2
7	03	042	Dharapuram TMC Colony	77	28	49	0	2
8	03	043	Periya Thottam	87	0	87	0	1
9	04	049	MGR Colony	85	12	71	2	1
			Total	944	146	759	39	

Table 4.25 Phasing of the untenable slums for the year 2018 -2019

S.No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	01	013	College Road & Railway Line & Jawan Nagar	352	51	296	5	2
2	04	056	Alankadu	124	16	98	10	2
3	04	056	KVR Nagar	149	8	137	4	2
4	04	050	TMC Colony Kamarjar Road	224	1	219	4	2
			Total	849	76	750	23	

Table 4.26 Phasing of the untenable slums for the year 2019 -2020

S.No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	03	036	Kovil Vazhi	103	0	91	12	2
2	04	050	Santhaipettai (Dr.Ambedkar Nagar)	234	12	188	34	2
3	04	049	LRG L/O	41	2	38	1	2
4	04	046	Indira Nagar Colony	142	5	115	22	3
5	03	044	Annai Satya Nagar	217	2	200	15	1
6	03	042	Anna Nagar	118	0	116	2	1
Total				855	21	748	86	

Table 4.27 Phasing of the untenable slums for the year 2020 -2021

S.No	Zone	Ward	Slum	Total House Hold	Pucca	Semi Pucca	Katcha	Rank
1	04	049	Petichettipuram	64	0	60	4	2
2	04	046	MGR Nagar	196	11	171	14	3
3	02	019	Anna Nagar	150	4	145	1	3
4	01	002	ThriuvallarNagar	83	2	62	19	3
5	02	023	Railwayline (Kuthoos Puram Anna Nagar)	91	1	88	2	3
6	01	013	Konganagiri	196	1	187	8	3
7	02	030	Poomparai	75	0	71	4	3
Total				855	19	784	52	

Table 4.28, 4.29 and Table 4.30 show the Curative strategy and Financing plan for tenable and untenable slums for the next eight years period (upto 2022) respectively.

Table 4.28 Detailed Investment Plan - Curative Strategy (Tenable)

Name of the City : Tiruppur

SI .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	5	5	6	7	5	6	6	6	46
	No of Households	528	489	359	468	536	458	520	417	3775
	No of Households Proposed for intervention	470	375	311	371	398	416	403	318	3062
	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	3.88	3.4	3.11	4.08	4.81	5.54	5.9	5.12	35.84
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	25.85	22.69	20.71	27.19	32.08	36.9	39.33	34.15	238.9
	(iii) Social infrastructure	1.94	1.70	1.55	2.04	2.41	2.77	2.95	2.56	17.92
	Subtotal B	31.67	27.79	25.37	33.31	39.30	45.21	48.18	41.83	292.66
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.24	0.21	0.19	0.25	0.29	0.34	0.36	0.31	2.19
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.24	0.21	0.19	0.25	0.29	0.34	0.36	0.31	2.19
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.16	0.14	0.13	0.17	0.20	0.23	0.24	0.21	1.48
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.08	0.07	0.06	0.08	0.10	0.11	0.12	0.10	0.72
	Subtotal C	0.72	0.63	0.57	0.75	0.88	1.02	1.08	0.93	6.58
D	Overheads/Administrative costs (at 5% of A+B+C)	1.62	1.42	1.30	1.70	2.01	2.31	2.46	2.14	14.96
E	Tender Excess @ 10 % of B	3.17	2.78	2.54	3.33	3.93	4.52	4.82	4.18	29.27
F	Total(A+B + C+D+E)	37.18	32.62	29.78	39.09	46.12	53.06	56.54	49.08	343.47
G	Physical contingencies (@ 2.5% of F)	0.93	0.82	0.74	0.98	1.15	1.33	1.41	1.23	8.59
H	Total Investment Cost H = (F+G)	38.11	33.44	30.52	40.07	47.27	54.39	57.95	50.31	352.06
I	Operation and Maintenance cost (at 4% of B)	1.27	1.11	1.01	1.33	1.57	1.81	1.93	1.67	11.70
	Total Investment Cost (H+I)	39.38	34.55	31.53	41.40	48.84	56.20	59.88	51.98	363.76

Table 4.29 Detailed Investment Plan - Curative Strategy (Untenable)

Name of the City :Tiruppur

Sl. No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	6	7	7	9	4	6	7	0	46
	No of Households	827	760	858	944	849	855	855	0	5948
	No of Households Proposed for intervention	827	760	858	944	849	855	855	0	5948
	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))	6.82	6.9	8.57	10.38	10.26	11.38	12.52	0	66.83
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	45.49	45.98	57.14	69.2	68.43	75.84	83.45	0	445.53
	(iii) Social infrastructure (at 7.5 % of B (ii))	3.41	3.45	4.29	5.19	5.13	5.69	6.26	0	33.42
	Subtotal B	55.72	56.33	70.00	84.77	83.82	92.91	102.23	0	545.78
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.42	0.42	0.53	0.64	0.63	0.70	0.77	0	4.11
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.42	0.42	0.53	0.64	0.63	0.70	0.77	0	4.11
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.28	0.28	0.35	0.42	0.42	0.46	0.51	0	2.72
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.14	0.14	0.18	0.21	0.21	0.23	0.26	0	1.37
	Sub total C	1.26	1.26	1.59	1.91	1.89	2.09	2.31	0	12.31
D	Overheads/Administrative costs (at 5% of A+B+C)	2.85	2.88	3.58	4.33	4.29	4.75	5.23	0	27.91
E	Tender Excess @ 10 % of B	5.57	5.63	7.00	8.48	8.38	9.29	10.22	0	54.57
F	Total(A+B + C+D+E)	65.40	66.10	82.17	99.49	98.38	109.04	119.99	0	640.57
G	Physical contingencies (@ 2.5% of F)	1.64	1.65	2.05	2.49	2.46	2.73	3.00	0	16.02
H	Total Investment Cost H = (F+G)	67.04	67.75	84.22	101.98	100.84	111.77	122.99	0	656.59
I	Operation and Maintenance cost (at 4% of B)	2.23	2.25	2.80	3.39	3.35	3.72	4.09	0	21.83
	Total Investment Cost (H+I)	69.27	70.00	87.02	105.37	104.19	115.49	127.08	0	678.42

Table 4.30 Detailed Investment Plan - Curative Strategy (Tenable & Untenable)

Name of the City :Tiruppur

SI .No	Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
	No of Slums	11	12	13	16	9	12	13	6	92
	No of Households	1355	1249	1217	1412	1385	1313	1375	417	9723
	No of Households Proposed for intervention	1297	1135	1169	1315	1247	1271	1258	318	9010
A	Land Cost									
B	Housing & Infrastructure									
	(i) Physical Infrastructure	10.7	10.3	11.68	14.46	15.07	16.92	18.42	5.12	102.67
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	71.34	68.67	77.85	96.39	100.51	112.74	122.78	34.15	684.43
	(iii) Social infrastructure	5.35	5.15	5.84	7.23	7.54	8.46	9.21	2.56	51.34
	Subtotal B	87.39	84.12	95.37	118.08	123.12	138.12	150.41	41.83	838.44
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.66	0.63	0.72	0.89	0.92	1.04	1.13	0.31	6.30
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.66	0.63	0.72	0.89	0.92	1.04	1.13	0.31	6.30
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.44	0.42	0.48	0.59	0.62	0.69	0.75	0.21	4.20
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.22	0.21	0.24	0.29	0.31	0.34	0.38	0.10	2.09
	Subtotal C									0.00
D	Overheads/Administrative costs (at 5% of A+B+C)	4.47	4.30	4.88	6.03	6.30	7.06	7.69	2.14	42.87
E	Tender Excess @ 10 % of B	8.74	8.41	9.54	11.81	12.31	13.81	15.04	4.18	83.84
F	Total(A+B + C+D+E)	102.58	98.72	111.95	138.58	144.50	162.10	176.53	49.08	984.04
G	Physical contingencies (@ 2.5% of F)	2.57	2.47	2.79	3.47	3.61	4.06	4.41	1.23	24.61
H	Total Investment Cost H = (F+G)	105.15	101.19	114.74	142.05	148.11	166.16	180.94	50.31	1008.65
I	Operation and Maintenance cost (at 4% of B)	3.50	3.36	3.81	4.72	4.92	5.53	6.02	1.67	33.53
	Total Investment Cost (H+I)	108.65	104.55	118.55	146.77	153.03	171.69	186.96	51.98	1042.18

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 to 1 billion mark, where every 3rd dwellers in urban areas in the world is living in slum settlements (UN-HABITAT), is not only changing the urban form and structure, but also is exacerbating poverty, housing problems, inequality and social exclusion in most cities specially in developing nations.

