Slum Free City Planning:

Davangere city

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ACRYONYMS

AKM - Asha Kirana Mahithi

BSUP – Basic Services for Urban Poor

CBD – Central business district

CBO – Community Based Organization

CCA – Compensatory City Allowance

CDP - City Development Plan

CDS - Community Development Societies

CGG - Centre for Good Governance

CO – Community Officer

DCC - Davangere City Corporation

DMA -Directorate of Municipal Administration

DPR – Detailed Project Report

DU - Dwelling Unit

EWS - Economic weaker section]

FSI - Floor Space Index

GIS – Geographical Information System

HHs - House holds

HRA – House Rent Allowance

HUDCO – Housing And Urban Development Corporation Ltd

IHSDP – Integrated Housing and Slum Development Programme

JnNURM – Jawaharlal Nehru National Urban Renewal Mission

KHB - Karnataka Housing Board

KSCB - Karnataka Slum Clearance Board

LDPE - Low Density Polyethylene

LIG - Low Income Group

MIS – Management Information System

MoHUPA – Ministry of Housing and Urban Poverty Alleviation

NGO's – Non Governmental Organizations

NHC - Neighborhood Communities

NHG - Neighborhood Groups

NNRC – National Network Resource Centre

NOAPS –National Old Age Pension Scheme

O&M – Operation & Maintenance

PO - Planning Officer

POA - Plan of Action

PPP - Public Private Partnership

RAY – Rajiv Awas Yojana

RCUES - Regional Centre for Urban and Environmental Studies

RCV - Resident Community Volunteers

SFPoA – Slum Free Plan of Action

SJSRY – Swarna Jayanti Shahari Rozgar Yojana

SLNA - State Level Nodal Agency

SLSC - State Level Scrutinize Committee

STEP UP - Skill Training for Employment Promotion amongst Urban Poor

TDR - Transferable Development Rights

TPIMA - Third Party Inspection and Monitoring Agency

UCDN - Urban Community Development Network

UDPFI - Urban Development Plan Formulation and Implementation

ULB - Urban Local Body

USHA - Urban Statistics for Human Resource & Assessments

UWESP - Urban Women Employment & Self help Programme

EXECUTIVE SUMMARY

The Government of India unveiled a holistic mission "Rajiv Awas Yojana" (RAY) which would benefit about 81 million urban poor with affordable housing, decent and dignified living environment and well developed basic amenities hence envisioning slum free India. Achieving Slum Free India, though appears to be a very difficult exercise, MoHUPA has categorized the tasks and sub tasks in such a manner, providing a clear roadmap for the state governments to follow certain methodology and process in conducting the categorical steps. Slum Free City Planning is a holistic mission to eradicate poverty, systematize the squatter and hazardous settlements, integrate the plan with other poverty alleviation schemes and make them as regular engines of both socio-economic and sustainable development.

The key aspects of Slum Free City Planning comprises mainly of *Urban Planning, Law and Legislation, MIS, GIS, Provision of Land, Community Participation, Stakeholder Convergence, Project Management and Capacity Building*. The process starts with conducting survey and establishing MIS database, preparation of the city and slum level maps in GIS, Integration of the spatial and non-spatial data, analysis of the existing situation of slums, preparation of slum specific proposals, conduct community and stakeholder participation, preparation of DPR, project monitoring and implementation to achieve Slum Free India.

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA), issued guidelines on step by step Slum-free City Planning, preparation of State Slum-free Plan of Action (POA), Community Mobilization, MIS and GIS etc. The states have to pass legislation for the assignment of property rights to the slum dwellers, and take steps to prevent new slums, with certain existing reservation of land.

This report is "Plan of Action" for implementing slum free city plan in Davangere. The City Plan of Action includes preparation of Geo-referenced city base map satellite imagery, identifying and demarcating slums and surrounding vacant lands, analyzing the slum profile features, finding infrastructure gap assessment, line estimates and detailed city/slum level analysis. The report provides a gross understanding of slum situation in the city, categorizes the slums, proposes the development mode required for each slum, and majorly phasing the slum development for the next coming five years. The first year prioritized slums have been finalized by conducting various stakeholder meetings under the leadership of "Municipal commissioner", City Corporation of Davangere city. The report aims to summarize, analyze the slum situation and propose a roadmap to reach slum free Davangere.

Davangere being one of the significant Industrial cities in Karnataka has 49 slums, in which 36 notified and 13 Un-notified where 12892 households of the total do not have pucca housing facilities and per the analysis, there is a housing deficit for 9196 households. From amenities view, **82%** of slums do not have access to drinking water sources and **33%** households lack storm water drainage system and **41%** with no underground sewer system. On the demographic front, BPL population forms **84%**.The plan of action provides the housing and infrastructure gaps and proposes all civic amenities as per RAY guidelines and the report calls for an immediate approval and action to prepare the DPR's for first year phased slums.

Section – I:
Preamble & Overview

PREAMBLE

The Rationale and the Philosophy behind the Rajiv Awas Yojana (RAY)

(i) An estimated 26 per cent of urban population (810 lakhs in 2004-05) still subsists on incomes that are below the poverty line. Eighty percent of their meagre earnings go towards food and energy, leaving very little for meeting the costs of living in an increasingly monetized society. The majority of them live in slums and squatter settlements, in inhuman conditions that deny them dignity, shelter, security, and the right to basic civic amenities or social services, in an environment in which crime, ill-health and disease frequently raise demands that draw them deeper into vulnerability and poverty. The statistics already reveal that about a quarter of the country's urban population lives in notified and non-notified slums, specifically higher in the metro cities, is an indication of iniquitous and exclusionary urban planning system, urban land management practices and land legislation that have not been able to adapt themselves to the pace or profile of indigenous urban growth; or to create space within the formal system of planned living and working spaces to accommodate the informal working classes. As urbanization grows, and the projected share of urban households rises in the next two decades from the current 28% to 50% of the country's population, the slums are expected to grow, seriously crippling the productive capacities of a growing number of people by the denial of basic services, shelter and security, increasing inequity and retarding the productive potential of urban areas.

(ii) Thus, both for considerations of social and economic growth - and the Constitutional mandate - it is necessary to break away from past trends and practices and to take decisive action for inclusive urban development that acknowledges the presence of the poor in cities, recognizes their contribution as essential to the city's functioning, and redresses the fundamental reasons for inequity that ties them down to poverty.

(iii)The Jawaharlal Nehru National Urban Renewal Mission (JnNURM) with its separate sub-mission on the urban poor comprising of the Basic Services for Urban Poor (BSUP) and the Integrated Housing and Slum Development Programme (IHSDP) has been successful in achieving the overarching aim of focusing State attention on the problems of inequity in urban areas, and drawing budgetary resources to the welfare of the urban poor. There is an increasing assumption of responsibility towards the slum dwellers, and their entitlement to conditions conducive to a dignified quality of life. Simultaneously, there is an acceptance at policy level, both in the State and the municipality, that the emergence of new slums can be prevented only by increasing the availability of affordable housing, which in turn requires that the market distorting shortages of land and housing be corrected.

(iv)The foundation laid by the above initiatives now needs to be built upon, by unlocking the potential of the most important asset in the context of slums in cities i.e. land, through assigning legal property rights to the urban poor. It is in this regard that the scheme introduces a bold new vision and a new direction to policy, viz., a Slum free India, in which those who live in slums are enabled to aspire for formal acceptance in urban areas by the assignment of property rights to them over their dwelling space. As demonstrated in many countries across the globe moving the urban poor from the informal to the formal economy is also an investment in deepening democracy and strengthening the legal order; thereby widening society's interest in peace and stability.

CHAPTER 1- OVERVIEW

1.1. Introduction

The state of Karnataka is one of the prominent states in the Southern region of India with Bengaluru as its capital, falling under 'A-1' category of CCA and HRA[1] Classification. Similarly, Davangere is classified as 'C Class' under HRA category. Being the district head quarters, Davanagere municipal corporation was established as Davangere municipality in the year 1951 and converted to Municipal Corporation in 2007. The Corporation comprises 41 wards with a Corporator for each ward, elected by the citizens of Davanagere. The Corporators elect the Mayor, who is the administrator of the City and serves office for a term of one year. The present Mayor is **Mr. H N Gurunath.** The administration of the Corporation is vested in the Commissioner.

The present report is the tentative Plan of Action for Slum Free City under the scheme of Rajiv Awaz Yojana (RAY) sponsored by the Ministry of Housing and Urban Poverty Alleviation (HUPA), Govt. of India and the city of Davangere selected as one of the Pilot cities for the development of both notified (36) and un notified slums (13) as part of inclusive growth. The report is structured with prime objective of addressing the existing slums as curative step and to also to ensure slum free Davangere in future as a preventive step. The report contains 5 chapters beginning with Overview chapter 1 Slum rehabilitation strategy chapter 2. This report is accompanied by annexure I & II where the first and second contains the data tables and analysis of each slum profile comprising of socio economic, household and livelihood information, gap assessment and proposed line estimates. The present report therefore needs to be referred with annexure I & II.

a. Davangere City Profile

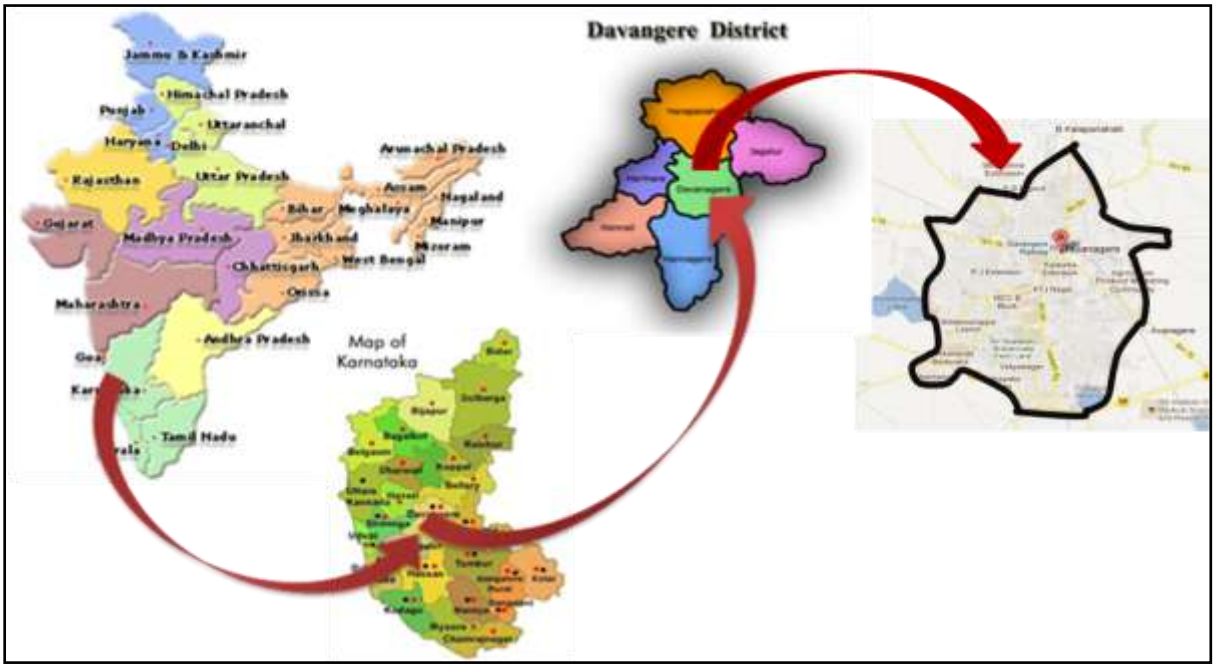
Davangere, like any other underdeveloped cities in Karnataka (or India) has its share of good and bad features. It is, carved out of Chitradurga, a Shimoga and Bellary district on 15 August 1997 has 6 Talukas and it is the district headquarters.

It is located at a distance of about 260 km from the state capital of Bangalore. It is nestled at the foothills of the Western Ghats. Previously known for its cotton mills, it is a fast developing city in Karnataka. The arid town was once a thriving textile center. This place is also called as 'Manchester of Karnataka' or textile capital of South India.

it is linked to the rest of the state by both road and rail. The National Highway 4 Poona-Bangalore traverses Davangere and Harihar. Chitradurga is 60 Kms, Bangalore is 265 Kms, Shimoga is 80 Kms, Hubli is 140 Kms, and Bellary is 200 Kms from Davangere by road. Harihar, the temple town of Lord Harihareswara is just 13 Kms from the city. Karnataka State Transport Corporation (KSRTC) operates many local and inter-state bus services. Private bus operators have a good number of trips both to the rural and other cities of Karnataka. The train services too are good as they connect to various parts of the state and the country as well. Harihar is an important junction for both bus and train services.

[1] According to India report 2008, Indian cities are classified into A (A1,A2,..), B and C based on grant for HRA and CCA on the recommendations of 5th Pay Commission , which essentially classifies these cities based on cost of living and Census 2001.

LOCATION OF DAVANGERE CITY



Picture 1- 1: Location of Davangere city

History

Davanagere is derived from the word "DAVANA KERE" which means "Village of Lake" This City has historical background, as this village was within the province of "Nolambavady" ruled by great Chalukya Kings. During 1173-1220, this province was ruled by Pandyas. Then Hoysalas ruled this province after defeating Pandyas. In 1342, Nolamba province was conquered by the great kings of Vijayanagara. After the downfall of Vijayanagara Kingdom, it came into the hands of local "Palyagars" of Chitradurga. This province was also ruled by Maratha Sardars as this town was given to Maratha sardar, Sri Devrao as "Jahagirs" by Hyderali. This part of land became very prosperous during the reign of Tippu Sultan and Mysore Maharajas.

Davanagere was originally an obscure village, forming one of the suburbs of Bettur. Sultan Haider Ali gave it as jagir to a Maratha chief named Apoji Ram who encouraged merchants to settle there. He died without heirs, but the place continued to grow, being favored by Tippu Sultan. After the fall of Tipu Sultan's regime, a European firm exploited the situation and passed a hint to start a cotton mill which led to a boom of cotton mills in Davanagere. Cotton was grown in plenty as the soil of Davanagere and adjacent Harihar was favourable (black Gypsum soil) and hence Davanagere Cotton Mills was started. Davanagere had a municipality as early as 1870. The Imperial Gazatteer of India (1911) says that the receipts and expenditure of the municipality during the ten years ending 1901 averaged Rs 14,200 and Rs 12,600 respectively.

Picture 1- 2: Harihareshwara Temple

Regional Importance

There is a famous temple built in 12th century during Hoysala's time called Harihareshwara temple (Guharanya Kshetra), from which the city derives its name, which is also known as "Dakshina Kashi".The god Harihareshwara is a combination of god Shiva and Vishnu.

In ancient days this place was known as 'Guharanya'. A dense jungle and habitat of a demon Guhasura. Then Vishnu and Shiva came together in a new avatara called Hari – Hara (Harihara) and killed demon Guhasura. That is how this place has got the name Harihar. Every year the Car festival is celebrated. Harihar also has a famous Ragavendra Mutt located on the banks of Tungabandra.The harihar serves as a major industrial base also.

Geography

Davangere is the "Heart of Karnataka". And it is surrounded from Chithradurga, Bellary, Shimoga, Chikmagalur and Haveri districts. it is at the center of Karnataka, 14° 28' latitude, 75° 59' longitude and 602.5 metres (1,977 ft) above sea level, Davanagere district receives average annual rainfall of 644.0 mm. Davanagere lies in the Are-Malnadu (Semi-Malnadu) or the Maidan region on the Deccan Plateau.

Climate and Rainfall:

Davangere is located at 14.28°N latitude and 75.59°E longitude and has an average altitude of 602.7 meters (1,977 ft) above sea level. It is situated in the southern region of the state of Karnataka, at the base of the Chamundi Hills. The city temperature varies from 16°C to 27°C in winter and 27°C to 35°C in summer. The highest temperature recorded in Davangere was 38.5 °C (101 °F) on May 4, 2006, and in winter, temperatures as low as 9.6 °C (49 °F) have been recorded. The summer season is from March to June, followed by the monsoon from July to November and the winter from December to February. The average annual rainfall received by the city is 798.2 mm. Though Davangere is situated in the relatively safe seismic zone II, earthquakes of magnitude greater than 4.5 on the Richter scale have been recorded in the vicinity of the city.