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

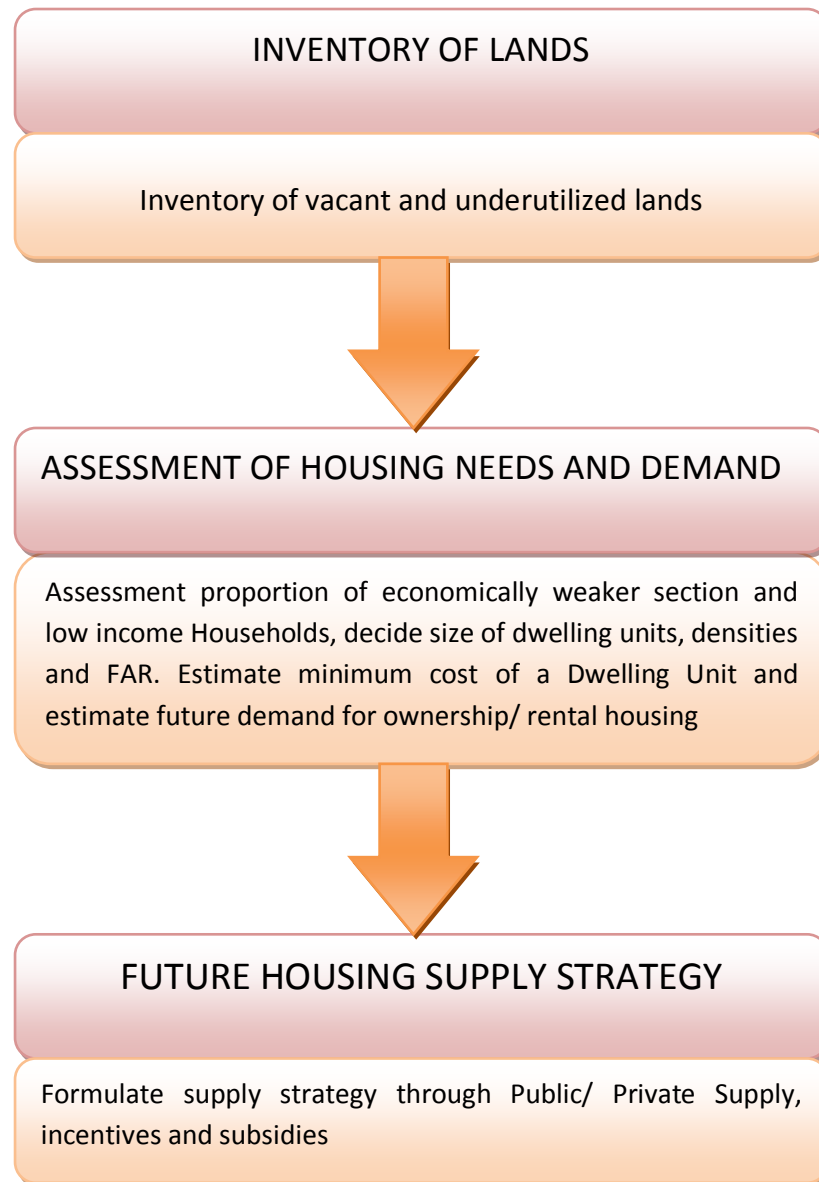


Fig. 5.1 Preventive Strategy for Slums[Source : Rajiv AwasYojana]

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

5.2 LAND AVAILABILITY FOR HOUSING IN TIRUPPUR

In Tiruppur, TNSCB identified around 9 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 & quality of life of any urban area. Poor planning mechanism leads to slums & illegal growth. Though, there exists an elaborate Regulatory Mechanism to promote, guide & 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 20percent 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 Tiruppur

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 Tiruppur City is based on the following factors: Past census population and relevant details;

- Decadal growth and growth rates of the country, state (TN) and the ULB;
- Population density pattern and availability of land for the future development;
- Socio-economic characteristics and economic base with employment generating potential Development (Master) Plan for the region considering the contextual issues stated and growth pattern in terms of land use and land availability for growth including proposed plans and potential for significant change in land use (within project period/ design life);
- Positioning of the hinterland, linkages with core of region and connectivity, importance and contribution as an economic base for the region;
- Availability of resources to facilitate provision and delivery of services and facilities;
- Implications of the ongoing and proposed projects towards improving the provision and delivery of services;
- Other external and internal growth dynamics responsible for migration; And Other factors - tourism, natural disasters and related.

Table 5.1 and Fig.5.2 projects the population for Tiruppur which comes 11.13 lakhs in 2023. Forecasting of population can be accomplished with different mathematical methods by using present and past population records. The most commonly used Geometric Progression method is used here for the calculation of population growth. Exponential growth occurs when the growth rate of the value of a mathematical function is proportional to the function's current value. Exponential decay occurs in the same way when the growth rate is negative. In the case of a discrete domain of definition with equal intervals it is also called geometric growth or geometric decay (the function values form a geometric progression). The exponential growth model is also known as the Malthusian growth model.

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

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

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

The city population and slum households are projected to calculate future demand using above equation. As per the 2011 census, Tiruppur city population and slum households are 877980 and 22148 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 10.91 lakhs in 2022. It has been observed from Table 5.1 that, every year the projected housing requirement is increasing in an average 504. It is also observed that total number of slum households projected is 27538 in 2022. Hence, 4034 households have been considered for the preparation of estimation for preventive strategy which is furnished in the Table 5.2, 5.3 & 5.4.

Table 5.1 Projected Slum Household and population for Tiruppur City

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Projected Slum Household	23043	23504	23974	24453	24942	25441	25950	26469	26998	27538
Projected Additional Households	-	-	470	479	489	499	509	519	529	540