Overview of the ULB:

The Government of Karnataka established the Urban Development Authorities for the planned development of major and important urban areas in the State and the areas adjacent to and connected there with under the Karnataka Urban Development Authorities Act 1987. Davangere urban agglomeration and Local Planning Authority of Davangere were merged to form the present Davangere Urban Development Authority. The Davangere Urban Development Authority is designated as the Planning Authority under the Karnataka Town and Country Planning Act, 1961. Table 1-1, shows an overview of demographic facts:

Table 1- 1 Existing Scenario of the ULB at a Glance

S.No	Indicator	City/ ULB
1.	Location (Longitude and Latitude)	14°28′00″N 75°55′27″E
2.	Area (in Sq. Km.)	**68.63Sq.km**
3.	Slum area (in Sq. Km.)	**1.68 Sq.km**
4.	**Demography - Population**	
	2001 census	3,64,523
	2011 census	4,35125
5.	**No. of Municipal Wards**	**41**
6.	**No. of Slums**	**49**
	Notified	**36**
	Non-notified	**13**
7.	Slum population	**63039**
8.	No of households in slums	**12892**

According to 2001 census, the total population of Davangere city was 3.64 Lakhs with a density of 5311persons per Sq.Km. On other side, it is found that a total of 49 slums have been

identified in Davangere City with a population of 63039 in the slums and a density of 919 persons per Sq.Km (2001 census). The growth in the decade of 1991-2001 and in the last five years is largely due to the growth of IT industry in the city.

Land use of the city

Land is the major resource available for accommodating current and new land use changes due to increasing population and economic growth. The measurement and monitoring of these land use changes are therefore crucial to understand land use cover dynamics over different spatial and temporal time scales for effective land management. Today, with rapid urbanization and industrialization, there is increasing pressure on land, water and environment.

Unplanned development of the cities marked with falling behind the norms in terms of service levels in delivering basic services whether good roads or clean environment. Municipalities/ULBs vested with authority to plan and implement infrastructure schemes also lack in co-ordination among them. These factors are resulting in the shortfall of service delivery.

Table 1- 2 Existing Land use

Category	Area in Hectares 2001	% Area 2001
Residential	9.93	14%
Commercial	4.02	6%
Industrial	8.28	12%
Park and open spaces	1.09	2%
Public and Semi-Public	5.39	8%
Traffic and Transportation	17.25	25%
Public utility	1.16	2%
Vacant	11.98	17%
Agricultural	9.53	14%
Total	68.63	100%

Source: Davangere City Corporation

Municipal finance

Resource mobilization and financial stability is of paramount importance for any cities health and plays a vital role in the development. The source of revenue for Davangere Municipal Corporation is primarily categorized into tax based and non tax based. The tax based revenues mainly includes revenues from collected property tax, advertisement, professional and terminal taxes. While the non tax based from state government generally include shared taxes, general and specific purpose grants and regular grants recommended by state finance commissions. In addition, capital receipts consist of loan from the government and revenues earned from sale of land and grants received on account of MP and MLA funds. The *table 1-3* presents a comparison of the receipts and expenditure of Davangere for the years 2002-2005.

Table 1- 3: Revenue and Expenditure for the Years 2006-07 to 2007-08 to 2008-09

S. No.	Particulars	Years (Rs. in Crores)		
		2008-2009	2007-08	2006-07
1.	Taxes	6.12	6.01	3.79
2.	Non-Taxes	4.12	4.19	3.76
3.	Assigned Revenues	Nil	Nil	Nil
4.	Grants (Plans & Non Plans)	2.1	26.1	15.4
	TOTAL	40.12	36.19	22.93
1.	Establishment	9.1	8.1	7.49
2.	O&M Expenditure	10.03	3.1	2.1
3.	Depreciation	4.1	3.1	2.6
4.	Others	13.1	6.7	10.6
	TOTAL	38.6	23.1	23.47
	Total Surplus	1.6	13.09	0.6

Source: Davangere Municipal Corporation

As per Municipal Corporation report, it was found that for taxation revenues, a growth of 34% has been exhibited between years 2006 and 2009.

b. Housing Scenario

The city's emergence as one of the fastest growing real estate destinations in India has provided investors with an opportunity to invest and develop layouts. Over the last three years, property prices and rentals in Davangere have witnessed an unprecedented boom and the shift in the demographic pattern and fast growing urbanization is bound to have a greater impact on the housing/real estate trends. First and foremost, informal settlements are often located on marginal land (along storm water drains, railway lines, and steep slopes and or near garbage dumps) and are prone to natural and man-made disasters. They are also often illegal and those living there do not have security of tenure. Slum and squatter settlements in Davangere are growing at alarming rates.

With escalating level of urbanization and a high increase of population, the increase in housing could not be matched with the increasing demand which resulted in housing gap and insufficient infrastructure. Rapid growth of slums in Davangere has put a lot of pressure on the existing land resources and infrastructure levels, leading to further deterioration of physical environment. Factors that contribute to slum development in Davangere include migration of people for jobs, availability of cheap living options.

Picture 1- 3: Siddarameshwara nagara

Picture 1- 4: Babu jagajeevan ram nagar

Picture 1- 5: Basapurahosa A.K colony

Picture 1- 6: Yagunte

1.2. Diagnostic Assessment of slums

The living conditions in slums represent the pathetic conditions of urban poor. Individuals and communities living in slums face serious challenges in their efforts to survive. Severe inadequacies in access to water, sanitation, shelter, health and education has deprived slum dwellers of some of the most basic amenities. For assessing the current situation of slums, appropriate indicators are required to understand the depth of problems. These indicators are derived from RAY guidelines wherein a detailed household/livelihood survey was conducted to identify slums which are characterized by poor quality of housing and poor infrastructure. The following sections provide insights into the real picture of slums.

With increase in population of the city, housing needs grew, which could not be met by formal housing market. Migrant population, which could not avail the facilities of suitable housing and lack of monetary support were forced to satisfy their needs by occupying both private and public vacant lands and resulted in formation of slums and more number of squatter settlements. Slums are predominantly scattered and found mostly on private lands.

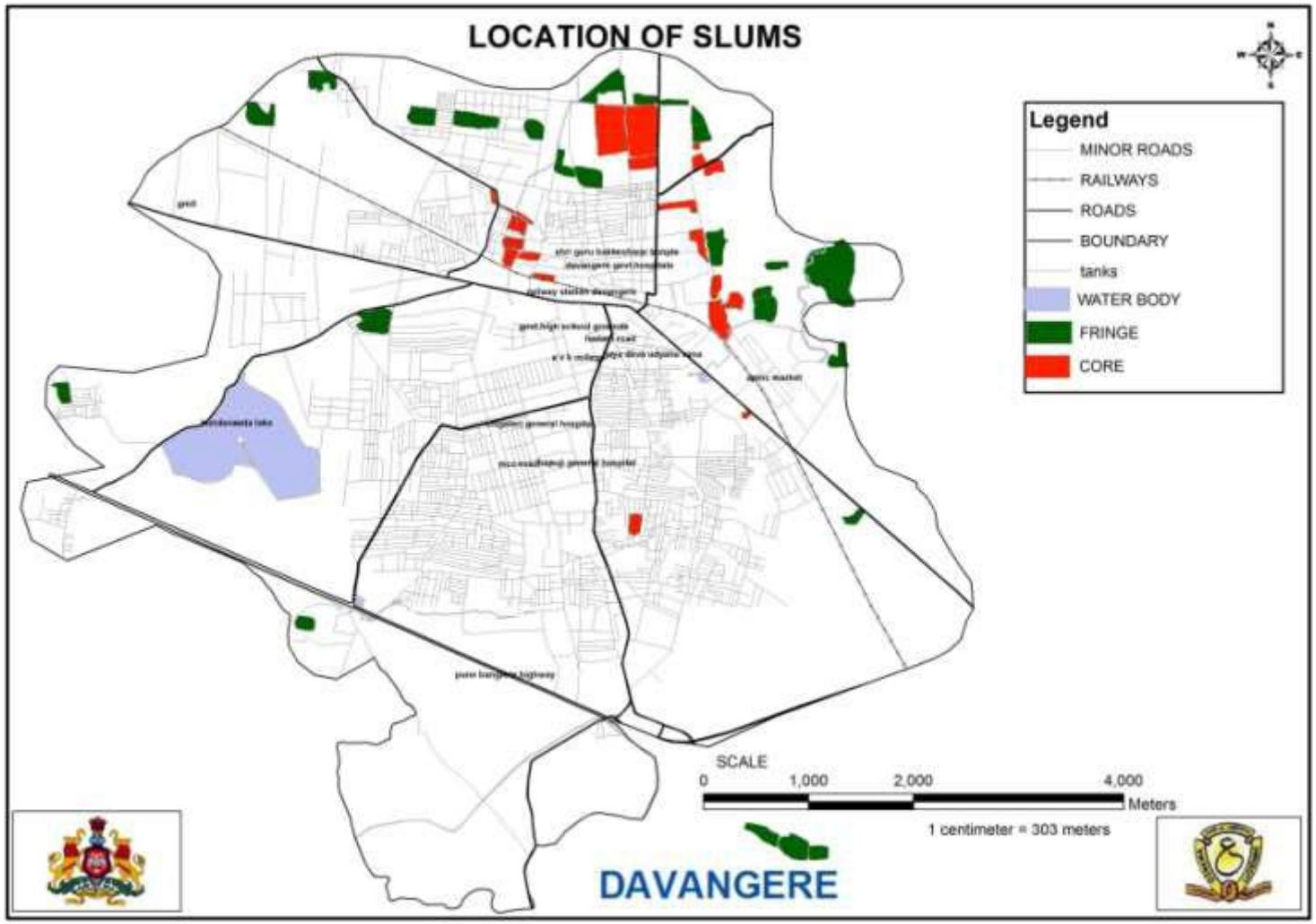
The existing scenario in Davangere has got two distinct dimensions- housing and infrastructure. Such a high residential density coupled with acute shortage and dilapidation of housing stock marred with extremely poor infrastructural conditions necessitates redevelopment and renewal works so as to improve the habitability of these areas for the urban poor.

Davangere City has a total of **49** slums, in which **36** slums are notified and remaining **13** slums are Non-Notified and the most of these are built on lands under the ownership of Urban Local Body. Over 88% of slums have existed more than 20 years in the city. The total population of the slums is **63039** which is about **17%** of the total city population.

With respect to physical location, **18%** of the slums are located on hazardous sites. Likewise, **69%** of the slums are found to be located along the major road network and railway lines; and **31%** along nallahs and water bodies, thereby vulnerable to natural disasters/ flooding. Most of the slum settlements are concentrated around CBD or any other dominant location/land use by forming larger clusters around it.

As evident in *map 1-1*, **45%** of the slums are located in the core area of the city while remaining **55%** in fringe area. The abutting land use surrounding slums is predominantly residential in nature, followed by industrial use.

The City wise, ward wise and slum wise descriptive details are provided in **Annexure-IA**.



Map 1- 1 Notification of slums

a. Listing of slums – number, status, tenability, tenure etc.

For the purpose of analyzing the existing situation, identifying the deficiencies of the slums and to provide improved basic urban services, the following variables mentioned in RAY guidelines were studied:

- Land tenability
- Land tenure status
- Ownership of the land
- Age of the slums

Using the above variables, the settlements in each slum that are characterized by poor physical and socio-economic conditions, irrespective of land tenure status and ownership have been identified through primary surveys. The following tables give a summary of the mentioned aspects crucial for any slum analysis.

Table 1- 4: Distribution of slums according to number, status, tenability, tenure

	Status		Tenability			Tenure	
No. of Slums	Notified	Non- Notified	Tenable	Semi-tenable	Un-Tenable	Secure	Insecure
	36	13	24	16	9	12	37
No. of Slums	**Age of the slum**						
	0-10 years	11- 20 years	21-30 years	31-40 years	Above 40 years		
	0	6	28	12	3		
No. of Slums	**Ownership of land**						
	Local Body	State Government	Private				
	22	14	13				

Distribution of Slums by Land Tenure Status

Land tenure is an important part of socio-economic structure of any neighborhood and enables entitlement of formal access to basic services. According to RAY guidelines, tenure status is "the mode by which land/property is held or owned or the set of relationships among people concerning land/property or its product" and defines the legal status of the land. As seen in the *table 1-4*, 24 % of the slum lands are secured and have access to basic amenities and in possession of certification while 76% of the slums are still unsecured, which needs regularization. While identified slums have some security of tenure and fall under the purview of municipal service provision, the unidentified slums fall outside the net of formal service provision.



Picture 1- 7: Images showing housing conditions in the slums

Distribution of Slums by Tenability Status

The land status of all listed slums/informal settlements are classified by the ULB as tenable[2] or untenable in order to determine whether the land is fit for human habitation and void of health hazards. (RAY Guidelines)

Chart-1-1 indicates that the current tenability status for 49 slums as identified has been presented where **49%** of the slums are found to be tenable with the remaining **33%** Semi-tenable and **18%** Non-Tenable, thus proving to be unsafe due to the reason that the slum lands are either earmarked for any major public facilities or located on hazardous sites; hence viable solution can be arrived in consultation with ULB.

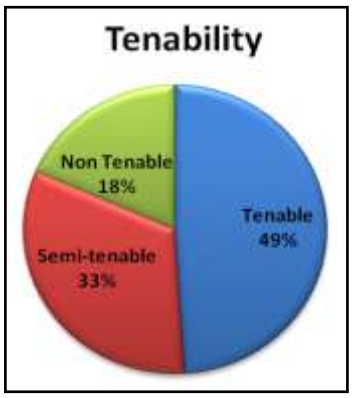


Chart 1- 1: Tenability of slums

Distribution of slums by land Ownership

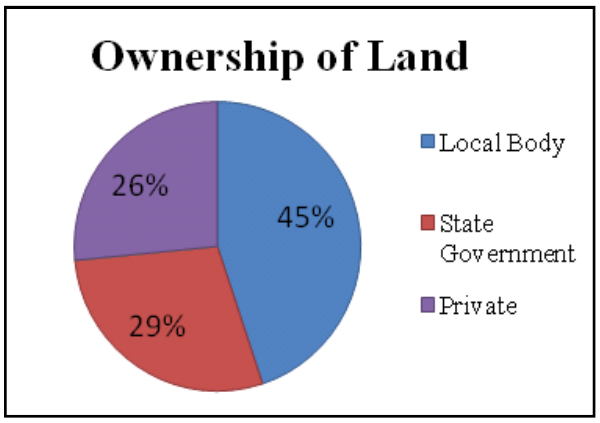


Chart 1- 2: Ownership of land

As seen in *chart 1-2*, it is observed that **45%** of the slums are built on lands owned by Urban Local Body (i.e. Davangere City Corporation). On other side, **29%** of the slum lands belong to State Government and **26%** under Private agencies.

Mentioned earlier, **26%** of the slums are on private lands do hold possession certificates and are still eligible for slum redevelopment programmes considering the varying economic status of those dwellers.

The *map 1-2* shows ownership of slum lands

Distribution of Slums by Age of the Slums

Age of the slum is one of the important information to assess the condition of a slum in any city. It is interesting to note that **69%** of the slums in the city have existed for less than 30 years with remaining **31%** for more than 30 years (*seen in chart 1-3*).