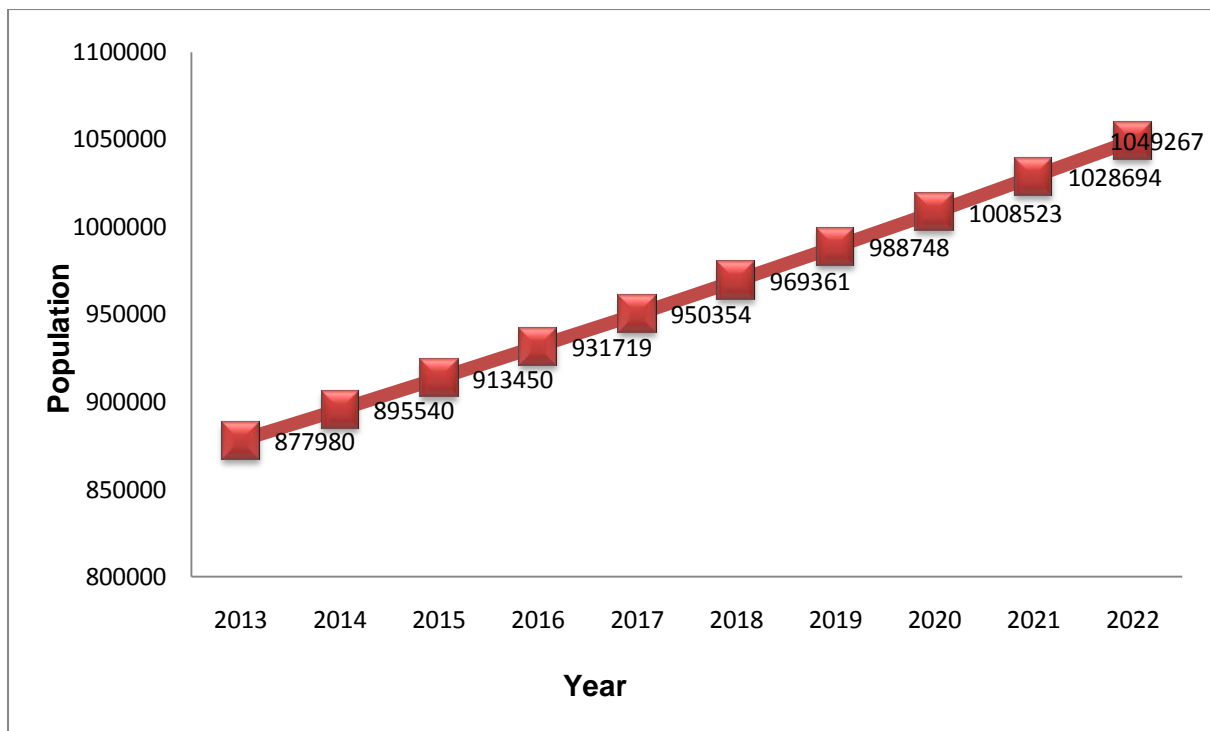


Fig. 5.2 Projected population of Tiruppur City

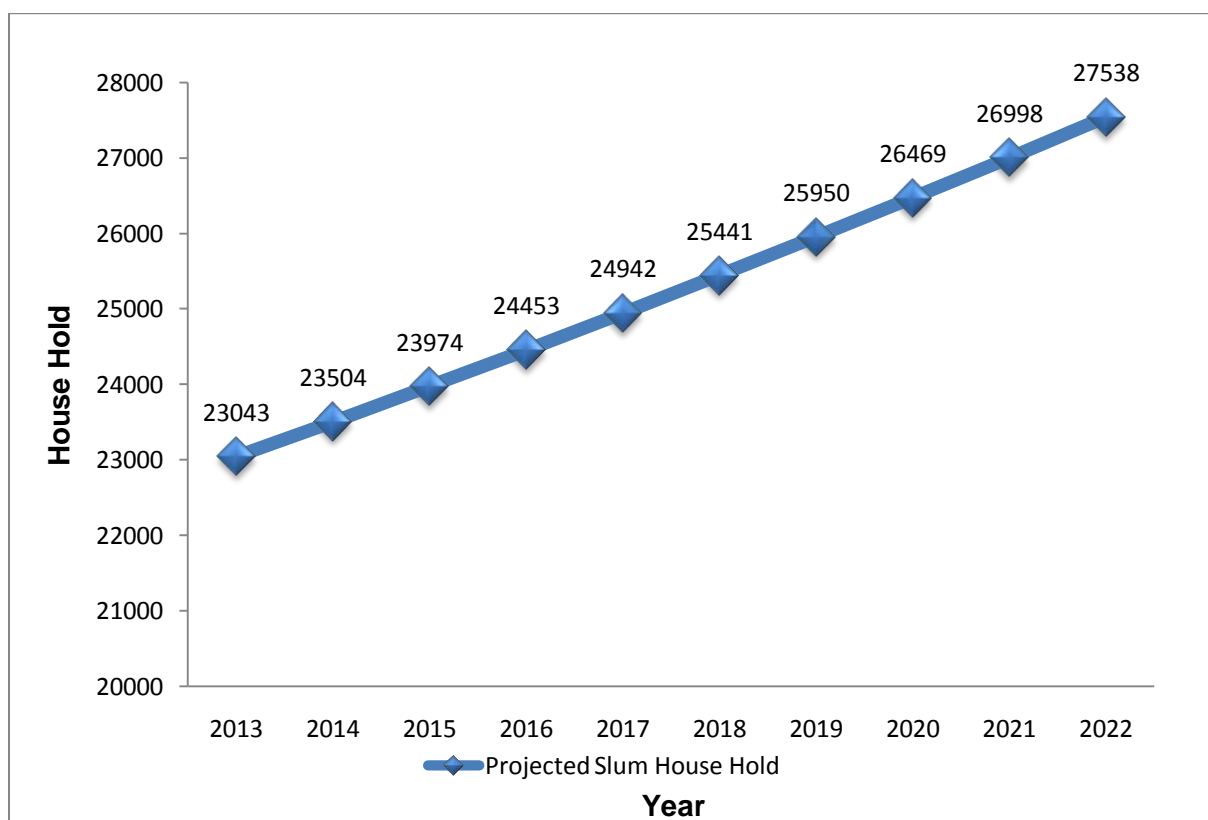


Fig. 5.3 Projected Slum Household of Tiruppur City

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 & Electricity.
- Primary School to be in near vicinity.
- Primary Health Center 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 AwasYojna. (proposed new scheme of Government of India to be implemented w.e.f. 01.04.2010)

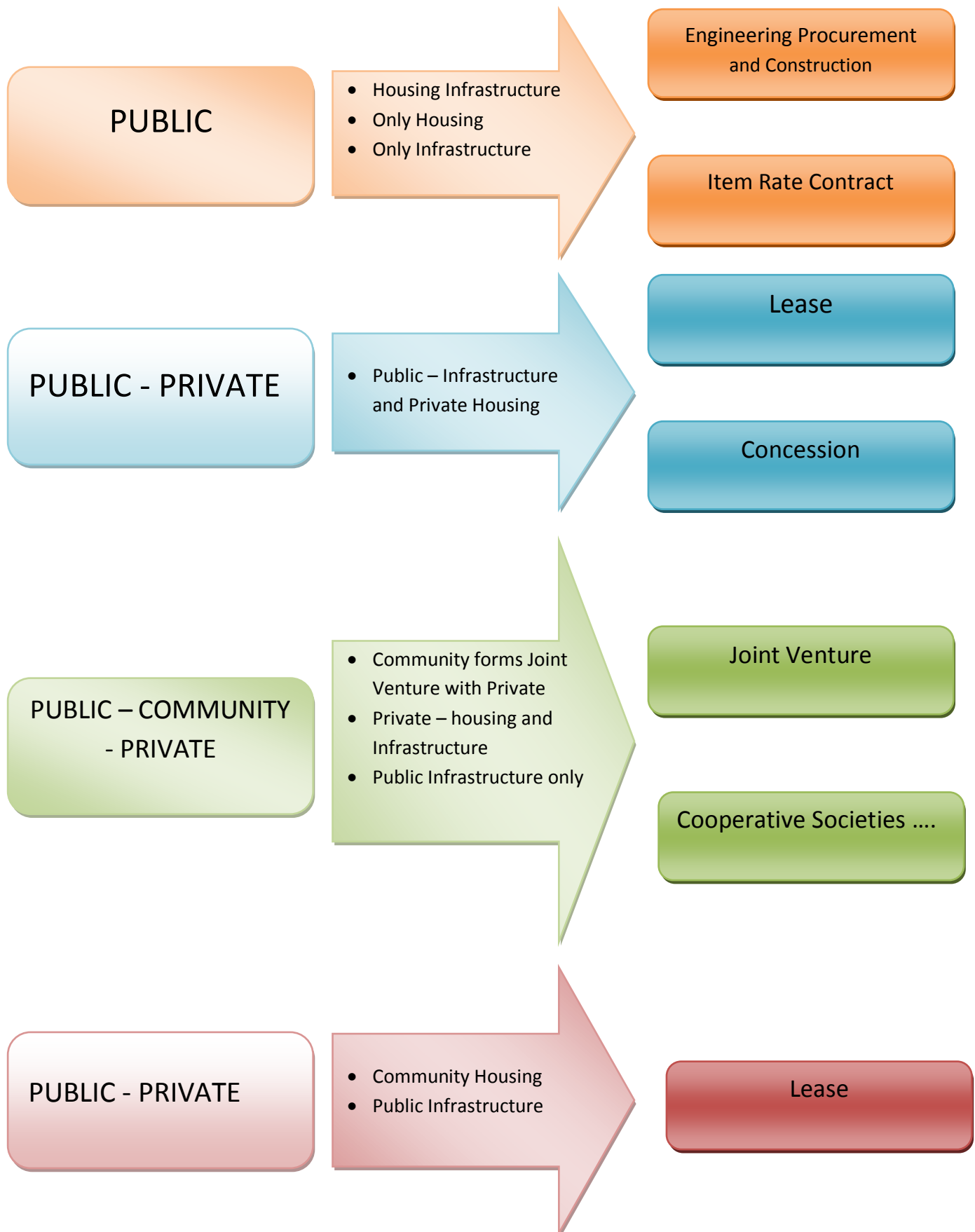


Fig. 5.4 Housing Augmentation Strategic Models

5.5 POLICY AND INSTITUTIONAL REFORMS

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

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

5.5.1. Policy and institutional reform include:

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

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 outdated 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 of issuance of land documents can create considerable conflict, especially in places with multiple forms of property rights. Authorities may prefer to retain the informal status of some spontaneous settlements, as the land may be demanded by other uses, and informal occupation provides a sufficient ground for eviction

Land and housing regulations make housing unaffordable.

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

among public agencies. In addition limited land supply would cause the land price to increase.

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

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

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

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

5.6 SUGGESTED POLICIES

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

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

Regulations both at the national and city 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 computerisation of land transaction and publishing the same in government 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 based on a broad framework, while more detailed planning policies should be designed at the local level. For example, density levels in different parts of the city and infrastructure standards should be decided at the city level, in consultation with local communities. Flexibility should also be extended to building standards, construction material standards, and codes. Regulations that can be eliminated without jeopardizing safety should be eliminated in order to keep construction costs down. Procedures to apply for and acquire construction and occupancy permits should also be made simple so that they are accessible to poor people with limited education and time.

Lengthy and complex planning procedures also delay the provision of serviced land and housing production, leading to increases in land and housing prices.

5.7 Credit Plan

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

5.7.1 ISHUP and Rajiv Rinn Yojana (RRY)

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

As a means of Credit Enablement, the Interest subsidy scheme for Housing the Urban Poor (ISHUP), has been dovetailed with RAY, with the existing ceiling of the subsidized loan of 1 lakh, so that to 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 tradeoffs between cost and quality of services. Limited access to urban services not only deteriorates human capital, i.e., health

education, but hampers the productivity of small- and micro-enterprises and home-based activities.

5.7.3 Financial Markets

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

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

5.7.4 Labour Markets & Employment

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

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

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

5.7.5 Support to Small and Microenterprises (SMEs)

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

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

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

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

5.8 Increasing Access to Job Opportunities

Physical access

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

Other enabling policies

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

Providing practical job training

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

Facilitating child care to enable women to work.

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

Cities can also take a role in the creation of short-term employment, for example, through public works programs. Such programs typically address urban infrastructure deficiencies through small works investments. Although the jobs created are only short-term, such programs provide temporary supplements to income and promote small-scale entrepreneurs.

Slum evacuation and deployment them in another place should ensure that their daily earning are not affected much and towards this, it is suggested that free and non transferable (photo identity) bus passes/ train passes may be used to them so that their basic livelihood is not affected in anyway.

Supporting Home-Based Income-Generating Activities

Home-based production (or cottage industry) is also an important income-generating activity among the poor. Not only can housing space be used to earn rents but homes can also accommodate commercial and manufacturing activity. However, planning policies and

land-use regulations tend to be based on the principle of separating housing and productive activities. City authorities often prohibit cottage industry to avoid health and safety hazards.

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

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

5.9 Social Protection

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

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

administered by local governments; therefore, capacity building of local governments is also important for the effectiveness of these programs. Non-governmental safety nets, such as NGO programs, could also be fostered by government as they may be suitable to reach the poor who remain outside of formal employment.

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

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

Health and Nutrition

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

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

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

- Facilitating access to basic services (see service provision section)
- 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 government with the assistance from central governments. However, local authorities can contribute through:

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

5.9.3 Personal Safety - Crime Prevention

Personal security of urban poor is jeopardized by:

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

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

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

Possible policy actions by local authorities are:

- Support community organizations to strengthen community networks
- Initiate training and job creation programs for the youth
- Provide community services, e.g., safe transport and electricity for slum areas
- Provide tenure security

- Support positive contact between poor communities and security forces; encourage and implement (if possible) appropriate training for security forces involved in crime prevention.

5.10 Poverty and Urban Environmental Conditions

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

Climate Change

The impacts of climate change and natural disasters pose a number of risks to cities due to the high concentration of people and economic assets and, in many cases the hazard prone location of cities on coastal areas and along rivers. This makes them vulnerable to rising sea levels, storm surges, and floods. Within cities, impacts of climate change and disasters are distributed unevenly among urban populations. Low-income households have limited choices for location, particularly where the land available for housing is scarce or unaffordable. As a consequence, in many cities there are high concentrations of poor households typically living in slums, on land at high risk from landslides, sea-level rise, and flooding. The urban neighbourhoods that are at risk from extreme weather events and natural disasters are made even more vulnerable by overcrowded living conditions, the lack of adequate infrastructure and services, including water, sanitation, drainage, solid waste collection, and unsafe housing, inadequate nutrition and poor health. When a disaster hits, impacts can include the loss of these basic services, damage or destruction to one's home, reduction or loss of livelihoods, and the rapid spread of malnutrition, and water- and vector-borne diseases (particularly malaria).

5.11 Possible Interventions:

Solid waste management

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

Water supply, sanitation, and wastewater management

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

Industrial pollution management

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

Table 5.2 Detailed Investment Plan - Preventive Strategy

Name of the City: Tiruppur

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	470	479	489	499	509	519	529	540	4034
	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))	3.88	4.35	4.89	5.49	6.15	6.91	7.74	8.7	48.11
	(ii) Housing (at Rs. 5.5 lakh per Unit with 10% escalation per annum)	25.85	28.98	32.57	36.58	41.03	46.04	51.63	58	320.68
	(iii) Social infrastructure (at 7.5 % of B (ii))	1.94	2.17	2.44	2.74	3.08	3.45	3.87	4.35	24.04
	Subtotal B	31.67	35.50	39.90	44.81	50.26	56.40	63.24	71.05	392.83
C	Other costs									
	(i) Preparation of DPRs (at 0.75 % of B)	0.24	0.27	0.30	0.34	0.38	0.42	0.47	0.53	2.95
	(ii) Design and Consultancy charges (at 0.75 % of B)	0.24	0.27	0.30	0.34	0.38	0.42	0.47	0.53	2.95
	(iii) Quality control (TIPMA) at 1% of ACA (0.5% of B)	0.16	0.18	0.20	0.22	0.25	0.28	0.32	0.36	1.97
	(iv) Social audit 0.5% of ACA (0.25% of B)	0.08	0.09	0.10	0.11	0.13	0.14	0.16	0.18	0.99
	Subtotal C	0.72	0.81	0.90	1.01	1.14	1.26	1.42	1.60	8.86
D	Overheads/Administrative costs (at 5% of A+B+C)	1.62	1.82	2.04	2.29	2.57	2.88	3.23	3.63	20.08
E	Tender Excess @ 10 % of B	3.17	3.55	3.99	4.48	5.03	5.64	6.32	7.11	39.29
F	Total(A+B + C+D+E)	37.18	41.68	46.83	52.59	59.00	66.18	74.21	83.39	461.06
G	Physical contingencies (@ 2.5% of F)	0.93	1.04	1.17	1.31	1.48	1.65	1.86	2.08	11.52
H	Total Investment Cost H = (F+G)	38.11	42.72	48.00	53.90	60.48	67.83	76.07	85.47	472.58
I	Operation and Maintenance cost (at 4% of B)	1.27	1.42	1.60	1.79	2.01	2.26	2.53	2.84	15.72
	Total Investment Cost (H+I)	39.38	44.14	49.60	55.69	62.49	70.09	78.60	88.31	488.30

Table 5.3 Detailed Investment Plan - Curative and Preventive Strategy – Tiruppur

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	5	5	6	7	5	6	6	6	46
ii	No of Households	528	489	359	468	536	458	520	417	3775
iii	No of Households Proposed for intervention	470	375	311	371	398	416	403	318	3062
iv	Investment Cost – Insitu Upgradation	39.38	34.55	31.53	41.40	48.84	56.20	59.88	51.98	363.76
B	Untenable									
i	No of Slums	6	7	7	9	4	6	7	0	46
ii	No of Households	827	760	858	944	849	855	855	0	5948
iii	No of Households Proposed for intervention	827	760	858	944	849	855	855	0	5948
iv	Investment Cost - Relocation	69.27	70.00	87.02	105.37	104.19	115.49	127.08	0.00	678.42
C	Curative Strategy - A+B)									
i	No of Slums (Ai+Bi)	11	12	13	16	9	12	13	6	92
ii	No of Households (Aii +Bii)	1355	1249	1217	1412	1385	1313	1375	417	9723
iii	No of Households Proposed for intervention (Aiii + Bii)	1297	1135	1169	1315	1247	1271	1258	318	9010
iv	Investment Cost - Curative Strategy (Aiv +Biv)	108.65	104.55	118.55	146.77	153.03	171.69	186.96	51.98	1042.18
D	Preventive Strategy									
i	No of Housing unit to be constructed	470	479	489	499	509	519	529	540	4034
ii	Investment Cost - Preventive Strategy	39.38	44.14	49.60	55.69	62.49	70.09	78.60	88.31	488.30
	Total Investment Cost (Civ + Dii)	148.03	148.69	168.15	202.46	215.52	241.78	265.56	140.29	1530.48

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

S. No	ITEM	Year (Rs.In Crores)								Total
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	
1	SFCP INVESTMENT	148.03	148.69	168.15	202.46	215.52	241.78	265.56	140.29	1530.48
1.2	No of affordable housing stock proposed including dormitories and night shelters.									
2	SOURCES OF FUNDING									
2.1	Central Assistance	56.25	56.5	63.9	76.93	81.9	91.88	100.91	53.31	581.58
2.2	State Contribution	81.42	81.78	92.48	111.35	118.54	132.98	146.06	77.16	841.77
2.3	Local body contribution									
2.2.1	BSUP Fund									
2.2.2	General Allocation from the Budget									
2.2.3	Earmarked resources									
2.2.4	PPP									
2.2.5	Loans									
2.2.6	Others - specify:									
2.3	Beneficiaries Contribution	10.36	10.41	11.77	14.17	15.09	16.92	18.59	9.82	107.13
2.4	Sources to be identified during implementation									
3	TOTAL SOURCES	148.03	148.69	168.15	202.45	215.53	241.78	265.56	140.29	1530.48

Tamil Nadu Slum Clearance Board

Coimbatore Division

Minutes of the RAY coordination meeting conducted at Tiruppur on 27.12.2013.

Members present

1. Mayor , Tiruppur Corporation
2. Commissioner, Tiruppur Corporation
3. Deputy Mayor, Tiruppur Corporation
4. Ward Members, Tiruppur Corporation
5. Assistant Commissioner, Tiruppur Corporation
6. Assistant Engineer, Corporation
7. Town Planning wing Officials
8. Thiru. R. Jeyapal, Chief Engineer
9. Thiru. V. Subramanian, Superintending Engineer
10. Thiru. R. Rajasekaran, Executive Engineer
11. Thiru. S. Jegannathan, Assistant Executive Engineer
12. Thiru. S. Muthupandi, Community Development officer
13. Thiru. S. Saravanakumar, Assistant Engineer
14. Thiru. S. Visagavel, Assistant Engineer
15. Thiru. S. Krishnan, Assistant Engineer
16. Tmt. S. Saraswathi, Community officer and TNSCB Officers.
17. Thiru. V. Fraklin, GIS Specialist
18. Thiru. K. Chandarkanth, Town Planning Specialist
19. Dr. R. Ravichandaran, NITTTR, Chennai
20. Dr. K.S.A. Dineshkumar, NITTTR, Chennai
21. Dr. G. Janarthanan, NITTTR, Chennai.

Thiru. V. Subraminan, Superintending Engineer, Tamil Nadu Slum Clearance Board has welcomed all the participants and explained the implementation of RAY.

Thiru. R. Jeyapal, Chief Engineer, Tamil Nadu Slum Clearance Board has explained in detail about the RAY schemes.