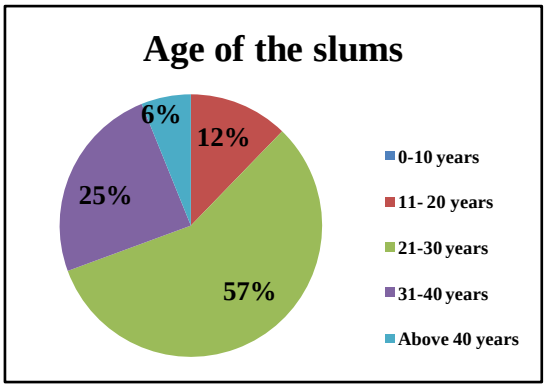
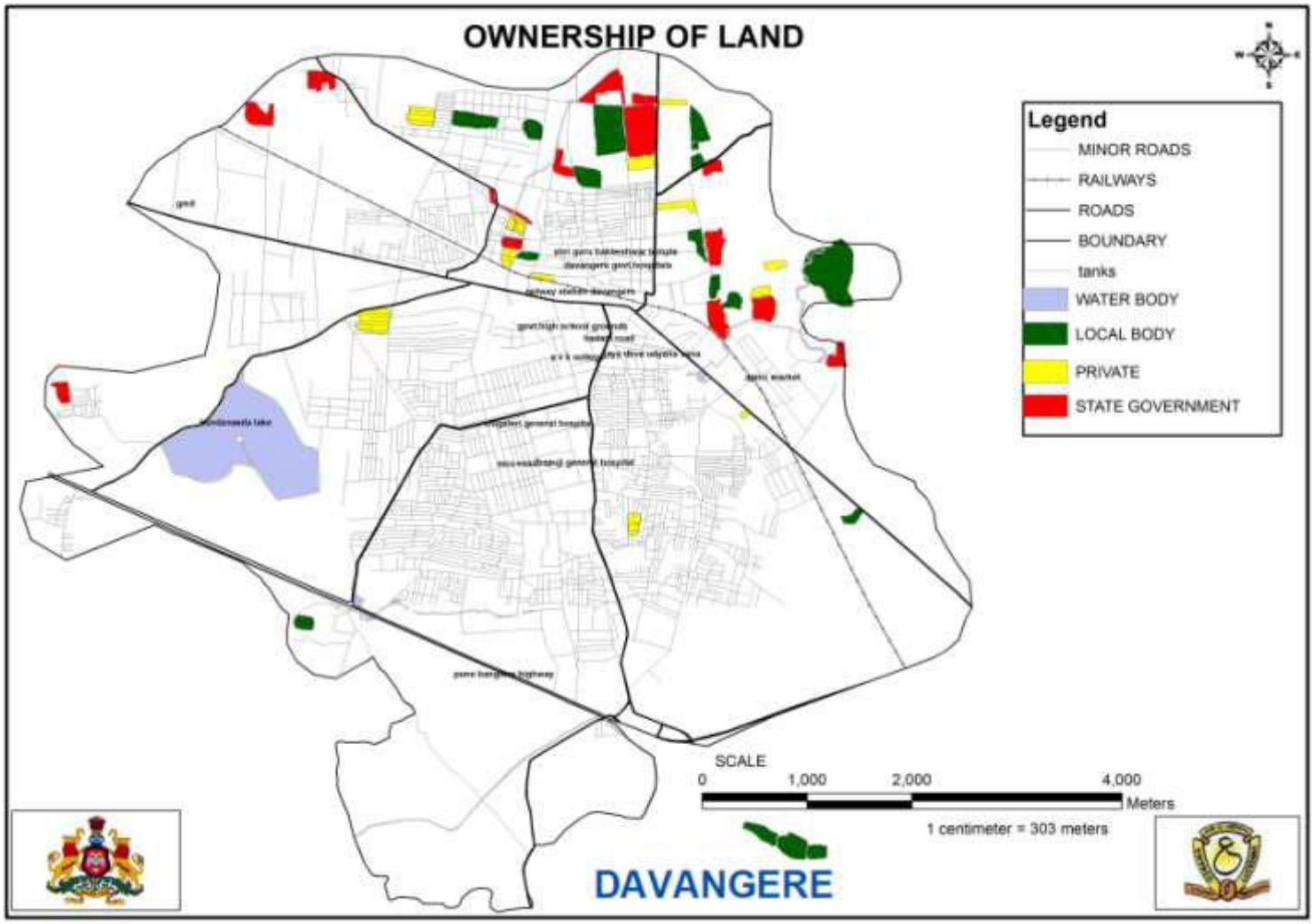


Chart 1- 3: Age of the Slums

[2] According to RAY, Tenable slums means all slums which are not located on hazardous locations suitable for human habitation and the land not earmarked for any major public facilities and therefore it can be regularized in the same location.



Map 1- 2: Land Ownership of Slums

Distribution of slums by notification

According to National Sample Survey Organization, areas notified as slums by the respective municipalities, corporations, local bodies or development authorities were treated as "notified slums", tends to receive higher level of services and those unrecognized by the local bodies were considered as "non-notified slums". As per the AKM data, currently 36 slums are notified by ULB to avail higher level of basic services. As seen in *map 1-3,* 13 slums marked in red color indicates that these are not yet notified, which requires the concerned authority to ascertain that these slums are to be provided with basic amenities.

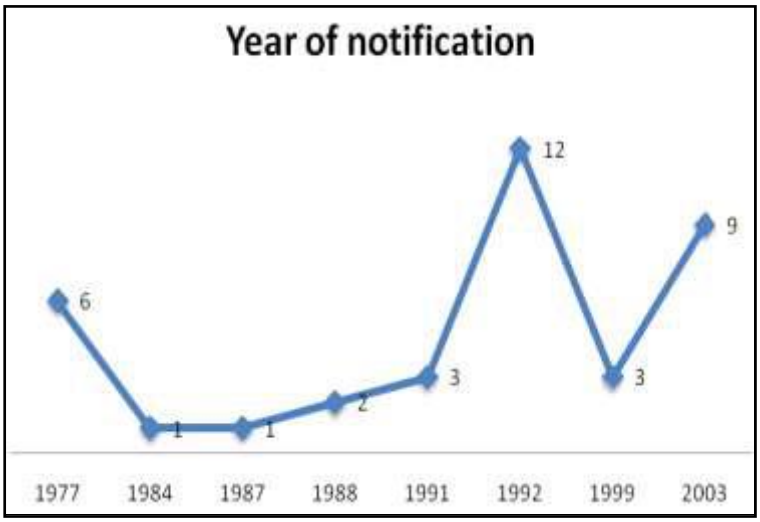
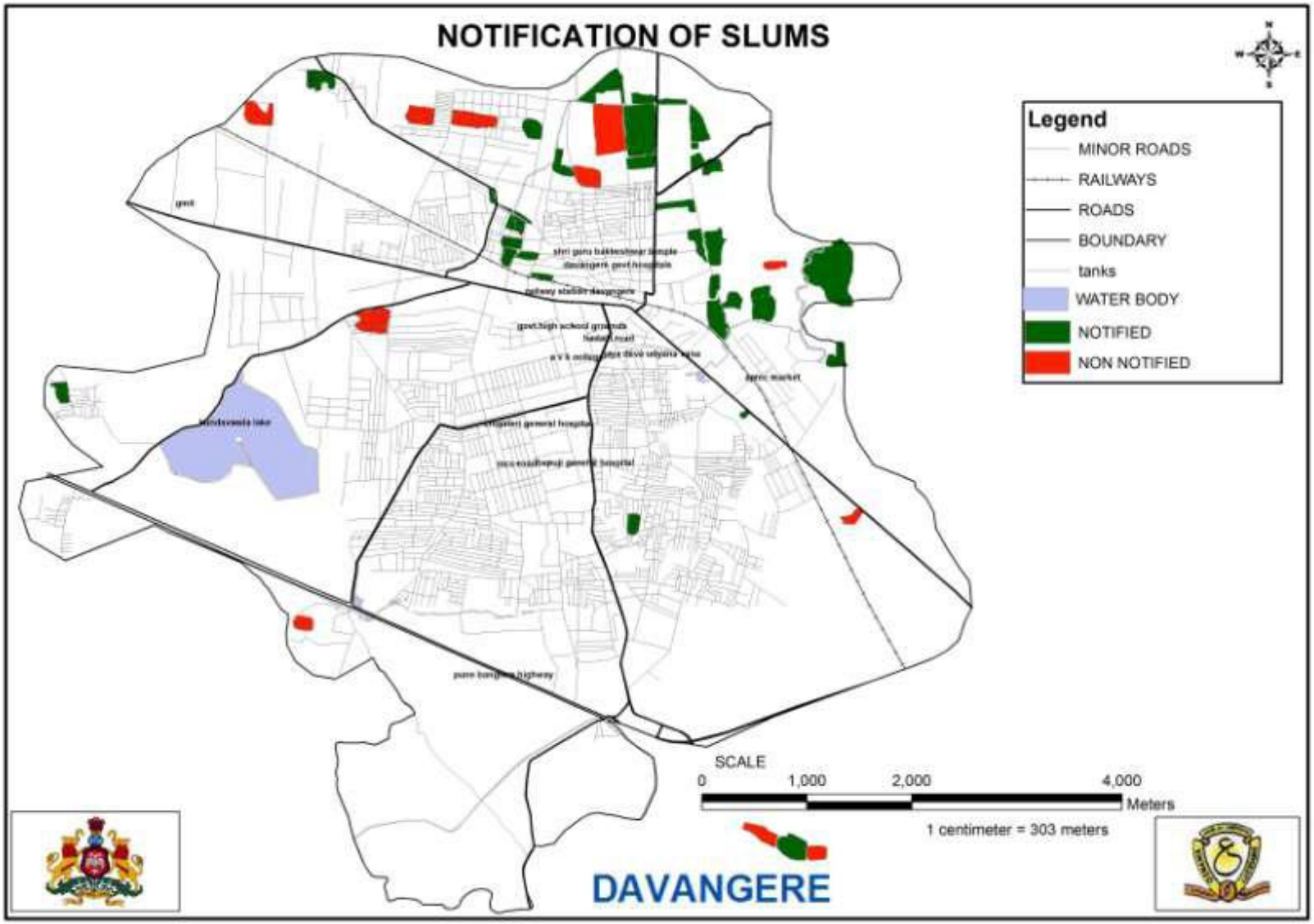


Chart 1- 4: Notification of the Slums

Please refer Annexure 1-A, for a detailed slum wise description of the variables in *table 1-4*.



Map 1- 3: Notification of Slums in Davangere

b. Physical profile

Slum and squatter settlements in Davangere are growing at alarming rates due to increased construction activities and industrial activities. The general composition of majority of slums comprises of scheduled tribes, scheduled caste, and other backward classes, forming the weaker section of the society. From habitation point of view, slums located in the low lying areas, along open drains/nallah, tank beds and hazardous/toxic sites are susceptible to inundation, and other forms of disasters.

The slum concentration in these areas has not only led to poor living conditions for the slum dwellers but also responsible for the general deterioration of the living environment in the city. This is primarily due to lack of proper infrastructure services in these areas and considering the fact that most of these slums are overcrowded, there is always constant pressure on the city infrastructure and resources. In this section, the following set of variables were measured to assess the existing housing scenario in terms of the structures, its type, access to electricity and other related issues so as to bring out the deficiencies

- Location of slums and its areas
- Vulnerability to floods
- Abutting land use
- Housing type

Table 1- 5 Summary of slums – area, location, abutting land use & flood vulnerability

Area(Sq. meters)						
No. of Slums	**Below 10,000**	**10,000 to20,000**	**20,000 to 30,000**	**30,000-40,000**	**40,000-50,000**	**50,000 Above**
	4	15	14	4	4	8
	Whether slum is Located					
No. of Slums	Core		Fringe			
	22		27			
Physical location of slum						
No. of Slums	Along Nallah (Major Storm water Drain)	Along Other Drains	Along Railway Line	Along Major Transport Alignment	Along River/Water Body Bank	On River/ Water Body Bed	Others (Hazardous /Objectionable)	Others (Non-Hazardous/ Non-objectionable)
	8	1	0	30	1	0	9	0
Whether the Slum is prone to flooding due to rains?						
No. of Slums	Not prone		Up to 15 days		15-30 Days	More than a Month
	48		1		0	0
Type of Area surrounding Slum						
No. of Slums	Residential	Industrial	Commercial		Institutional	Other
	26	13	3		2	5

Distribution of slums bu Physical Location

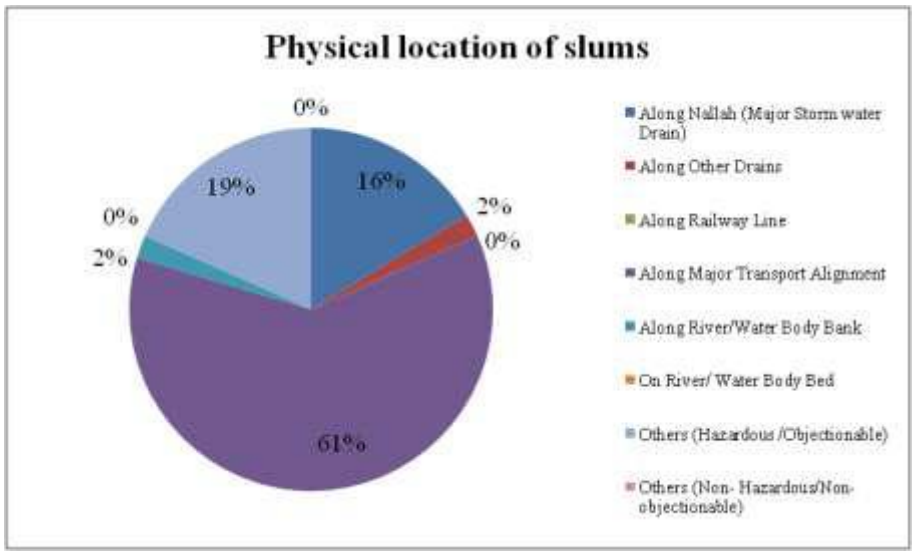


Chart 1- 5: Physical location of Slums

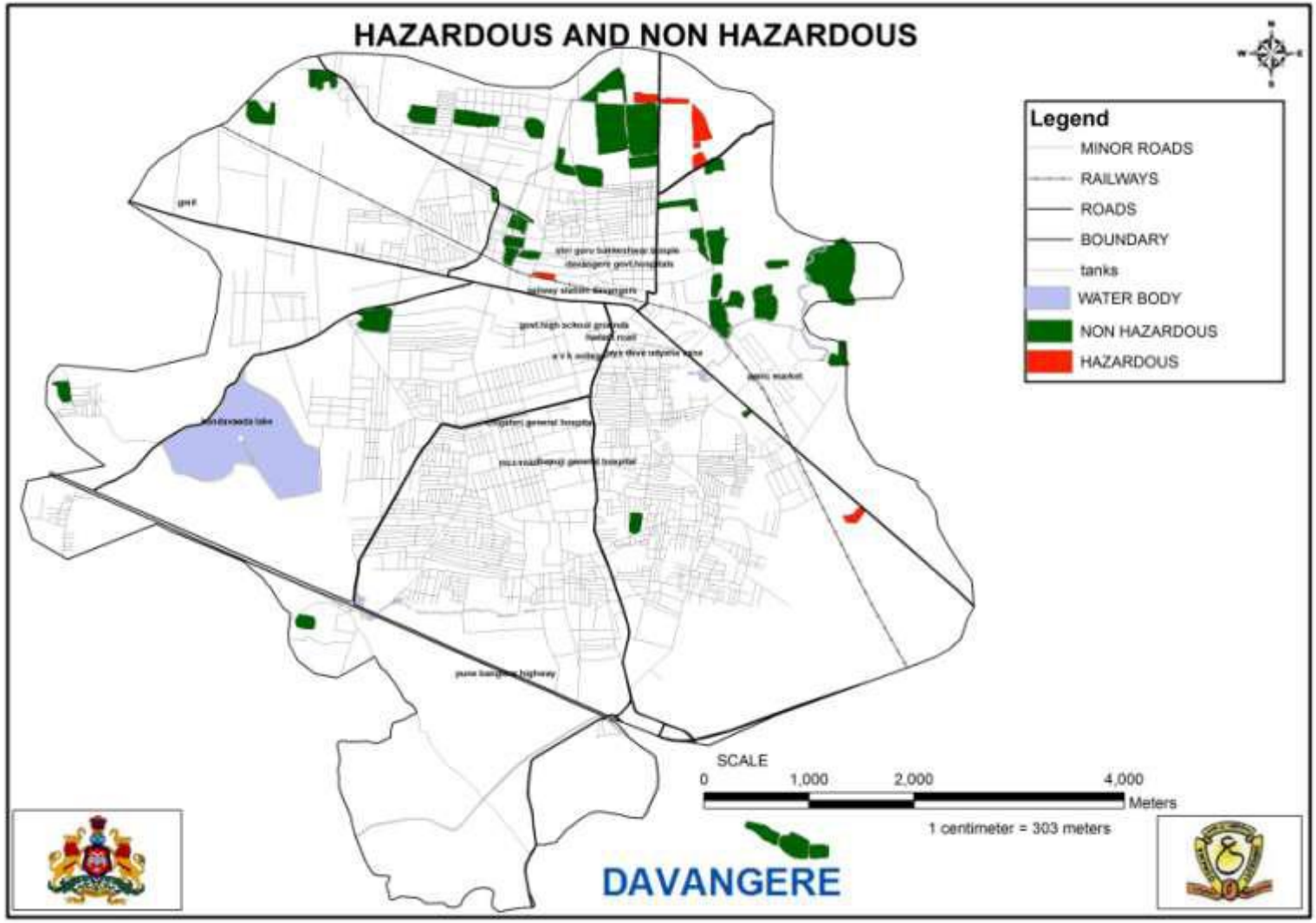
Out of 49 slums, 22 slums are found in the core area such as near CBD and remaining 27 in the urban fringe areas near agricultural lands. With respect to the physical location of the slums, around 61% are located along the major transport alignment such as National Highways while 18% along the open drains. On other side, 2% slums are found to be located on river/Water body beds. As indicated in *map1-4*, 19% of the slums are located on the sites of Hazardous / Objectionable areas marked in red colour are observed to be near are on the hazardous sites (*seen in chart 1-5*). These slums require special attention before undertaking any development, the beneficiaries cooperating and their livelihoods are of paramount importance.

Picture 1- 8: Karl marks nagara Along major storm water Drains

Picture 1- 9: Indiranagara, kuruchethotti Along other drain

Picture 1- 10: Yagunte Slum on Agriculture land

Picture 1- 11: Shivanagara slum Along Major Transport Alignment



Map 1- 4: Hazardous and Non-Hazardous slums in Davangere

Distribution by Slum Area

According to AKM data, slum population constitutes **17%** of the total City population while the total slum area (1.67Sq.Km) is about **2%** of the total city area. Nearly 8% of slum areas are found to be less than 0.01 Sq.km. 29% of slum areas are between the ranges 0.02-0.03 Sq.Km. On other hand, 16%of slum areas are above 0.05km.The area of the slums under the ownership of private agencies is 0.27 Sq.Km, and 1.41 Sq.km is under Public ownership.

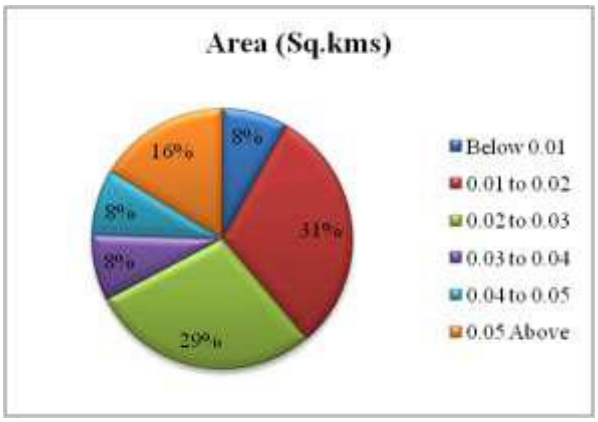


Chart 1- 6 Area of slums

Flood Prone Slums

As indicated in *table 1-5*, nearly 48 slums are found not vulnerable to floods and the remaining 1 slum to be flood prone with rain water remnant for up to 15 days or even more, indicating lack of safety to the slum dwellers. Moreover, the duration of water logging is found to be Upto 15 days in Basapura hosa A.K colony slum, which are easily susceptible to floods during rainy season.

Picture 1- 12: Shivanagara slum Drainage water

Picture 1- 13: Near vinayaka talkies Slum Storm water drains

Picture 1- 14: Shivnagar Flood prone slum

Picture 1- 15: Solid waste disposal shanthi nagara slum

Distribution of slums by abutting land use

Looking into the abutting land use, the *table 1-5* reveals that **53%** of the slums are surrounded by residential land use, followed by industrial uses **(27%)** such as small scale industrial units in the city. In addition **6%** of the slums are covered by commercial use like wholesale businesses and **4%** of the slums covered by Institutional use; **10%** for other land uses. Of the 27 slums located in the fringe areas, 44% of the slums are bounded by residential use.

Chart 1- 7: Type of Surrounding Areas

Distribution of slums by housing structure type

One of the prime indicators to assess the existing condition of a slum is housing. In order to understand the degree of living conditions, data on the kind of houses that the slum households live is collected to examine the housing scenario. For analysis purpose, the dwelling units were classified into pucca, semi-pucca and kutcha, based on the kind of roofing and wall materials used.

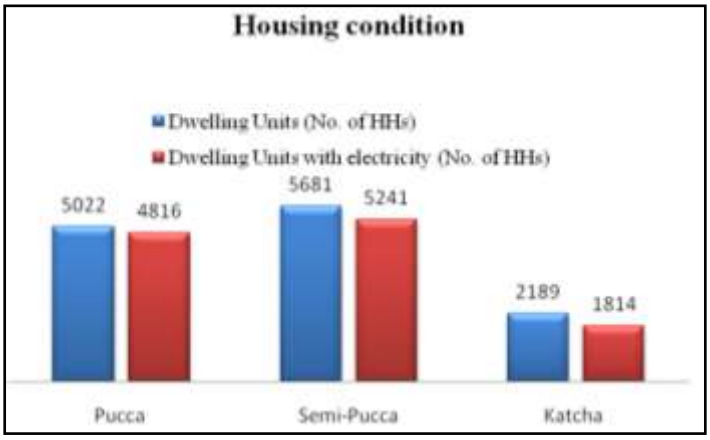
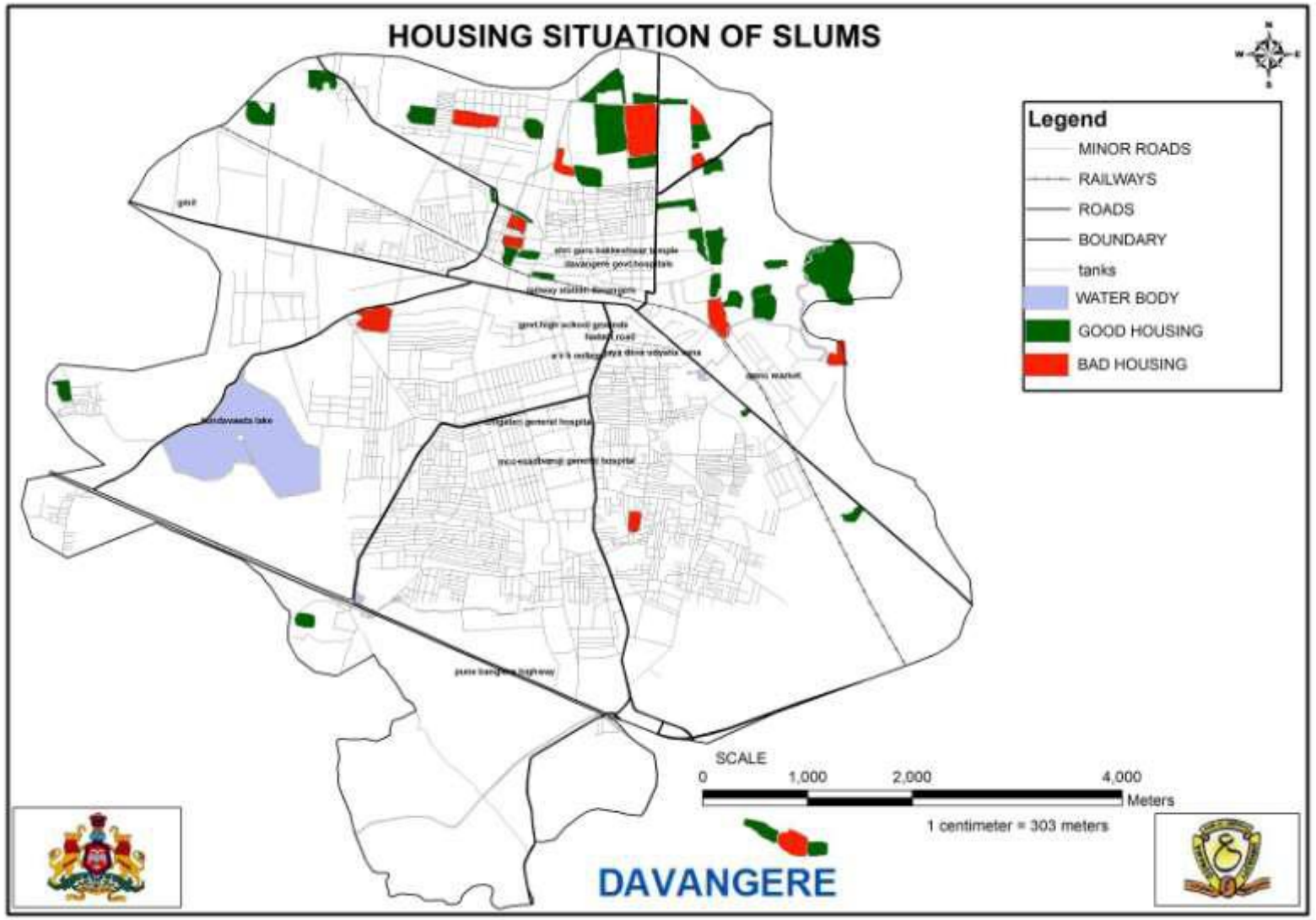


Chart 1- 8: Existing Housing Condition

It is evident in *chart 1-8*, 44% of the dwelling units built is semi Pucca and 17% units are katcha in nature with remaining 39% to be Pucca houses. With respect to electricity connection, nearly 92% of dwelling units have access to electricity where 41% of Pucca houses; 44% of semi Pucca and 15% of katcha houses have access to the same connection. Hence there is a need to cover **8%** of the total houses with electricity, indicating the pathetic status of the slum dwellers.

Picture 1- 16: Shanthi nagara slum Katcha house

Picture 1- 17: Aaradhya slum layout Semi pucca



Map 1- 5: Housing situation of slums

The *map 1-5* depicts the current housing structure condition in the slums of Davangere. For analytical purpose, semi Pucca and katcha houses were considered exclusively to determine the housing shortage and the need to implement suitable housing redevelopment programmes. If the semi pucca + katcha houses were greater than 75% then it is considered poor housing in awful state which needs to be addressed immediately or rebuilt. In the same way if the semi Pucca + katcha houses were less than 75% then it is assumed that housing condition not as good as Pucca houses. As per the data results, it was found that 9 slums are located in hazardous sites considered as relocation and 17 slums have semi Pucca + katcha houses more than 75% while 23 slums in the latter category.

Based on the income levels and the affordability levels of the households, the kind of housing is determined and varies accordingly. Similarly in Davangere, 39% of the Pucca houses are built using wall materials of burnt bricks, stones, cement concrete, timber, and roofing of reinforced brick concrete and reinforced cement concrete, PCC flooring. While semi Pucca houses have walls made up of Pucca material but roof is made up of the material other than those used for Pucca house and katcha houses are usually found to be built using make shift material like sandstone tiles, thatches, loosely packed stones, Jhopris and temporary tents.

Although most of the houses are puce in nature, it is irony that these are in a dilapidated condition and in need of up gradation. Due to lack of choice, and security, the dwellers are forced to live and work in informal settlements and earn on a daily basis.

Picture 1- 18: Arur A.K.colony slum Semi-pucca housing

Picture 1- 19: Avaragere gomala slum kutcha housing

Picture 1- 20: Behind K.G. Kallappa rice mill (H.K.R nagara) slum - Semi-pucca housing

Picture 1- 21: Hale chikkanahalli slum kutcha housing

For slum wise details, please refer Annexure-1B on housing structure.

c. Social Profile

According to AKM data, the total population in **49** slums is **63039** with total number of **12892** households. Of the total slum population, **84%** are below poverty line (BPL) with **10996** households.

Table 1- 6: Population & Health

	Sc s	ST s	OBC s	Others	Total	Minorities
Total slum population	16660	5374	32151	8854	63039	29938
Total Households	3438	1171	6307	1976	12892	5717
Total BPL population	14963	4733	26393	7104	53193	24747
Total BPL Households	3130	1039	5232	1595	10996	4772
No. of women headed households	704	214	826	332	2076	935
No. of persons > 65 years	94	25	144	48	311	150
No. of child labours	1910	402	5354	978	8644	6494
No. of physical handicapped persons	130	32	235	75	472	227
No. of mentally challenged persons	48	9	87	18	162	88
No. of persons with HIV & AIDs	1	4	10	4	19	7
No. of persons with tuberculosis	5	3	5	2	15	7
No. of Persons with Respiratory Diseases including Asthma	16	4	33	7	60	31
No. of Persons with Other Chronic Diseases	32	10	46	14	102	34

Source: AKM data

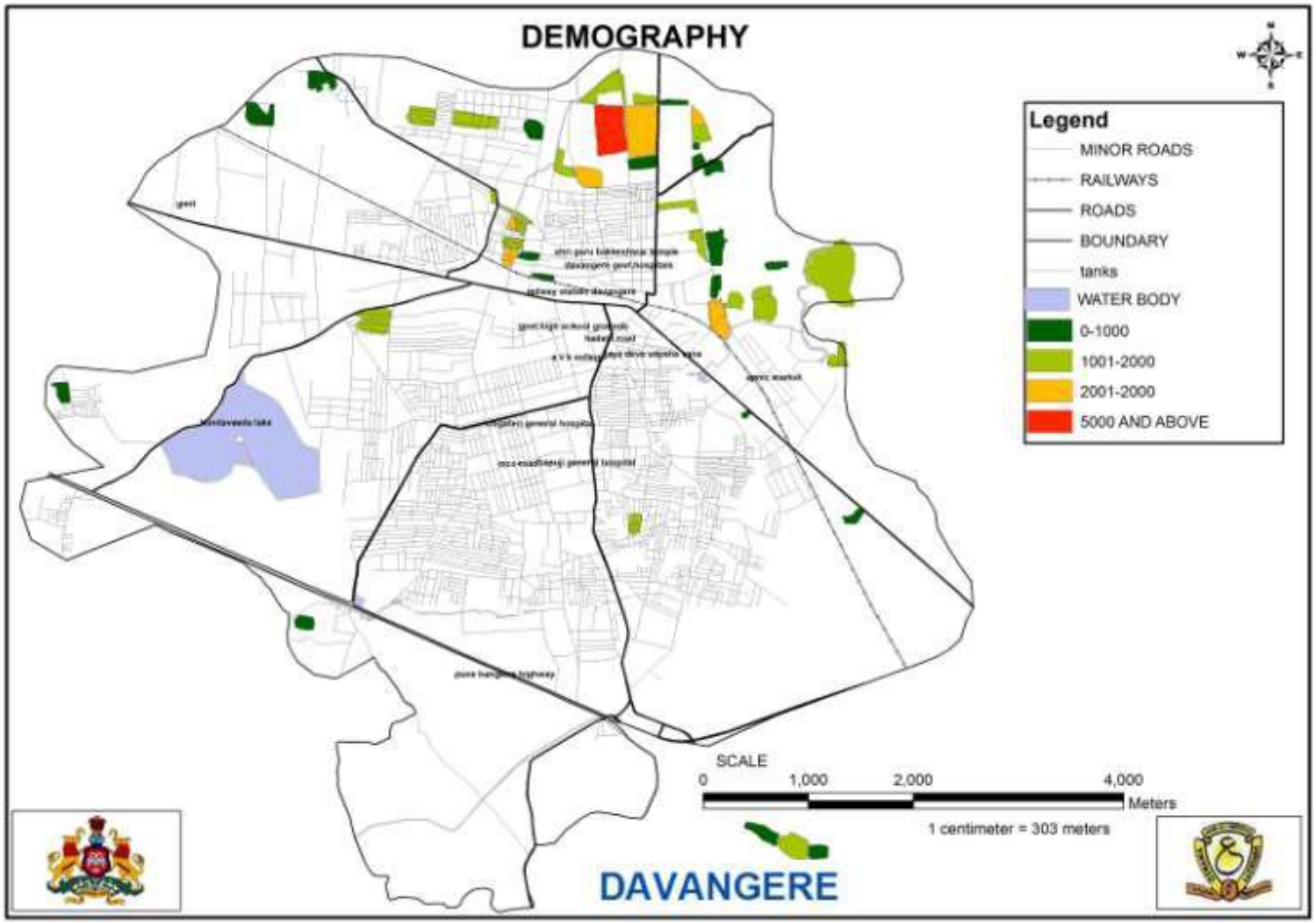
Total population

Seen in *table 1-6*, around 16% of the household population forms the women- headed households with OBCs and SC caste women being in lead. Similarly 14% of the total population in the slums belongs to Child laborers and 47% of the total falls under minority category.

As seen in *Map 1-6*, the slums have been classified into 4 equal class intervals where it is observed that the slums marked in green color with population below 2000 persons and mostly located along Nallahs and major transport alignment. The population distribution in the slums is found to be varying as low as 139 persons to a highest value of 5499 persons. Seen in Annexure 1C for year 2011 demographic details, Bhasha nagara(3rd and 4th stage) is found to be having the highest slum population (5499) and BPL population (4955) followed by same slum. Comparing the density results of the total 49 slums, it is observed that around 3 slums had high density and 34 slums had low density and 12 slums were moderately dense.

Picture 1- 22: Near vinayaka talkies

Picture 1- 23: Near vinayaka talkies Housing situation



Map 1- 6: Population Classification in Slums

Distribution of slum households by caste/different social groups

Seen in *chart 1-9* for different social categories, SCs and OBCs are found to be in larger number comprising of 77% of the total population and 78% under BPL when compared to other groups in the 49 slums respectively. According to different social categories, it is observed that 11%of SC population constitutes the Child Labor and 17% under OBCs. 28% of the BPL population in slums is SCs & 50% comprises of OBCs and the remaining 22% belong to STs and others.

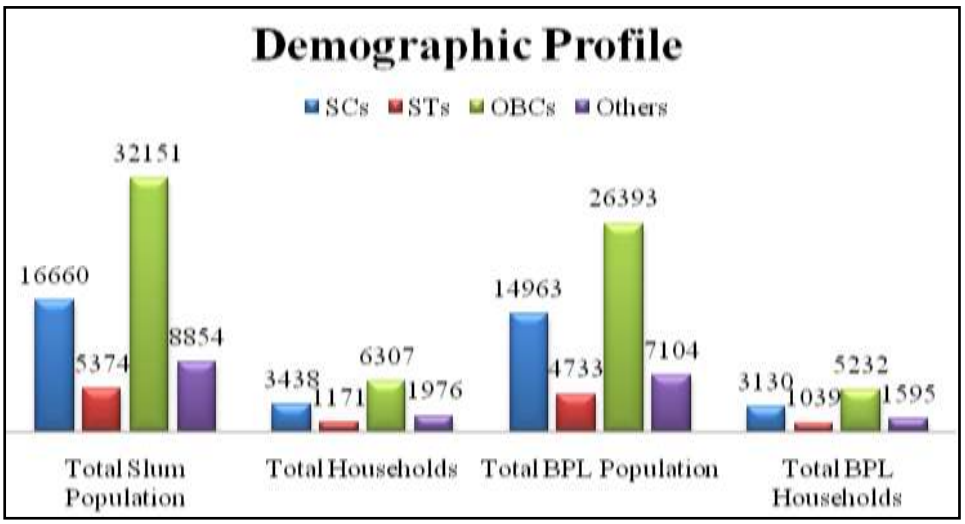


Chart 1- 9: Total populations among categories

Distribution of slum households by Minority groups

Of the total slum households, 47% forms the minority group with a BPL population of 53193 persons. For women headed category, 3% of the households belong to the women headed households while 22% of the minority population belongs to child laborers.