The Chief Engineer has also explained objective of the RAY scheme, financial details, funding pattern, beneficiary contribution and implementation procedures. The insitu houses are to be constructed for people living in unobjectionable lands and relocation houses are to be constructed to the slum people living in objectionable lands.

The Booklet containing list of slums in Tiruppur Corporation with tenability, no of families and land classification are issued to all the members.

The NITTTR officials Thiru. R. Ravichandran, Thiru. K.S.A. Dineshkumar and Thiru. G.Janarthanan have presented Power Point presentation about planning of slum free city action.

They also explained that under RAY scheme the slums are taken up for social economic survey. Also the infrastructure facilities and layouts of the slums are taken by satellite image and GIS maps.

The Commissioner, Tiruppur Corporation has explained the councillors about implementation of RAY scheme in Tiruppur.

The ward Councillors have raised the following queries.

Ward 23

The RAY scheme to be implemented for those beneficiaries, who have paid beneficiaries contribution. He requested loan facility for the beneficiaries

Ward 23

The Slums not covered under survey, are to be included. The 10% beneficiaries contribution to be paid by Government (or) bank loan.

Ward 52

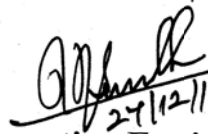
The schemes covered under IAY are to be added in the RAY scheme.

Ward 12

The councillors asked the details of RAY scheme and area of the houses, to be constructed.

The Chief Engineer, Tamil Nadu Slum Clearance Board explained in detail for all the quarries, raised by the councillors.

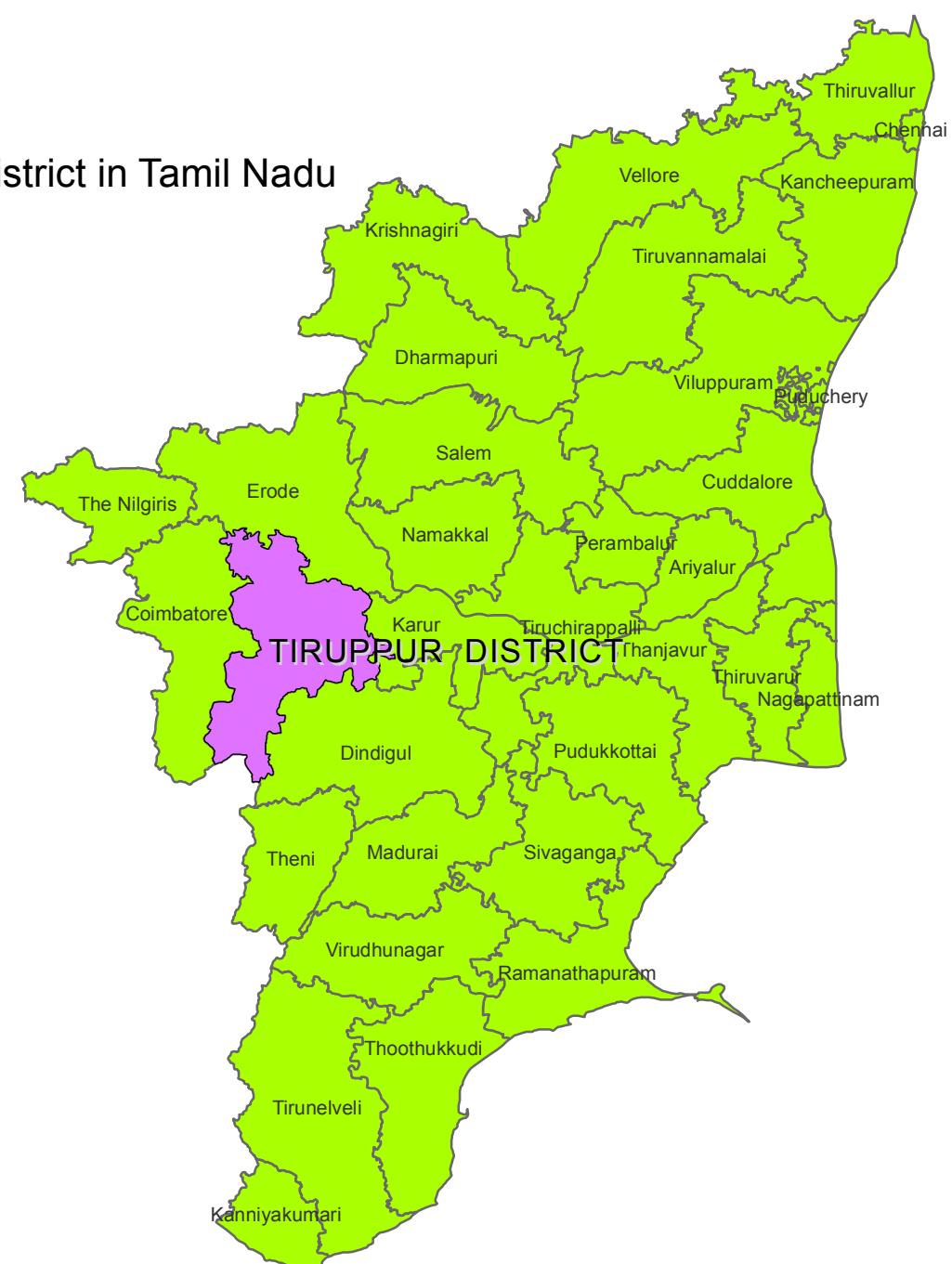
The Mayor, Tiruppur Corporation has explained the status of RAY scheme in Tiruppur. The slums not yet covered under RAY socio economic survey are to be taken up for further survey and the same has been accepted.