Literacy rate by gender

Of the total slum population, 82% are literates and the remaining 18% are illiterates where 45% are male and 55% are females.

Under different social categories, SC population has the illiteracy rate of 35%, followed by OBC group with 48% of illiterate persons. Similarly, under BPL category, the percent of illiterates is found to be 16% of the total BPL population.

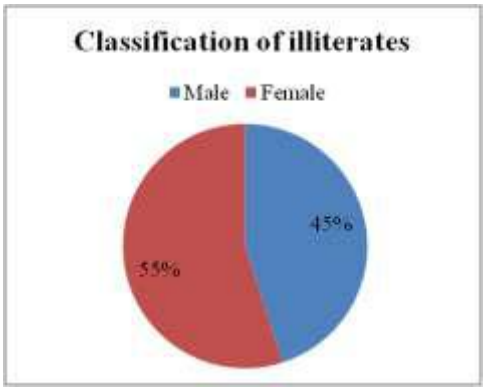


Chart 1- 10: Classification of Illiterates



School Dropouts

According to Planning Commission, though most Indian States have done well in enrolling more and more children in schools, their inability to retain them has been a problem. The dropout rate was least for those belonging to the highest income group and maximum for those from the lowest income group and EWS. Children from poorer sections of the society drop out in the early stages of education due to the fact that either the children or their parents were not interested and nearly as many were on account of economic considerations, compulsion to work for wages or looking after younger siblings.

As per AKM data, it is found that 0.14% (87persons) of the slum population were school dropouts with 46% of males and 54% females under it. As seen *chart 1-11*, the 0.14% school dropout belongs to the age groups of 6-14 years, In case of Davangere the school dropouts have led to increase in child labour were these children are found to be engaged in collection and clearance of solid waste. Hence mitigation measures needs to be taken through implementation of education policy programmes and provision of elementary education to the deprived groups.

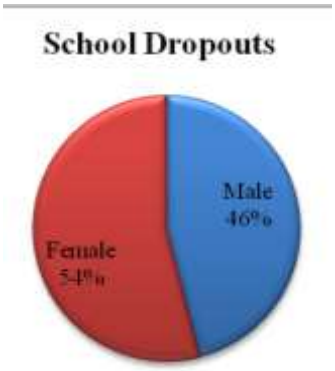


Chart 1- 11: School Dropouts

Picture 1- 24: Hale chikkanahalli

Picture 1- 25: Babu Jagjeevan ram nagar

Number of Slums by Disability Status and senior citizens

As per AKM data, the physically challenged population comprises 1% of the total slum population, with SC group forming the highest under social groups. Similarly the mentally challenged persons constitute 0.3% of the total population in Davangere slums. Hence employment provisions needs to be made for those physically challenged person who are skilled enough.

In Davangere Slums, it was found 0.5% of the total constitutes the senior citizens where in SC group accounts for 30%. For the well being of these citizens, it is essential to make due concessions and provision of adequate social facilities for the senior citizens in Davangere slums. In addition, eligible aged persons and senior persons in BPL families that can hardly support the aged should be entitled to National Old Aged Pension Scheme (NOAPS).

Number of households by Health Condition

Poor water and unsanitary conditions leads to adverse effects on health of households living in the slums. Given the fact that Davangere is a major touristic center, it is quite apparent that the slums are characterized by poor/crammed housing conditions, lack of good sanitation and contaminated water supply. Contamination of water and effluents, has resulted the households be exposed to skin irritation, respiratory problems and other diseases. Indicated in AKM, 0.03% of the slum population is found to be having HIV/AIDS while 0.02% of the population is suffering with Tuberculosis and 0.1% with respiratory problems, 0.16%with other chronic diseases.

For slum wise details, please refer *Annexure-1C* on social profile.

d. Economic profile

Davangere town is a major trading center of Karnataka state. It was called the "Manchester of Karnataka" for housing many cotton mills and supported trade and business. Being at the center of the State makes it suitable for trading. The surrounding hinterland provides support to business at Davangere. Crops like Rice, Arecanut and Cotton are traded here. There are many rice mills making puffed rice and beaten rice in and around this town.

Davangere is famous for textiles mills. Shankar Textile Mills, Chigateri Mills, Chandrodaya Mills Ltd, Yallamma Cotton Woollen and silk mills Ltd all contributed the economic development of the city. The Cotton mills which are existing till date are Anjaneya Cotton mill, Ganesh Mill, Siddeshwara Cotton Mill. Davangere was a major cotton textile exporter during the 1960s till the 80s. Currently the major agro-industrial activity around Davangere revolves around rice and sugarcane, with a number of sugar mills in and around this area.

The Shamanur Sugar Mills situated in the Dugavathi village near Davangere is a Major Industry in Davangere. Many of the rice Mills are established in the Industrial area near the Bye Pass Road. Davangere has a big Garment and clothing Shop i.e. B.S. Channabasappa and Sons.

Livelihood profile

Two types of labor exist in all economies: skilled and unskilled. Skilled labor is the portion of workers in an economy that have specific, technical industry skills relating to business and the production of goods. Engineers, welders, accountants and scientists are a few examples of skilled labor. Unskilled labor is the cheaper and less technical portion of the workforce that makes up a large part of an economy's labor market. This workforce plays the important part of performing daily production tasks that do not require skills.

As indicated in AKM data, 18% of slum population are illiterate with lack of skill and professional training, making it difficult for them to obtain skilled employment opportunities in Davangere, hence end up doing low or moderately paid jobs on a daily basis.

The composition of work force conveys a picture of quality of life, associates with their social and economic activities. Due to increasing prominence of tertiary activities, the role of primary sector in Davangere city has reduced. Majority of the working population in the slums is engaged in constructional labours, Rice mill workers, rag pickers, Auto drivers & wholesale business. On the other hand, women in the families are majorly involved in beedi making tasks and domestic works.

The unemployment in slum dwellers could be potentially mitigated by implementing schemes such as SJSRY, STEP UP and other livelihood oriented training programmes initiated by Govt. of India.

Distribution of slums households by Occupation Status

As per AKM data, it is inferred that 31% of households are found to be working as casual laborers and 23% on regular wage basis as they are unskilled, includes domestic help, rag pickers, and vegetable vendors. Only 14% is actually working on monthly salary, indicating a secured position and skilled employment. Therefore nearly 60% of the poor households do not have access to dependable occupation and secure incomes.

Chart 1- 12: Occupational Status

This situation of slum livelihoods need to be taken into consideration in future development programmes as there is a need for an enhanced productivity in the city.

Picture 1- 26: Babu jagajeevan ram nagar slum

Picture 1- 27: Neelamma thota slum

Picture 1- 28: Bharath colony slum

Monthly income by households

The monthly income of 10% households ranges between Rs.1500 to Rs.2000 and Rs.2000 to Rs.3000 is 22%. The percentage of households that earn less than Rs. 1500 is 28%, indicating that 31% of the households belong to casual labor and belong to BPL class.

Chart 1- 13: Monthly income Of Households

Further, the livelihood pattern has become indefinite and irregular for the households, where only 50% of them are earning more than Rs.3000/- per month. In addition, it is also observed that child labor number is rapidly increasing where a need is felt to curtail it. There is urgency in creating economic assistance which can include training, job placements, credit and technical support to small and marginal businesses, creating new society –owned enterprises, providing micro-finance facilities and loans for housing and financial assistance such as subsidies for building materials. There is ample scope for programmes like SJSRY projects to be launched particularly STEP UP, UCDN, UWESP in most of the slums as part of livelihood promotion and leads to enhanced productivity.

For slum wise details, please refer *Annexure-1D* on Economic Profile.

Picture 1- 29: Hale chikkanahalli Slum

Picture 1- 30: Shekarappa nagara slum

e. Infrastructure

Sustainable growth of a city depends on its infrastructure facilities. Lack of infrastructure and institutional mechanism can lead to collapse of urban system in a city. Access to basic services has now become a criterion for identification of the poor areas in a city. The responsibility for urban service provision in an equitable manner lies with the ULB, where an increasing gap in service levels and the difficulties in providing the same are prevalent. Information on access to services in terms of Physical Infrastructure of Davangere city has been collected and a brief analysis on the current status of Water Supply, sewerage, Storm Water drainage and Solid Waste Management. The numbers indicated in the *tables 1-7 to 1-15* are based on AKM data of 49 slums.

Water Supply

Table 1- 7: Current Water Supply Statistics

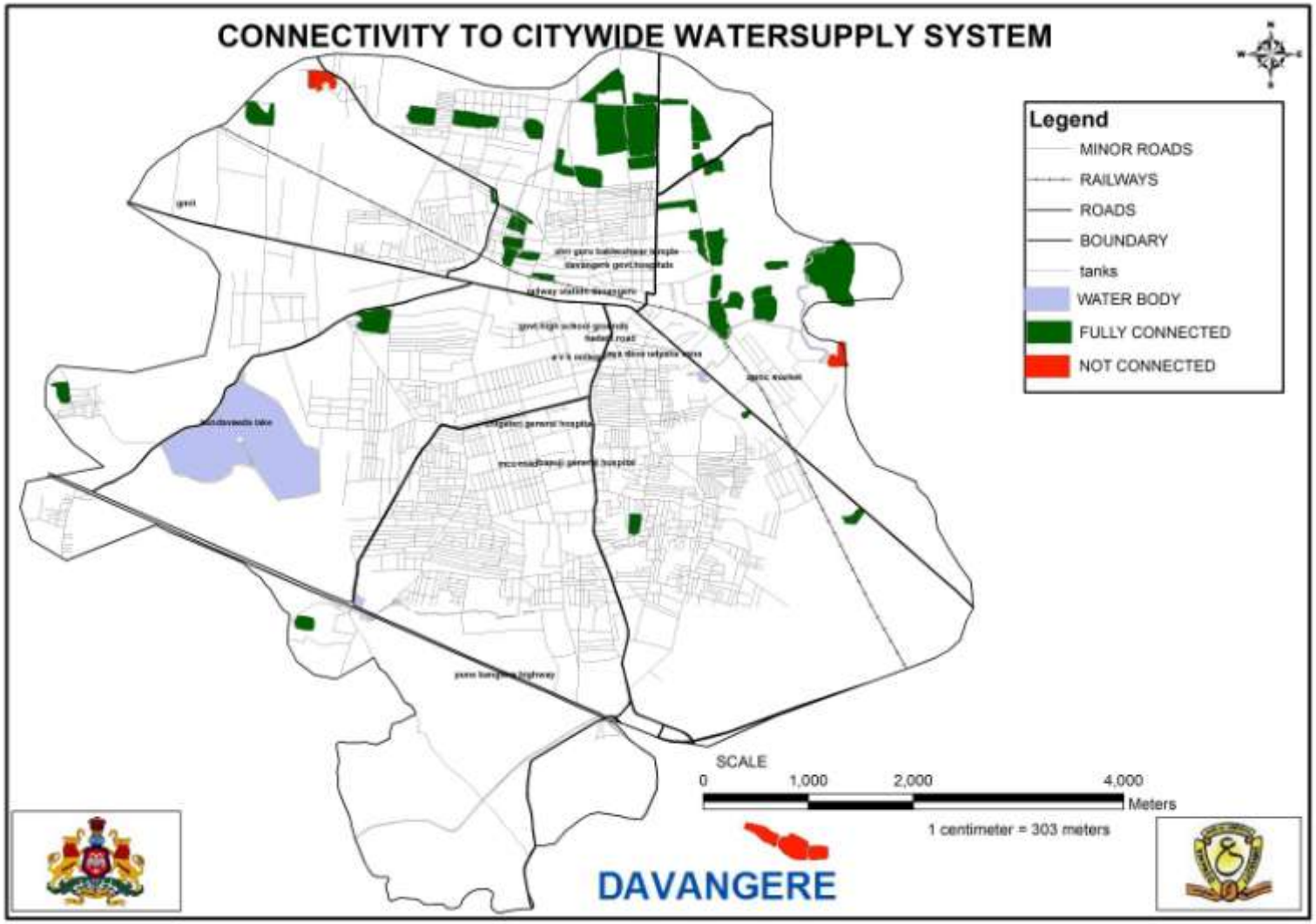
Connectivity to City-wide Water Supply System								
No. of slums	Fully connected		Partially connected			Not connected		
	43		0			6		
Source	Individual tap	Public tap	Tube well /Bore well/Hand pump	Open well	Tank/ Pond	River /Canal/Lake/ Spring	Water tanker	Others
No. of households	2334	8267	734	61	43	20	70	1363
Existing Situation	No. of individual taps		No. of public taps		No. of tube wells / bore wells/ hand pumps			
	2334		301		63			
Duration of water supply								
less than 1Hour	1-2 hrs daily		More than 2 hrs daily	once a week	twice a week	not regular	No supply	
2	3		1	1	36	2	4	

Source: AKM data

Davangere has adequate water supply resources due to the proximity of rivers Kaveri and Kabini. The city has four sources of water located within a distance of 15 kilometers and these sources draw water from the rivers Kaveri and Kabini.

Connectivity to City Wide Water Supply System

Most of the slum households either have direct access to services or access them through community or common facilities. Of the total slums, 88% of it is fully connected to the city wide water supply system. The remaining 12% of the slums do not have connectivity to city water supply system. The *map 1-7* shows the number of slums that are connected to city wide water supply system.



Map 1- 7: Slums connected to city-wide water supply system

Existing Sources of Drinking Water

Over 18% of the households have individual water supply connections where protected drinking water is being supplied to 955 households by Urban Local Body. Hence a significant 82% of the households do not have access to drinking water and dependent on public water taps, tube wells, open wells, hand pump and water tanker. In a slum it is observed that on an average about 27 households are sharing one public tap.

Duration of Piped Water Supply

The duration of water supply usually is once in a day or once in couple of days where 12% of the slums have access to piped water supply between 1 to 2 hours or more on a daily basis. In order achieve 100% piped water supply it is necessity to address deficit of 43 slums.

Despite the connectivity to city wide water supply system, the major problem is observed to be is the poor quality of water. This is due to the discharge of waste from leather industry, contamination of river through burnt up bodies, garbage at the source of river. Even after treatment, the quality of water is still found to be poor; which needs to be addressed immediately.

Picture 1- 31: Shekarappa nagara slum over head tank

Picture 1- 32: Shivanagara slum

Picture 1- 33: Aaradhya layout slum

Picture 1- 34: Bambu bazaar slum

Picture 1- 35: suresh nagara 3rd stage slum

Picture 1- 36: Aaradhya layout

Sanitation

Sanitation and sewerage systems are not only the basic necessities of life, but they are also crucial for achieving the goal of "Health for All". Increased sanitation coverage is directly linked to improvement of health status. Lack of sanitation is a universal problem when it comes to Slums and is markedly less than access to other basic services. While, it is worthwhile to note that the proportion of people having access to sanitation in urban areas is considerably greater when compared to their rural counterparts, however the problems are more exacerbated in slums. Urban sanitation is perceived as being important because of the health factor. In case of slums, it is observed that sanitation facilities are worst and in pathetic condition. A comprehensive view of the sanitary facilities as well as current sewerage system in the slums is shown in *table 1-8*:

Table 1- 8: Current Sanitation Statistics

	Storm water Drainage	Underground Drainage/Sewer Lines	Digester	Not Connected to Sewer or Digester
No. of HHs	8663	7584	6562	3387

Connectivity to City-wide Storm-water Drainage System		
Fully connected	Partially connected	Not connected
43	0	6

Connectivity to City-wide Sewerage System		
Fully connected	Partially connected	Not connected
41	0	8

	Latrine Facility used by the households									
	Public/Community			Shared Latrine			Own Latrine			
	Septic tank/ flush	Service latrine	Pit	Septic tank/ flush	Service latrine	Pit	Septic tank/ flush	Service latrine	Pit	Open Defication
No.of H.Hs	578	0	162	508	0	487	4321	0	741	6095

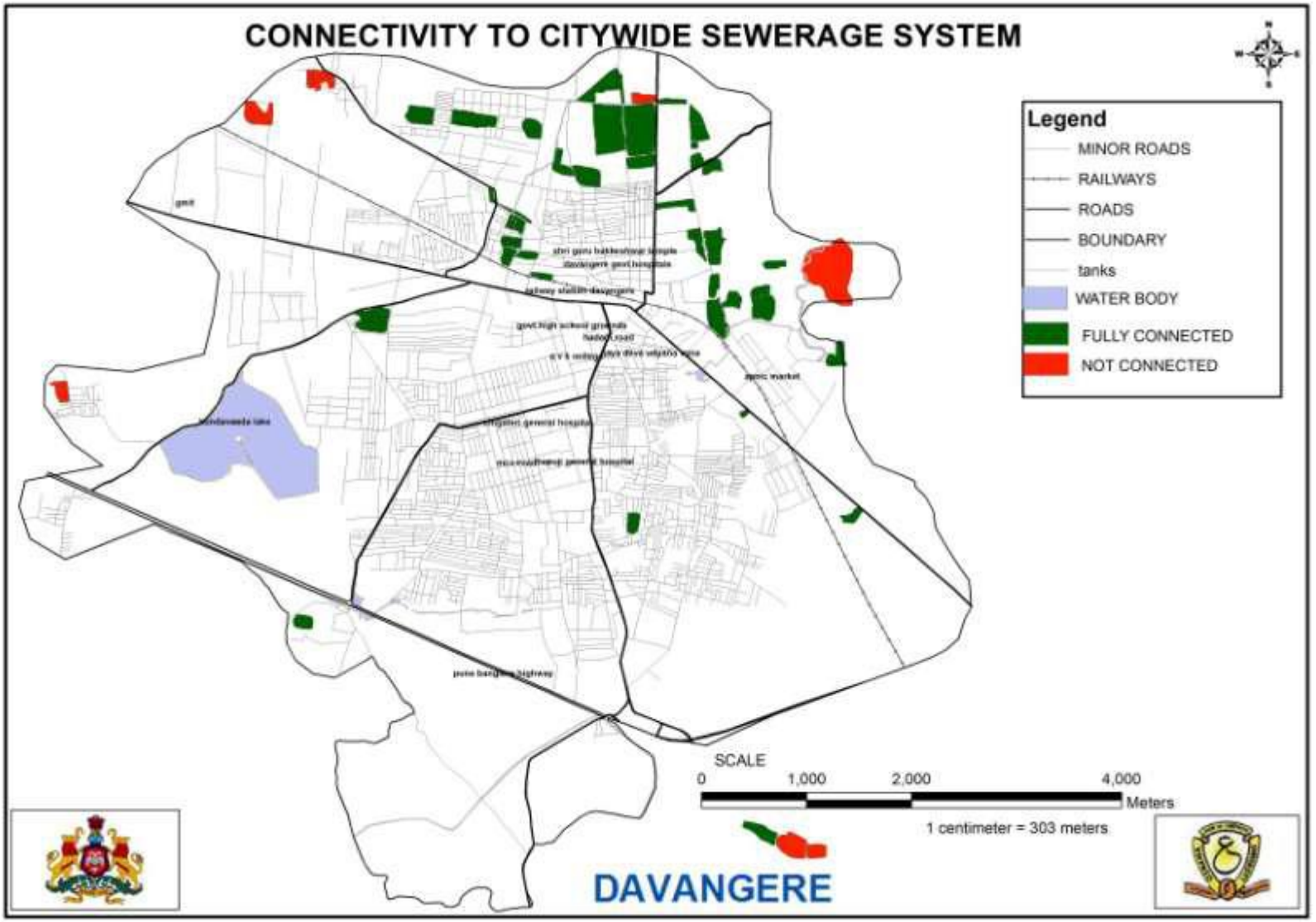
Source: AKM data

Connectivity to City wide Trunk Sewerage System

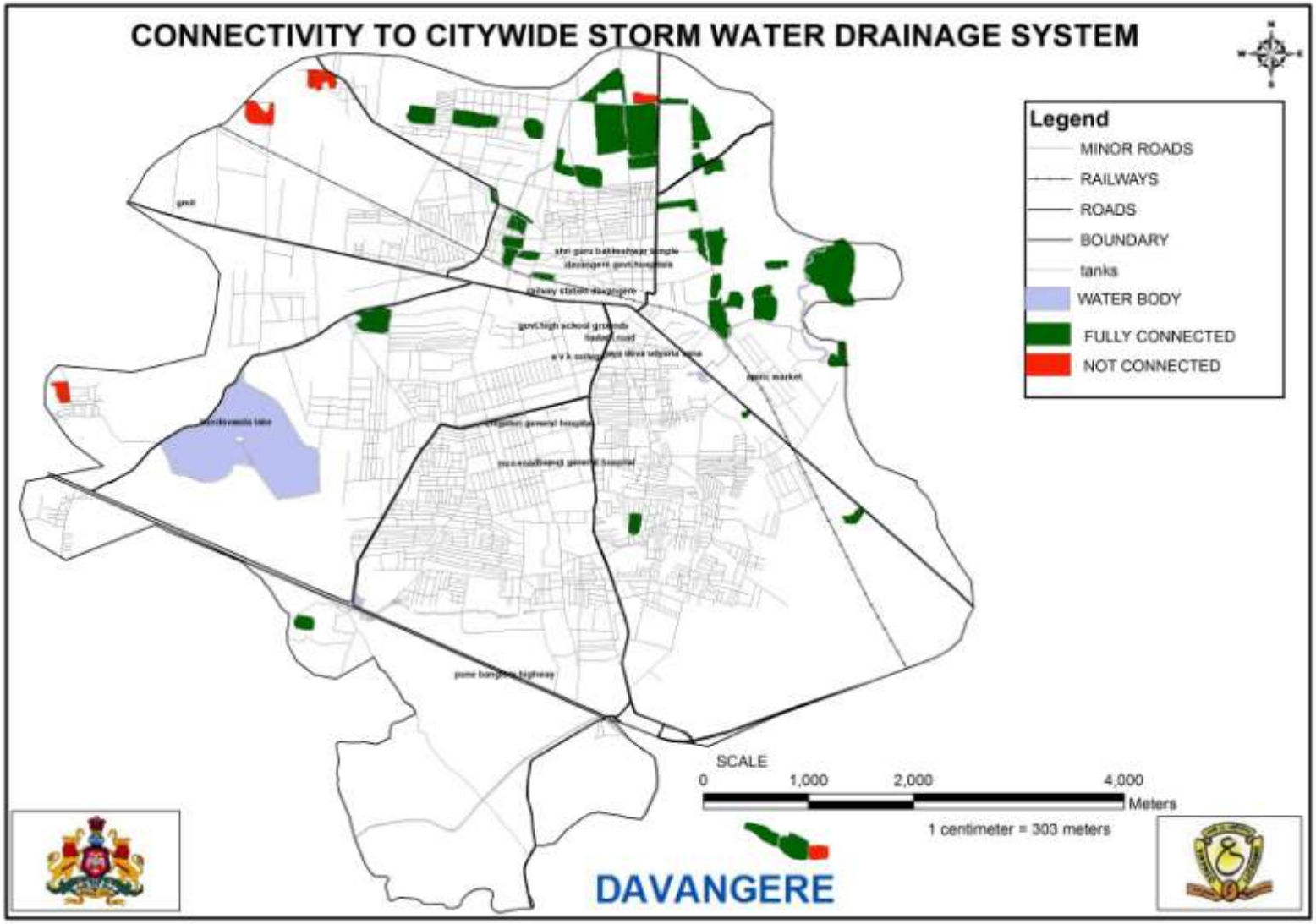
84% of the slums are fully connected to city wide sewerage system. Even though 84% of the slums are connected to city wide sewerage system yet 16% needs to be upgraded. The *map 1-8* presents the status of the slums that connected to city wide sewerage system.

Connectivity to City wide Storm-Water Drainage System

Similarly 88% of the slums are fully connected to the storm water drainage system, but 12% of the slums are not covered by the city wide system. Given the situation, it is necessary to improve the system as well as provide newer connections before it infiltrates into the environment. The *Map1-9* shows condition of storm water drainage system.



Map 1- 8 Slums connected to city-wide sewerage system



Map 1- 9 Slums connected to city-wide Storm Water Drainage system

Drainage and Sewerage facility

As per AKM data, it was found that 67% of 8663 households have access to storm water drainage while 59% has access to underground sewer lines and 51% of the households connected to digester. Even though 74% of the households in the slums have some form of drainage and sewerage facility, still 26% of the households are not connected to a sewerage system. Due to absence of a system, the gray water and waste water from houses are directly dumped into the open nallah or nearby open drains along with solid waste, makes it overloaded and choked. Due to this discarding, water logging in the slums areas is prevalent and in turn has direct consequences on the health of households.

Picture 1- 37: Near vinayaka talkies slum storm water drainage

Picture 1- 38: Karlmarks nagara slum storm water drainage

Picture 1- 39: R.K. hegde nagara slum rain water in the road

Picture 1- 40: Sureshnagara 1st stage slum storm water on the road

Distribution of Households by use of different type of Toilet facilities

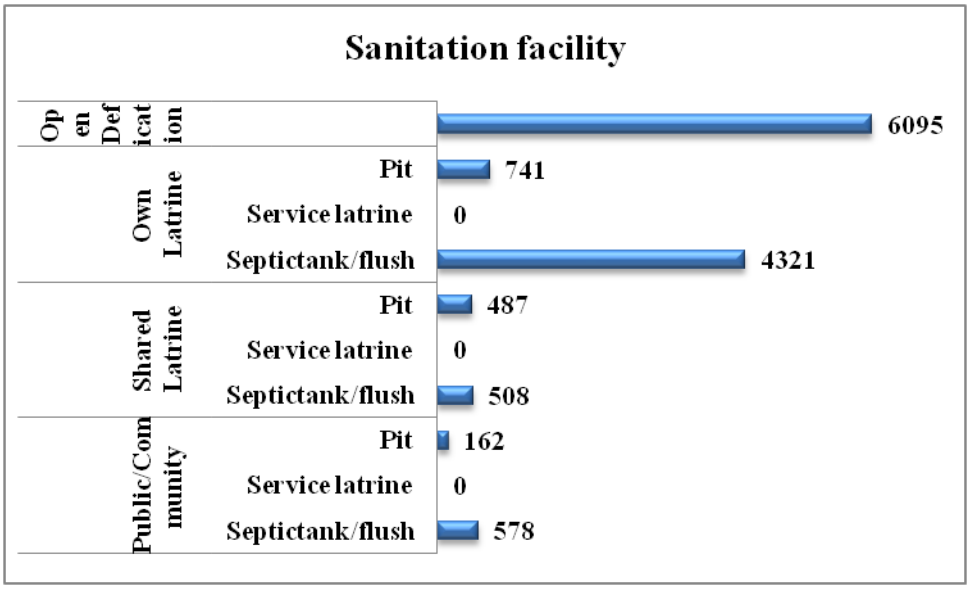


Chart 1- 14: Type of sanitation

In Davangere, there exist three different systems of sanitation covered in 49 slums namely, public, shared and own. Under each category, there are different toilet facilities in use such as pit, septic tank/flush and service toilet system. In slums when there is inadequate toilet facilities, open defecation has become prevalent and leading to unhygienic conditions. As evident in the *chart 1-14*, overall 34% of the households use Own Latrine-Septic tank/ flush ,3% use Own Latrine-Service latrine and 6%use Own Latrine-Pit, 1% use Public/Community-Pit and 4%use Public/CommunitySeptic tank/ flush;4% use Shared Latrine -Septic tank/ flush and 4% use Shared Latrine Pit. About 47% of the households do not have any kind of toilet facility and hence opt for open defecation on river banks , thus polluting surface water.

Picture 1- 41: Sriram nagar own toilets

Picture 1- 42: Avaragere gomala 0213 slum Open Defecation

Even though 53% of the households have access to some form of toilet, it is believed the exisitng toilet system is considered to be of primitive stage with no proper maintenance and lacks general hygienic condition, further deteriorating the environment.

Solid waste management

Well functioning and safe solid waste management system in slum is vital so as to minimize the health hazards and the environmental pollution caused by solid waste. In many areas, garbage disposal services are jagged and sometimes not available. People are forced to live in such environment and definitely a solution has to be put in place to efficiently, safely and properly dispose of their solid waste.

The *table 1-9* gives an overall picture of the current situation of solid waste management.

Table 1- 9: Solid waste management (Existing Situation)

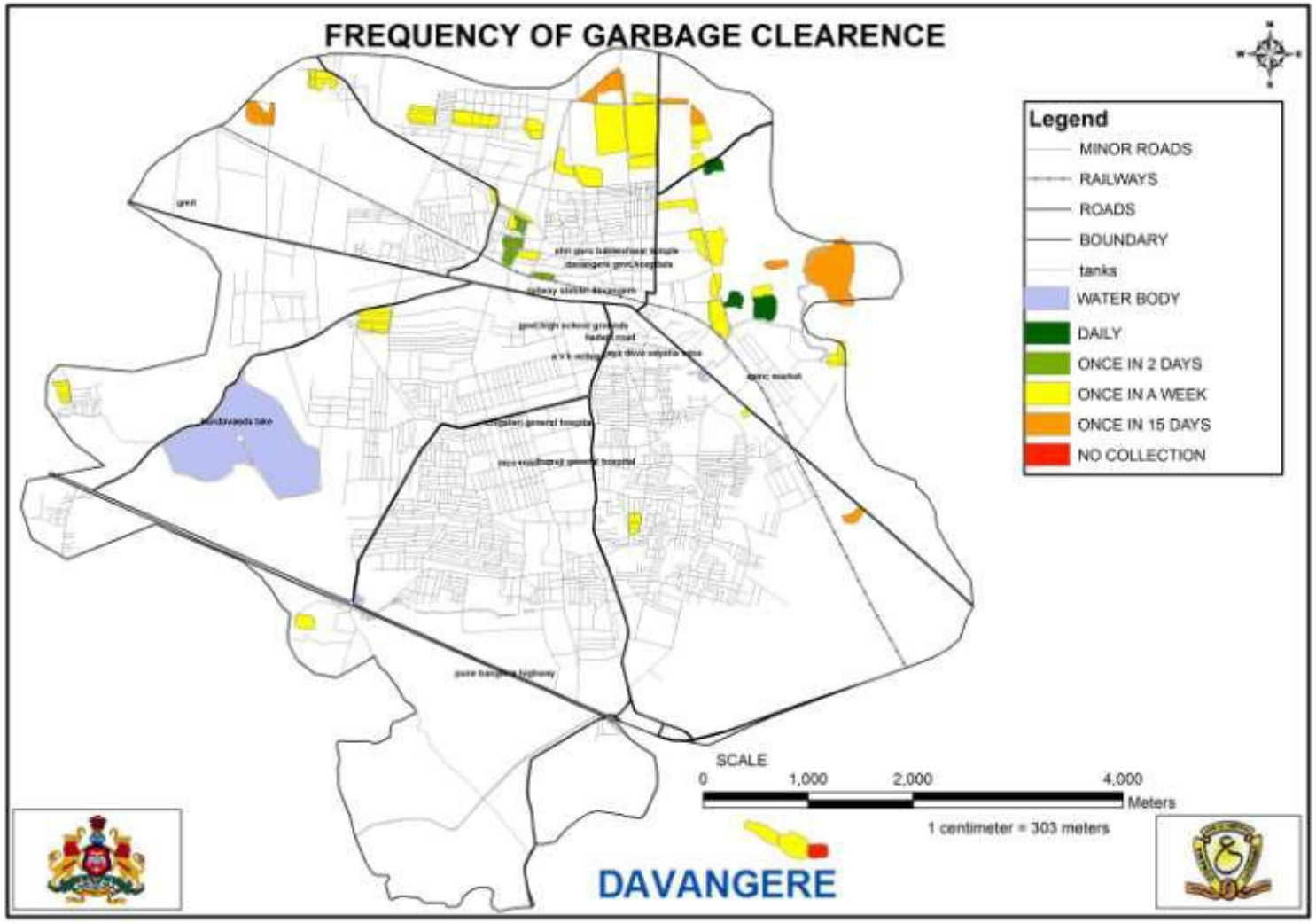
	No. of Slums
Frequency of garbage disposal	
Daily	3
Once in 2 days	5
Once in a week	32
Once in 15 days	8
No collection	1
Arrangement for Garbage Disposal	
Municipal staff	44
Municipal Contractor	5
Residents themselves	0
Others	0
No arrangement	0
Frequency of Clearance of Open	
Daily	0
Once in 2 days	2
Once in a week	35
Once in 15 days	12
No clearance	0

Source: AKM data

Frequency of Solid waste disposal

The *table 1-9* gives an overall picture of the current situation of solid waste management where 6% of the slum have daily clearance of garbage, 10% have once in 2 days and 65% have it cleared once in a week .Due to inadequate collection of solid waste, 19% of slums found to be affected insanitary conditions, requires immediate attention from concerned authority.


Picture 1- 43: Garbage disposal



Map 1- 10: Frequency of Garbage clearance

As evident in the *Map 1-10*, the slums marked in red color represent the ones not covered with clearance of solid waste disposal on a regular or non regular basis.