27/12/13.
Executive Engineer
Coimbatore Division

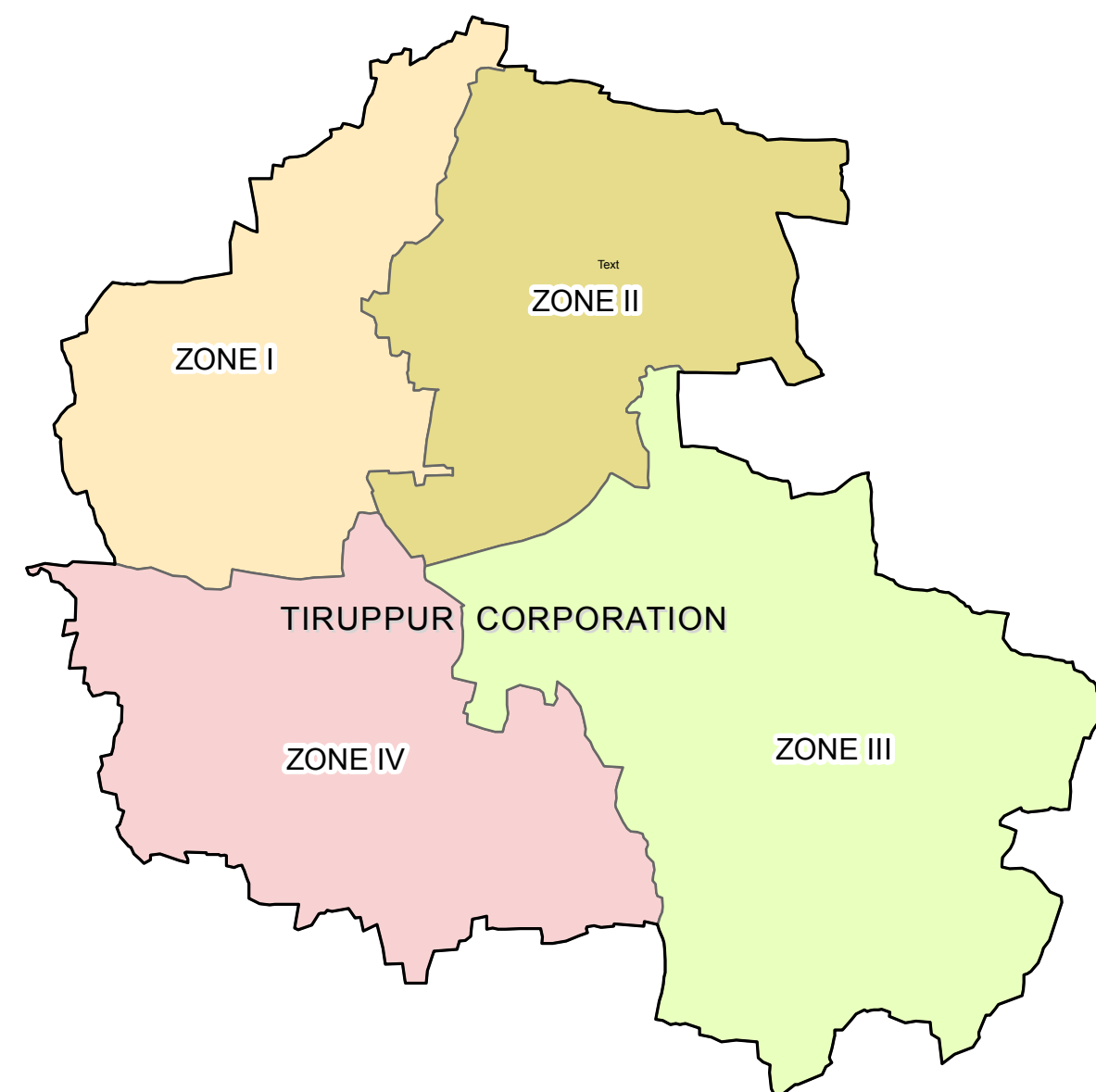




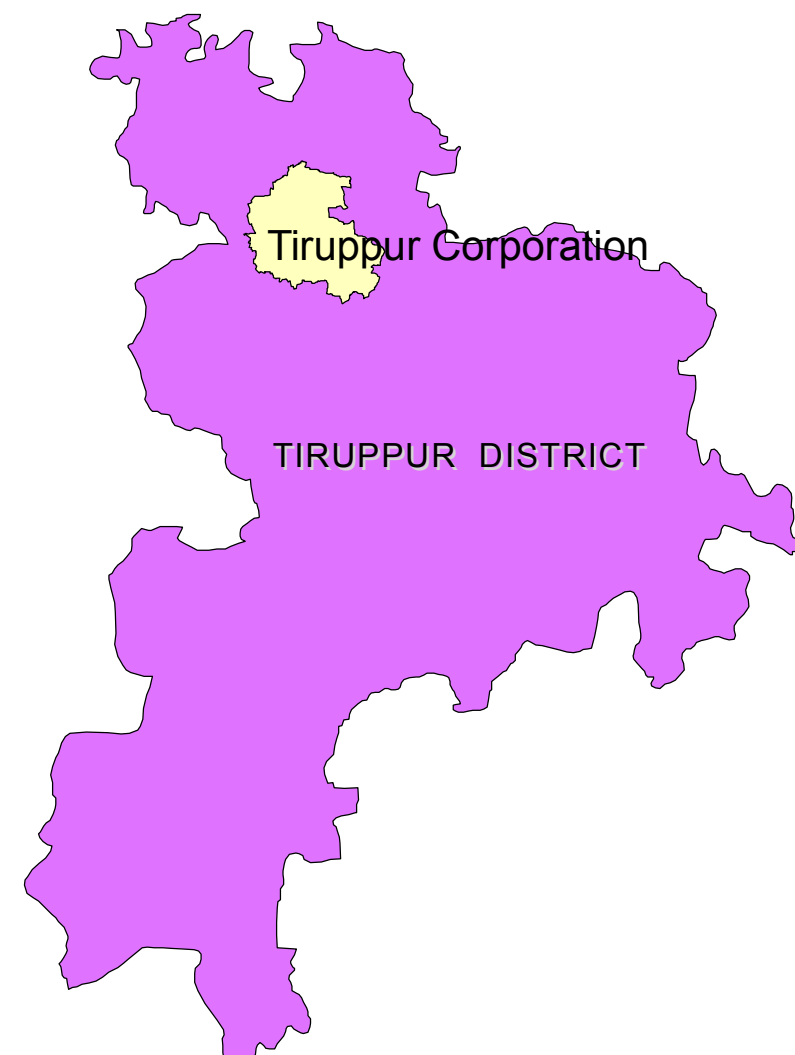
Tiruppur District in Tamil Nadu



Tiruppur Corporation



Tiruppur Corporation in Tiruppur District



TAMILNADU SLUM CLEARANCE BOARD

raytnscb@gmail.com

044 - 28442784

RAY CELL, NO. 5, KAMARAJAR SALAI, CHEPAUK, CHENNAI - 600 005

SCHEME NAME:

Rajiv Awas Yojana

MAP TITLE:

LOCATION MAP OF
TIRUPPUR CORPORATION

CITY NAME : TIRUPPUR

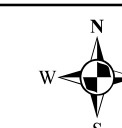
LEGEND

ADMINISTRATIVE UNITS

- India
- Tamil Nadu
- Tiruppur District
- Tiruppur Corporation
- Zone I
- Zone II
- Zone III
- Zone IV

Scale : 1:50,000

0 1 2 4 Km



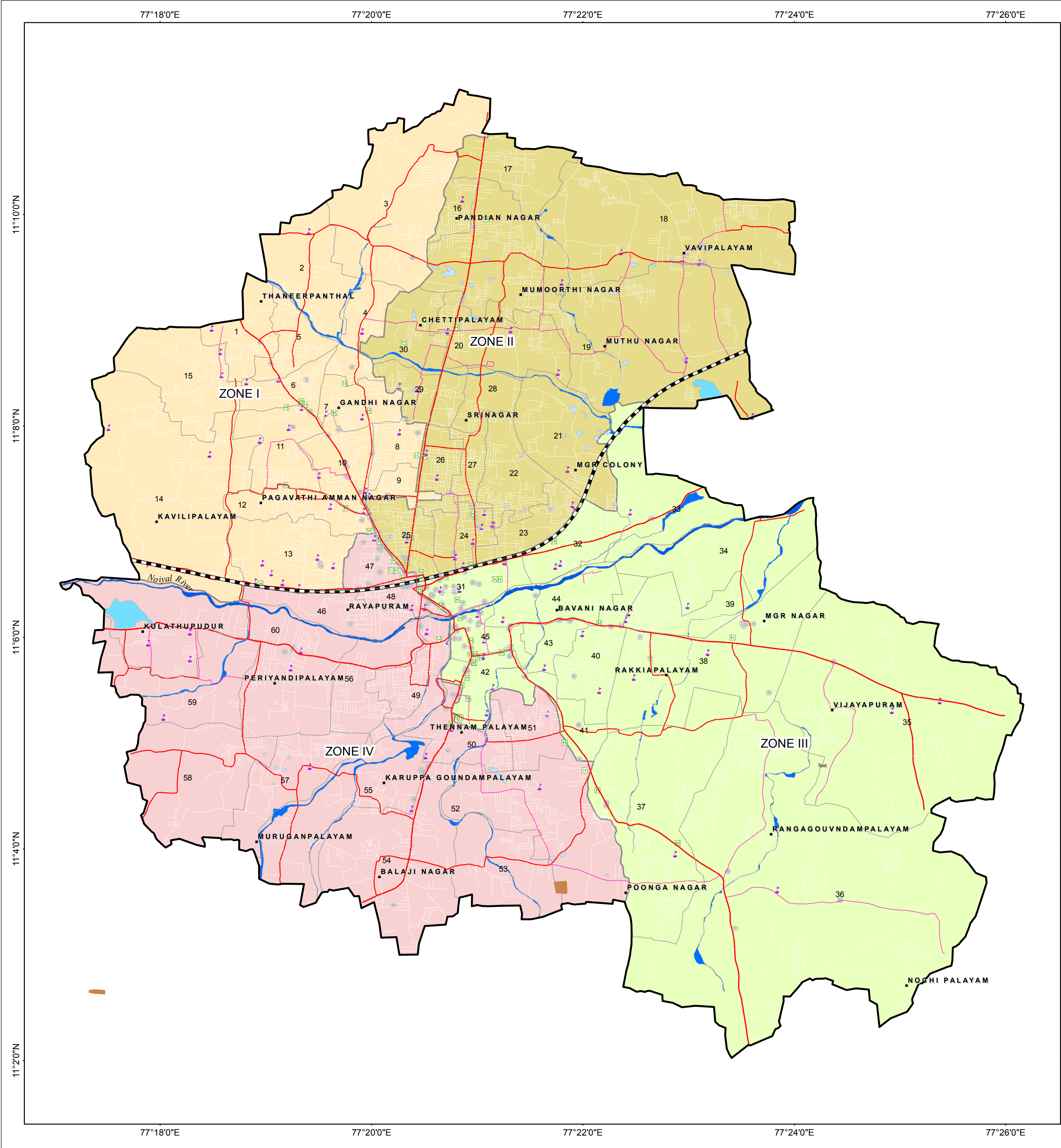
CONSULTANT

GIS SPECIALIST

ASSISTANT EXECUTIVE ENGINEER

TP SPECIALIST

EXECUTIVE ENGINEER



TAMILNADU SLUM CLEARANCE BOARD

raytnscb@gmail.com044 - 28442784

RAY CELL, NO. 5, KAMARAJAR SALAI, CHEPAUK, CHENNAI - 600 005

SCHEME NAME:

Rajiv Awas Yojana

MAP TITLE:

GEO-REFERENCED CITY BASE MAP OF TIRUPPUR CORPORATION

CITY NAME : TIRUPPUR

LEGEND

ADMINISTRATIVE UNITS

Corporation

Zone I

Zone II

Zone III

Zone IV

1Ward

LANDMARKS

Settlement

Educational Institutes

Health centers

Others

Vacant Land

TRANSPORT NETWORK

National Highway

State Highway

District Highway

Others

Railway

WATER BODIES

River

Canal

Lake

Pond

Scale : 1:50,000

00.512 Km

N

W

E

S

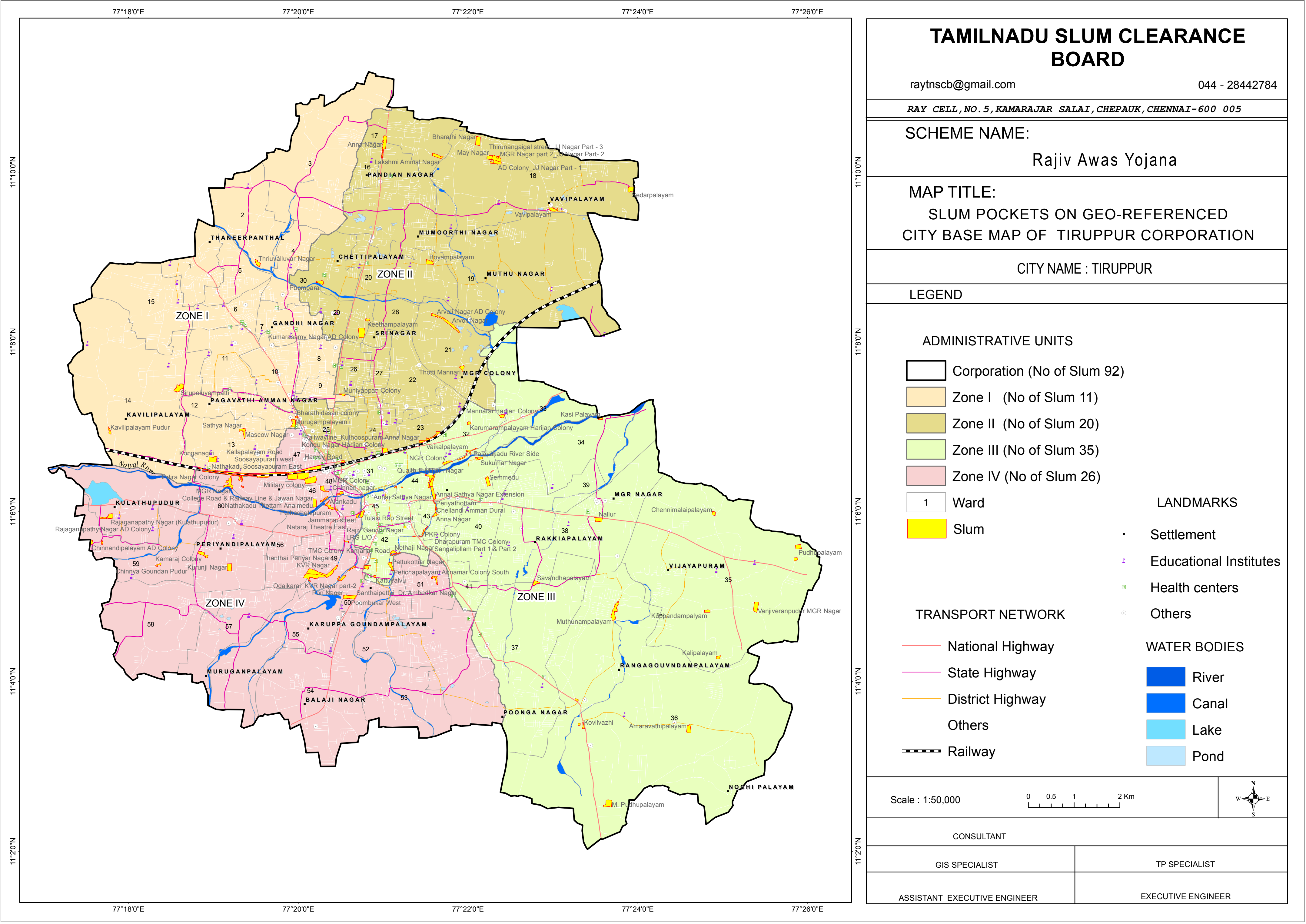
CONSULTANT

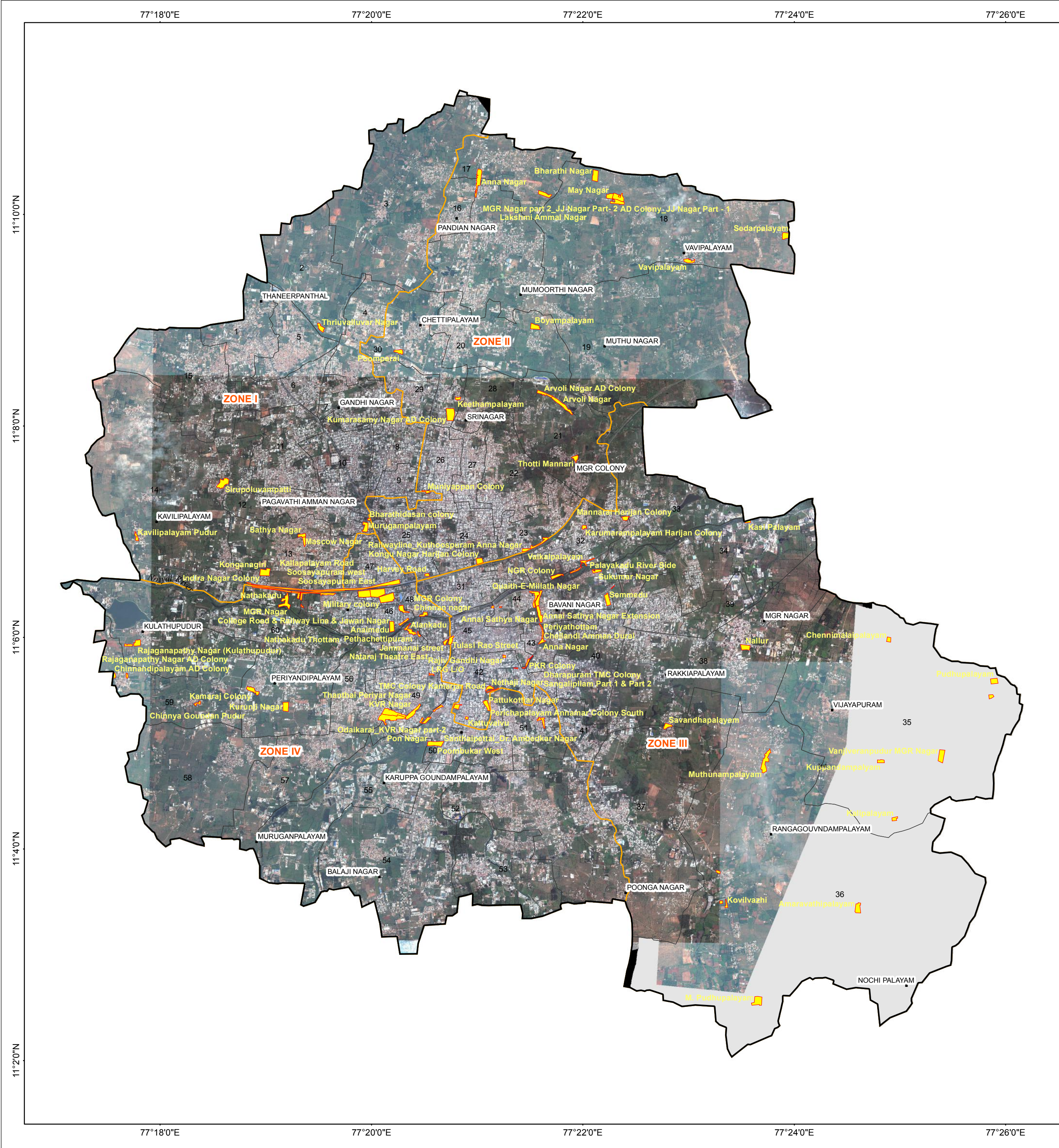
GIS SPECIALIST

TP SPECIALIST

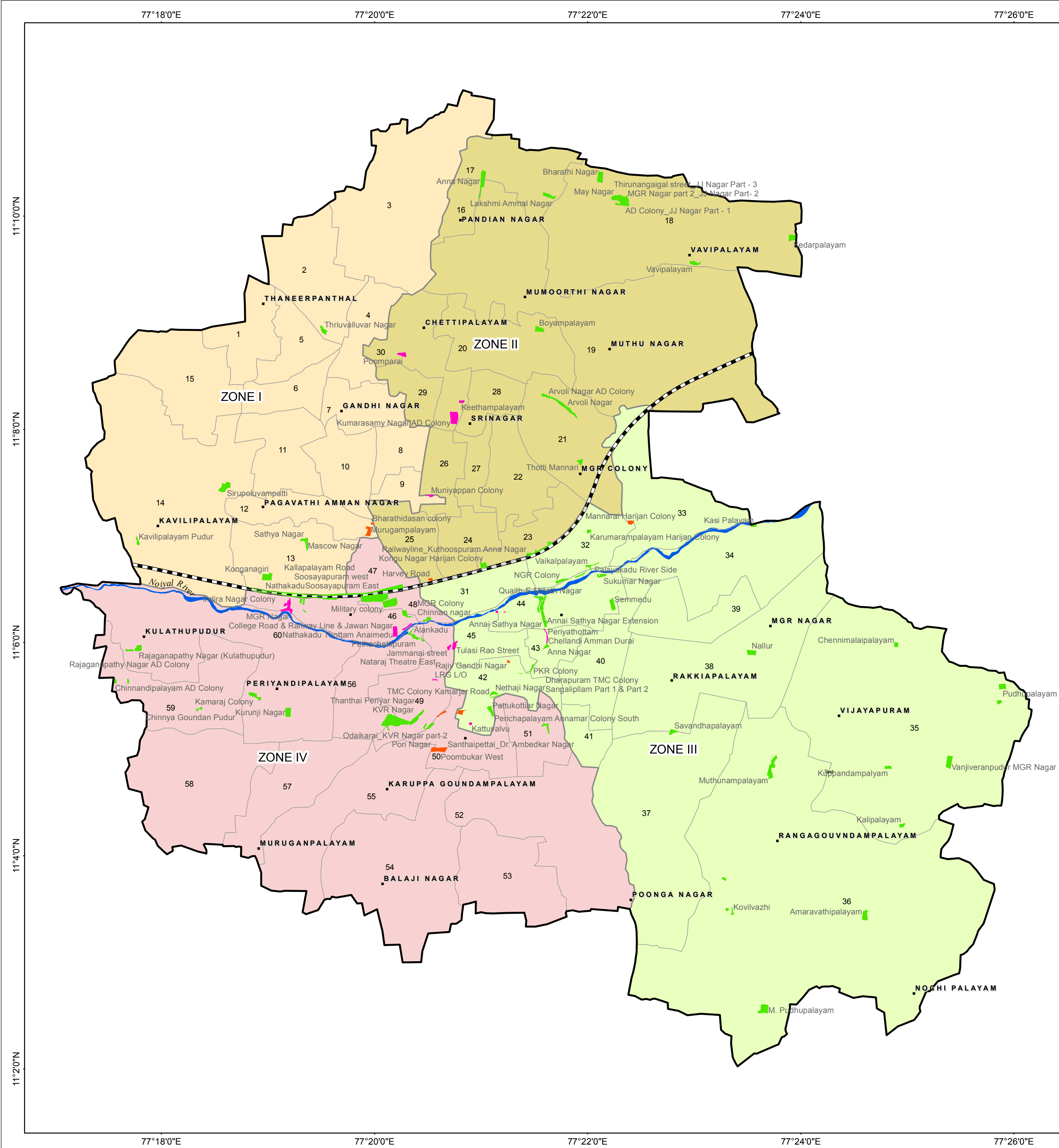
ASSISTANT EXECUTIVE ENGINEER

EXECUTIVE ENGINEER





TAMILNADU SLUM CLEARANCE BOARD	
raytnscb@gmail.com044 - 28442784	
RAY CELL, NO. 5, KAMARAJAR SALAI, CHEPAUK, CHENNAI - 600 005	
SCHEME NAME: Rajiv Awas Yojana	
MAP TITLE: SLUM POCKETS ON SATELLITE IMAGE OF TIRUPPUR CORPORATION	
CITY NAME : TIRUPPUR	
LEGEND	
ADMINISTRATIVE UNITS	
1	
Scale : 1:50,00000.512 Km	
CONSULTANT	
GIS SPECIALIST	TP SPECIALIST
ASSISTANT EXECUTIVE ENGINEER	EXECUTIVE ENGINEER



**TAMILNADU SLUM CLEARANCE
BOARD**

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044 - 28442784

RAY CELL, NO. 5, KAMARAJAR SALAI, CHEPAUK, CHENNAI-600 005

SCHEME NAME:

Rajiv Awas Yojana

MAP TITLE:




LAND VALUE RANGES OF SLUMS IN TIRUPPUR CORPORATION