Arrangement of Garbage Disposal

As seen in the *table 1-9*, it is found that 90% of the solid waste disposal is handled by the municipal staff and remaining 10% of the disposal arrangement is through Municipal contractors. In areas where there is no lack of solid west disposal or collection.

Frequency of Clearance of Open drains

As per AKM data, 4% of slums have it cleared once in 2 days, It is analyzed that 96% of the slums are not sufficiently covered with clearance of the open drains, further deteriorating environmental conditions and contaminating the ground water. Please find the list of slums that not covered in annexure-1E

Picture 1- 44: Dump bins located in slums

Roads and Street lights

The network of roads and streets in Davangere follows a hub and spoke system with arterial roads originating from the centre of the city. This arrangement also means that all commercial activities converge to the centre of the city causing congestion. Most of the roads in the city are broad and straight with regular footpaths on either side. The lack of connecting roads with other parts in the city and within the slums poses a grave issue and affects the transport connectivity. This is one of the fundamental issues that is generally neglected in slum developments and needs thorough planning and execution.

The *table 1–10* as extracted from DCC‟ s MIS interface presents the existing condition of road network.

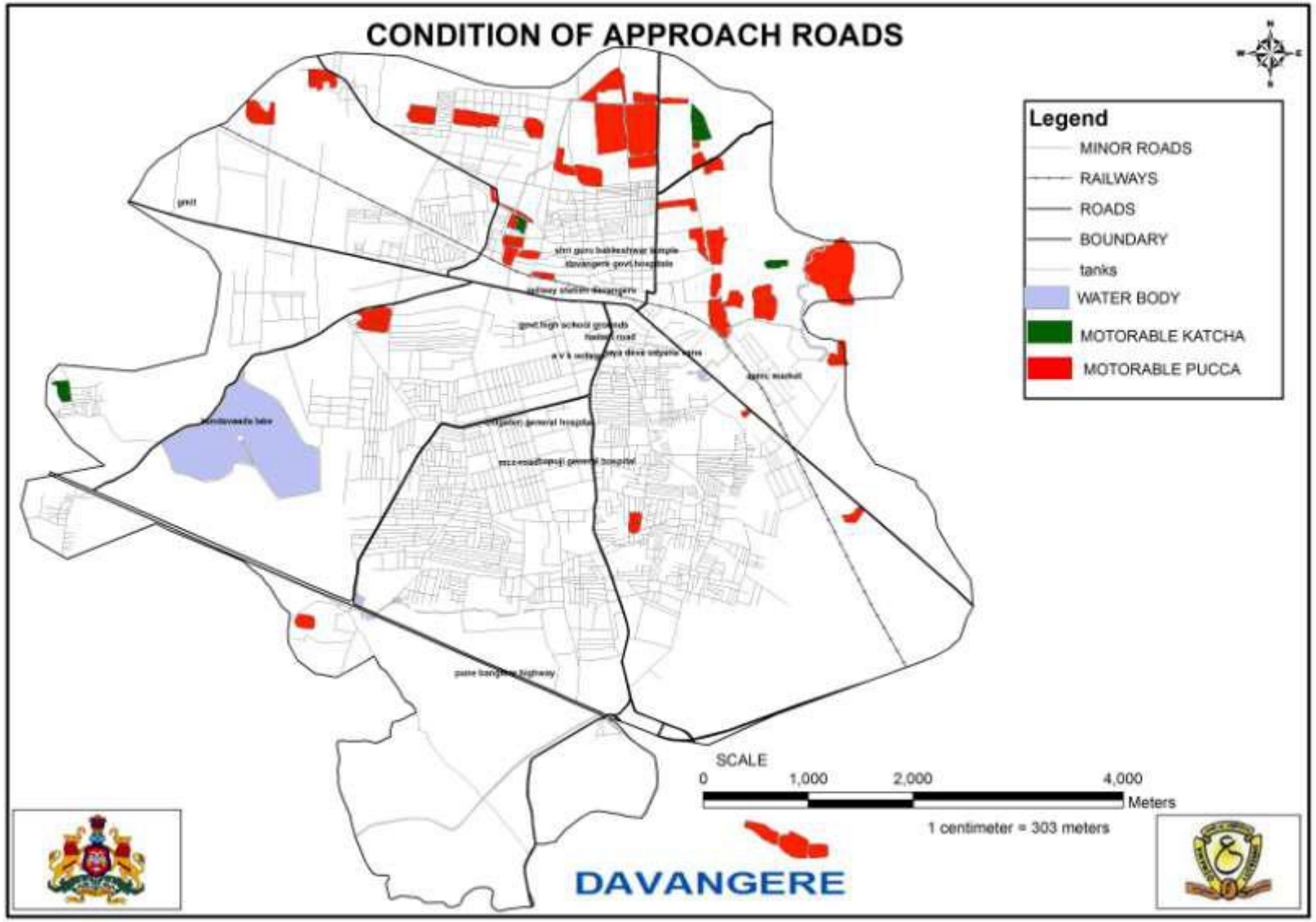
Table 1- 10 Current Statistics of Roads and street lights

	No. of Slums
Approach Road/Lane/Constructed Path to the Slum	
Motorable pucca	44
Motorable katcha	5
Non-Motorable pucca	0
Non-Motorable katcha	0
Distance from the nearest Motorable Road	
Less than 0.5 kms	49
0.5 to 1.0 km.	0
1.0 km to 2.0 km.	0
2.0 km to 5.0 km.	0
more than 5.0 km	0
Internal Road	
Motorable pucca	21
Motorable kutcha	16
Non-Motorable pucca	10
Non-Motorable katcha	2
Whether Street light facility is available in the Slum	
Yes	49
No	0

Source: AKM data

Nature of Approach Road

By and large, 90% of slums are provided with Motorable Pucca roads and 10% are Kutcha in nature.



Map 1- 11: Condition of approach roads

Distance from nearest Motorable road

100% of the slums have access to the nearest Motorable road within 0.5 to 1 KM.

Type of Internal road

43% of the slums have Motorable pucca internal roads while 33% have katcha internal roads. Around 24% of the slums lack in proper internal roads with BT surface.

Picture 1- 45: Sriram nagar slum Internal road

Picture 1- 46: Anekonda A.K Hatti slum internal road

Street Lighting Facility

According to the AKM data, 100 % of the slums have street lighting facilities.

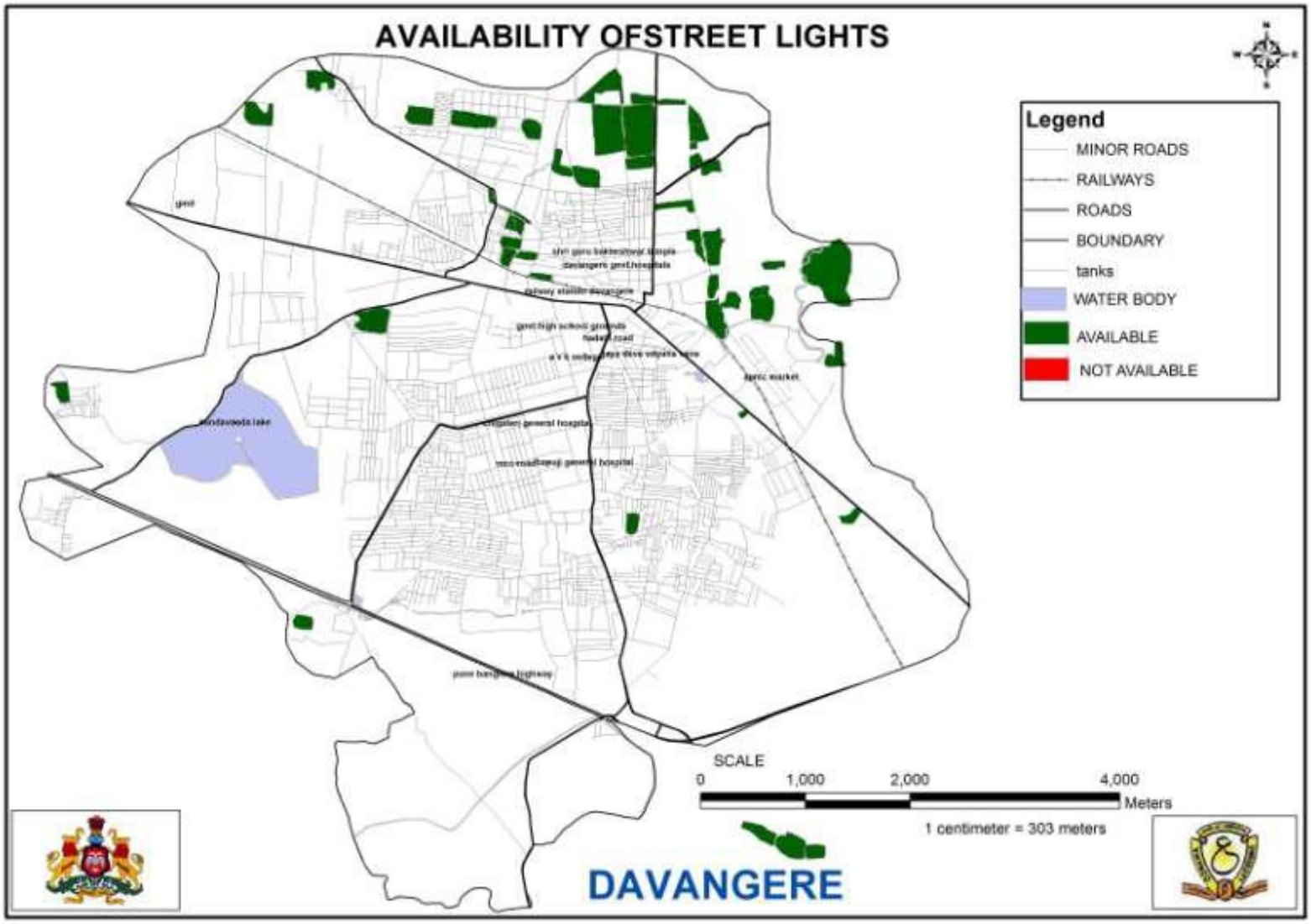
Picture 1- 47: Aaradhya layout slum

Picture 1- 48: Shivanagara slum

Picture 1- 49: Mandakki batti (1 to 3) slum

Picture 1- 50: avaragere gomala 0213 slum

For slum wise details, please refer *Annexure-1F* on Roads and Street lights.



Map 1- 12: Availability of Streetlight facility

Social infrastructure

The quality of life in any urban centre depends upon the availability of and accessibility to quality social infrastructure. Development of social infrastructure includes education, health, social welfare, livelihood centers and recreational facilities, instrumental in contributing to substantial improvements in physical quality of life, which in turn, initiates and accelerates economic development in a city. The following are a list of elements that forms the social infrastructure:

- Educational facilities
- Health facilities
- Community halls & rooms
- Livelihood centers
- Youth centers
- Social welfare facilities
- Old age homes
- Night shelter
- Recreational facilities
- Public utilities such as fire services

Following section details out the current level of social infrastructure available to the slum households.

Education facilities:

Table 1- 11: Distance from nearest Pre-Primary Schools

Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	More than 2 KM
Pre- Primary Schools (Anganwadis)					
No of slums	43	6	0	0	0
Pre- Primary Schools (Municipal)					
No of slums	49	0	0	0	0
Pre- Primary Schools (Private)					
No of slums	7	33	7	1	1

Source: AKM data

As indicated in *table 1-11*, for slum households, the nearest distance to pre-primary schools run by different agencies are located maximum within the slums and 0.5 Km from the slums. About 43 slums have pre- primary schools run by government are located within the slums. Seen in *map 1-13*, the areas marked in red color show that 6 slums do not have access to pre-primary schools within the slums (Anganwadis).

Table 1- 12: Distance from nearest Primary Schools

Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	More than 2 KM
Primary Schools (Municipal)					
No of slums	46	2	1	0	0
Primary Schools (State Government)					
No of slums	15	28	5	1	0
Primary Schools (Private)					
No of slums	10	34	4	1	0

Source: AKM data

As indicated in *table 1-12*, for slum households, the nearest distance to primary schools run by different agencies are located maximum within the slums and 0.5 KM away from the slums. Around 3 slums do not have access to Primary schools with in the slums.

Table 1- 13: Distance from nearest High Schools

Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	More than 2 KM
High Schools (Municipal)					
No of slums	48	1	0	0	0
High Schools (State Government)					
No of slums	4	13	17	9	6
High Schools (Private)					
No of slums	4	23	17	4	1

Source: AKM data

As indicated in *table 1-13*, for slum households, the nearest distance to high schools run by different agencies are located maximum within the slums and 0.5 KM away from the slums. Around 6 slums do not have access to High schools (State Government) when the distance is more than 2 Km.

Picture 1- 51: Sriram nagar slum High school

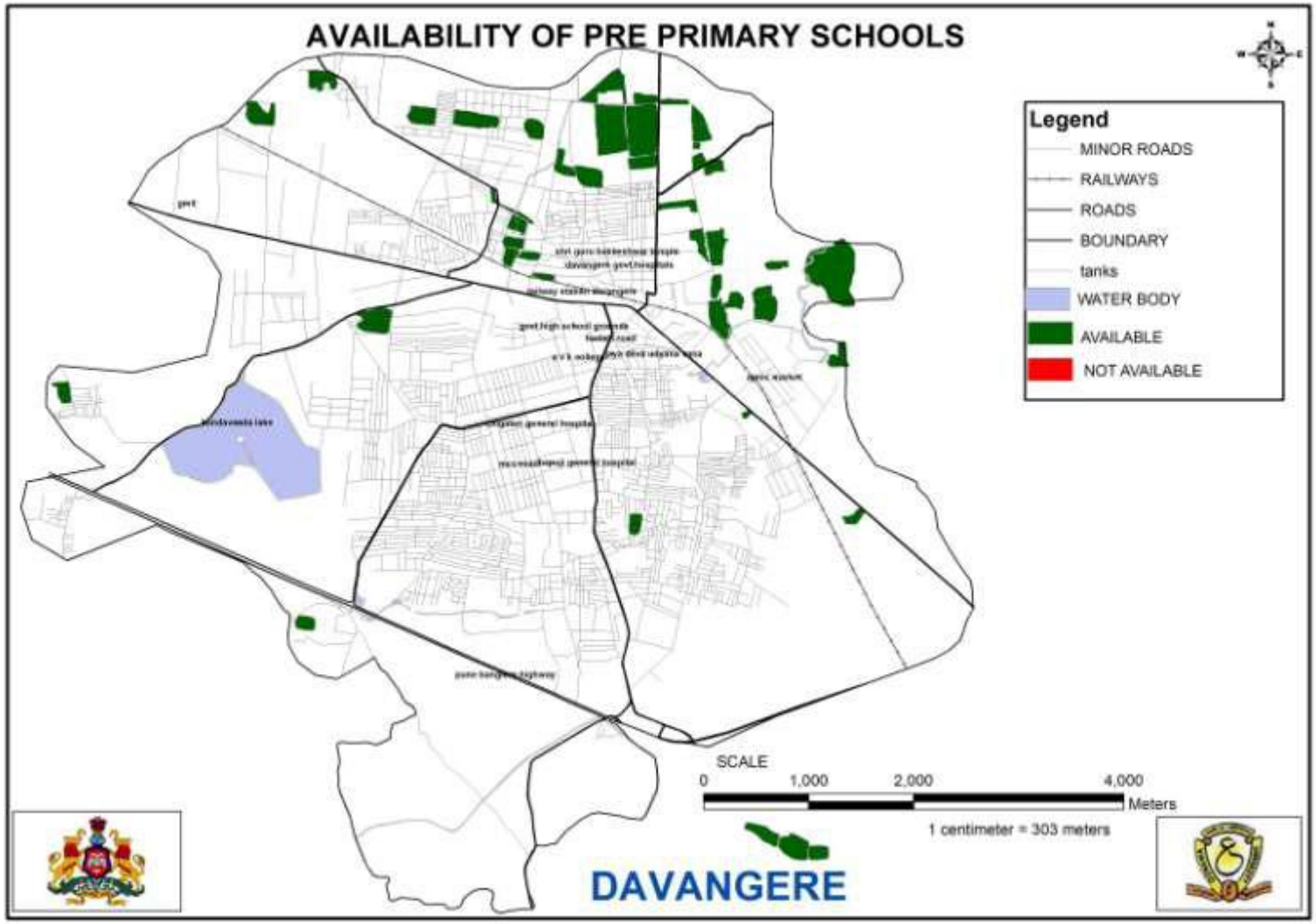
Picture 1- 52: Bambu bazaar slum private pre-primary school

Picture 1- 53: Anekonda A.K Hatti slum anganwadi

Picture 1- 54: Hale chikkanahalli slum primary school

Picture 1- 55: Shekarappa nagara slum pri-primary school

Picture 1- 56: Sriram nagar slum Anganwadi



Map 1- 13: Availability of primary schools

Health facilities

Many of the health problems in urban slums stem from lack of access to or demand for basic amenities. Basic service provisions are either absent or inadequate in slums. Lack of drinking water, clean, sanitary environment and adequate housing and garbage disposal pose series of threats to the health of slum dwellers, women and children in particular, as they spend most of their time in and around the unhygienic environment. Inadequate nutritional intake due to non-availability of subsid ized ration or availability of poor quality to ration makes the slum dwellers prone to large number of infections and lack of education or precaution, further aggravates the situation.