CITY NAME : TIRUPPUR







LEGEND



LAND VALUE

Rs per Sq.ft

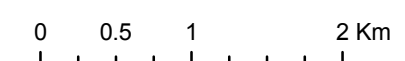
	< 750	Low (71)
	750 - 1500	Medium (13)
	> 1500	High (8)

ADMINISTRATIVE UNITS

 Corporation
 Zone I
 Zone II
 Zone III
 Zone IV
 Ward

- Settlement
-  Railway
-  River

Scale : 1:50,000



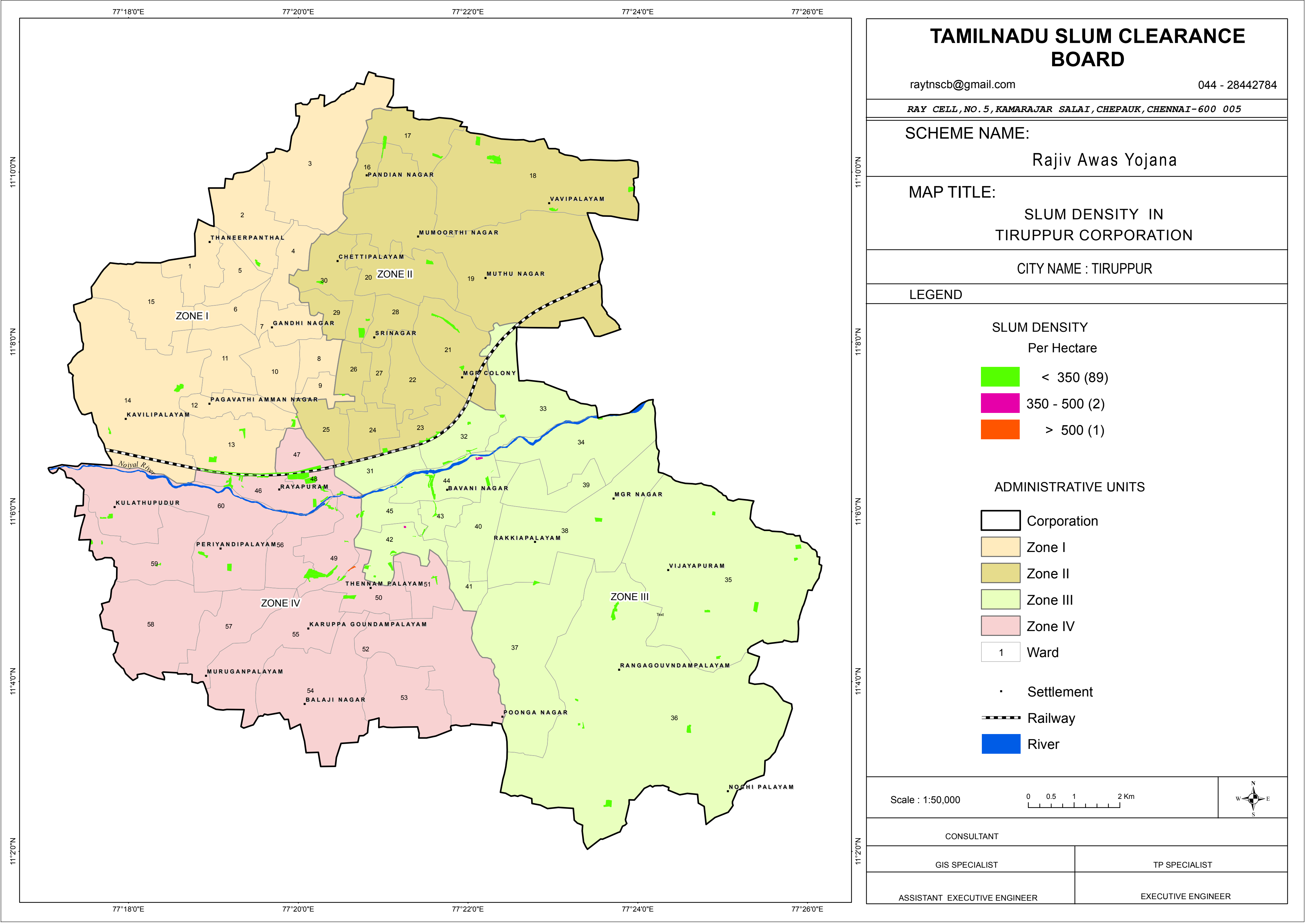
CONSULTANT

GIS SPECIALIST

TP SPECIALIST

ASSISTANT EXECUTIVE ENGINEER

EXECUTIVE ENGINEER



TAMILNADU SLUM CLEARANCE BOARD	
raytnscb@gmail.com044 - 28442784	
RAY CELL, NO. 5, KAMARAJAR SALAI, CHEPAUK, CHENNAI - 600 005	
SCHEME NAME: Rajiv Awas Yojana	
MAP TITLE: SLUM DENSITY IN TIRUPPUR CORPORATION	
CITY NAME : TIRUPPUR	
LEGEND	
<div>SLUM DENSITY Per Hectare</div> <div><div></div>< 350 (89)</div> <div><div></div>350 - 500 (2)</div> <div><div></div>> 500 (1)</div> <div>ADMINISTRATIVE UNITS</div> <div><div></div>Corporation</div> <div><div></div>Zone I</div> <div><div></div>Zone II</div> <div><div></div>Zone III</div> <div><div></div>Zone IV</div> <div><div>1</div>Ward</div> <div><div></div>Settlement</div> <div><div></div>Railway</div> <div><div></div>River</div>	
Scale : 1:50,000 <div>00.512 Km</div> <div><div></div><div>N</div><div>W</div><div>E</div><div>S</div></div>	
CONSULTANT	
GIS SPECIALIST	TP SPECIALIST
ASSISTANT EXECUTIVE ENGINEER	EXECUTIVE ENGINEER