As per AKM data, 94% of the slums do not have primary health facilities, 6% constitute private clinics, 67% forms registered practitioner, 78% have government hospitals and 98% have primary health centers. Health as well as medical facilities is provided and is serving the ailing people belonging to the slum areas item wise particulars are shown in *table1-14.*

Table 1- 14: Distance from nearest Health facilities

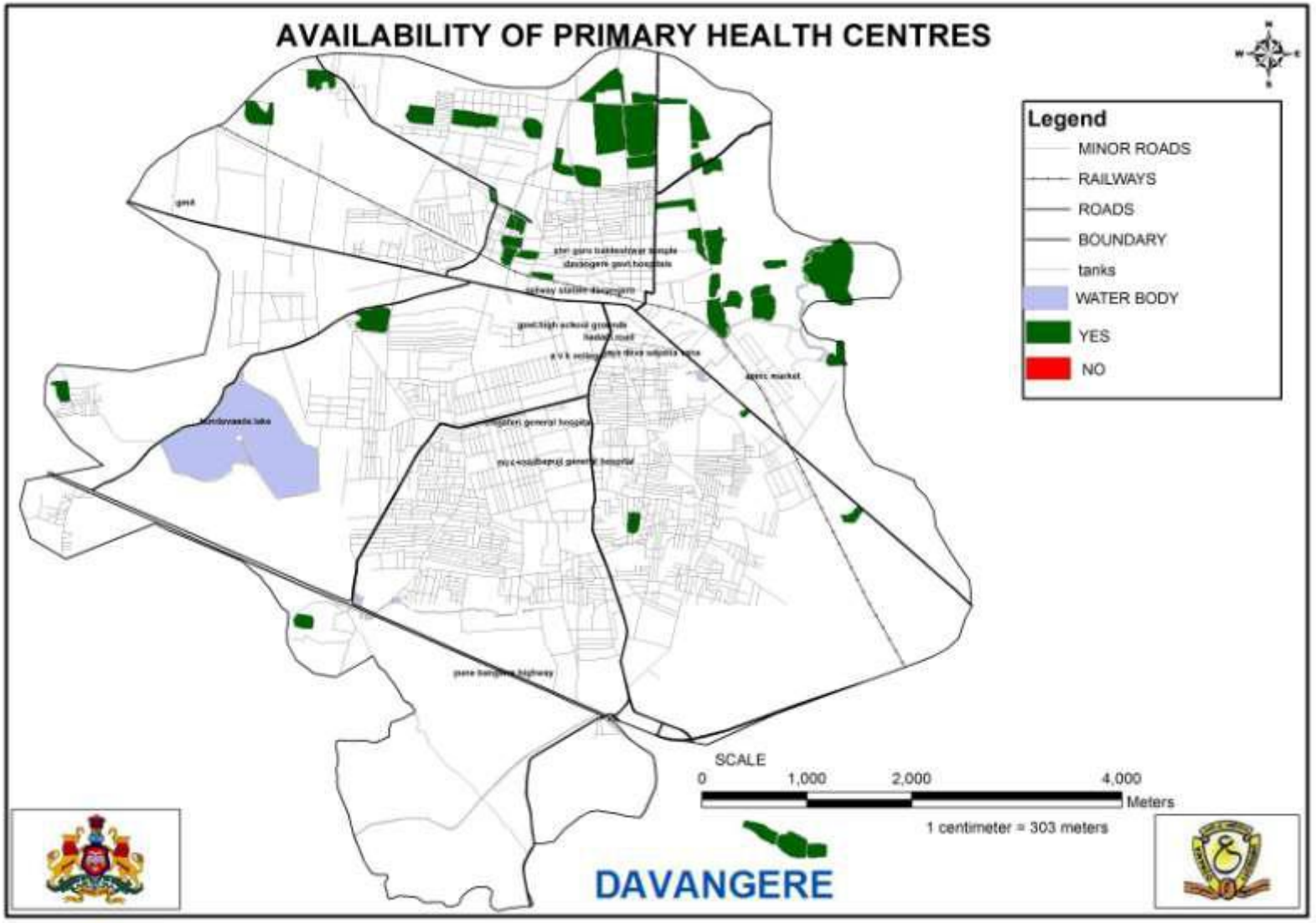
Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	More than 2 KM
Urban Health post					
No. of Slums	**8**	**7**	**4**	**16**	**14**
Primary Health Centre					
No. of Slums	**3**	**17**	**13**	**15**	**1**
Government Hospital					
No. of Slums	**2**	**2**	**15**	**19**	**11**
Maternity Centre					
No. of Slums	**0**	**3**	**21**	**20**	**5**
Private Clinic					
No. of Slums	**3**	**33**	**8**	**5**	**0**
Registered Medical Practitioner (RMP)					
No. of Slums	**9**	**9**	**12**	**3**	**16**
Ayurvedic Doctor/Vaidhya					
No. of Slums	**6**	**5**	**6**	**5**	**27**

Source: AKM data

As indicated in *table 1-14*, for slum households, the nearest distance to primary health care centers is located maximum within the slums and 0.5 to1.0 KM from the slums. While for Government Hospitals, approximately 2 slums have access to the hospital within the slums.

Picture 1- 57: Basapura hosa a.k colony slum

Picture 1- 58: Bharath colony slum



Map 1- 14: Availability of primary health center

Social welfare facilities

Similar to the above sections in social infrastructure, the following *table 1-15* presents available social welfare facilities in 49 slums:

Table 1- 15: Social welfare facilities available in slums

Availability of Facilities within Slum	**No. Slums**
Community Hall	17
Livelihood/Production Centre	0
Vocational training/Training-cum-production Centre	2
Street Children Rehabilitation Centre	0
Night Shelter	0
Social Welfare facilities	**No. of Holders**
Old Age Home	0
Old Age Pensions	299
Widow Pensions	684
Disabled Pensions	280
General Insurance	535
Health Insurance	125
Self Help Groups/DWCUA Groups in Slum	61
Thrift and Credit Societies in Slum	197
Slum-dwellers Association	**No. of slums**
Yes	13
No	36
Youth Associations	24
Women's Associations/ Mahila Samithis	9

Source: AKM data

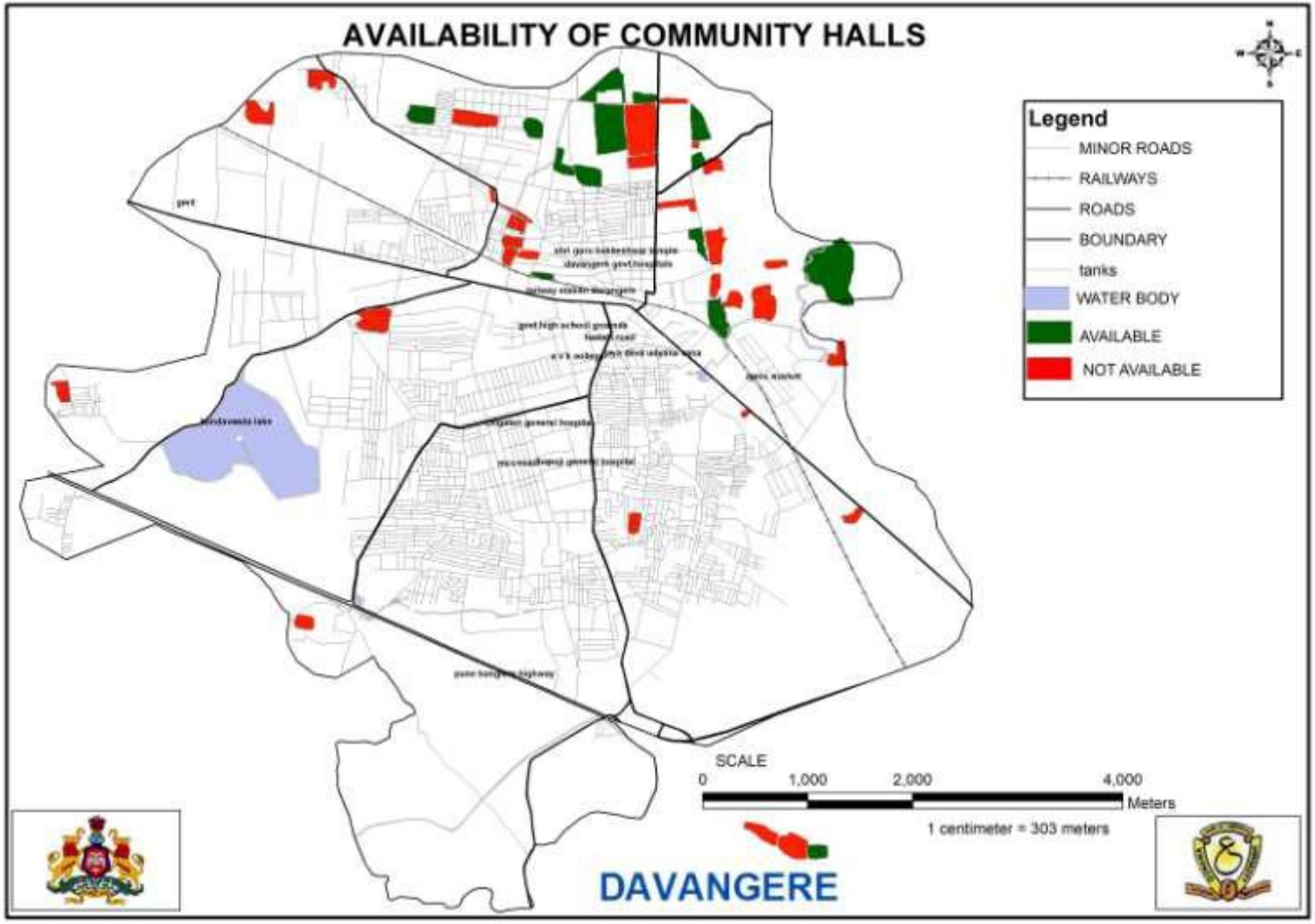
17 slums out of 49 have facility of community halls; 73% of the slums do not have slum dwellers association however 18% of the slums have women's associations to empower women with home based employment. In addition, the slums do have self groups as well as credit societies. The *map 1-15* shows the availability of community halls in slums

Picture 1- 59: Suresh nagara 3rd stage slum

Picture 1- 60: Suresh nagara 2nd stage slum

Picture 1- 61: Anekonda A.K Hatti slum

For Slum wise details on social Infra Structure, Please refer Annexure –I F.



Map 1- 15: Availability of Community halls

Section – II:

Slum Rehabilitation Strategy

CHAPTER 2 – Slum Rehabilitation Strategy

Introduction

The major factors that influence the design of upgrading programs are scale of the problem, the severity of conditions, tenure, and relevant support for social and economic development, community participation, the institutional framework, the financial structure, political will, and good governance. As part of community up-gradation, there are factors that need to be considered in the planning and implementation of initiatives. Most of the up-gradation programmes undertaken throughout the world are one of three types: provision of *basic infrastructure to the community, tenure security, and comprehensive up-gradation*. The appropriateness of their use is driven by the status of existing conditions in the slums.

First component is provision of basic infrastructure to the slum households. Improvement of basic services is necessary when the environmental conditions and physical infrastructure are poor, but tenure is relatively secure. For improving the services, both the physical and social infrastructure elements such as sanitation, water supply, drainage, and often some community facilities are taken into account. This type of program tends to cost less per capita than more complex programs. The improvements can be financed easily by a program like RAY.

The second component is the incremental buildup of tenure security when the land tenure status is found to be insecure. In these circumstances, lack of tenure is a threat to the security of livelihoods, and a significant barrier to households investing in upgrading their own homes. The threat of forced evictions also looms over such settlements. In such cases rapid tenure regularization may lead to increased land values and, as a consequence, market driven displacement of beneficiaries. An incremental approach based on a 'continuum of land rights' and flexible tenure arrangements would be recommended. Temporary occupancy rights, lease agreements, possession rights, anti-eviction rights are among flexible and effective tenure systems that do not place unrealistic demands on local governments with weak resources, do not disrupt municipal land markets, and provide beneficiaries with adequate and incremental security of tenure. When and where it becomes appropriate and affordable, lot titling through the sale or allotment of land should be considered as a way of providing the strongest form of tenure security.

The third type of upgrading program – a mixture of the previous two – is comprehensive upgrading. It combines both provision of basic infrastructure and tenure security. It is appropriate where environmental conditions and physical infrastructure is poor, where population densities are high, and where tenure is insecure.

The comprehensive upgrading program is relatively complex and time-consuming because it has more administrative requirements, implicates more stakeholders, and depends on greater community involvement.

In order to best apply RAY objectives and create Davangere a Slum free city, an imperative slum rehabilitation strategy would be necessary depending on the expected outcomes from the findings or analysis of existing slum situation in a city.

The rehabilitation strategy comprises of several components such as:

- Physical targets – relocation, in-situ and up gradation
- Law and legislation for slum dwellers
- Stakeholder/ community participation
- Financial framework
- Institutional mechanism

The following flowchart details the rehabilitation proposed for Slum free Davangere

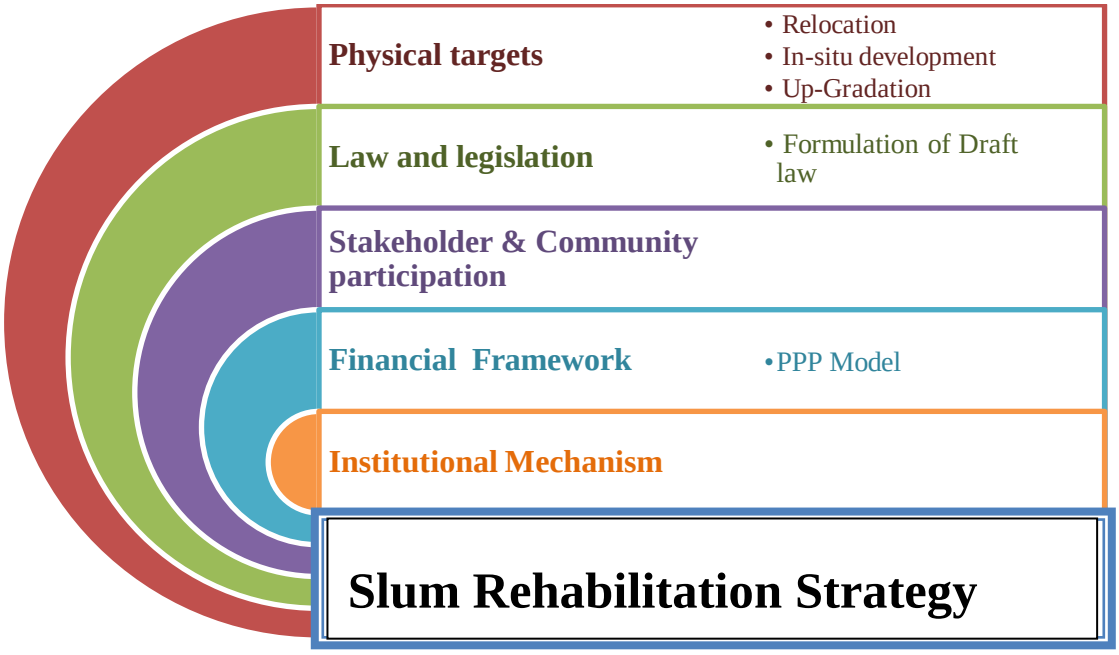


Chart 2- 1: Slum Rehabilitation strategy

a. Physical targets

For slum rehabilitation, the top most priority would be given to the redevelopment/ rehabilitation of identified slums and measures to prevent future slums. The following three options of redevelopment that is categorized based on housing tenure, tenability, physical location, density and ownership:

Relocation mode

- Depending on the physical location of slums such as hazardous sites and environmental conditions and where there is no alternative
- Involves communities in identification of alternative sites
- Ensures that education, health, transport, basic services and infrastructure and provided before relocation

In situ slum re-development mode

- Involves redevelopment of whole site to provide more living space and improved environmental conditions such as those in high density areas.
- Provision of transit accommodation and including of all residents, especially the extremely poor critical to success

- In this mode, new mixed-use mixed income communities can be created with a viable cross-subsidy model, which is a function of local land values, socio-economic needs and general context of the area.

In-situ slum Up-gradation mode

- Involves a mixture of provision or upgrading of service and infrastructure levels, incremental housing improvements or selective replacement of katcha houses

The following chart presents the recommended mode of development for 5 years in order to make Davangere a slum free city.

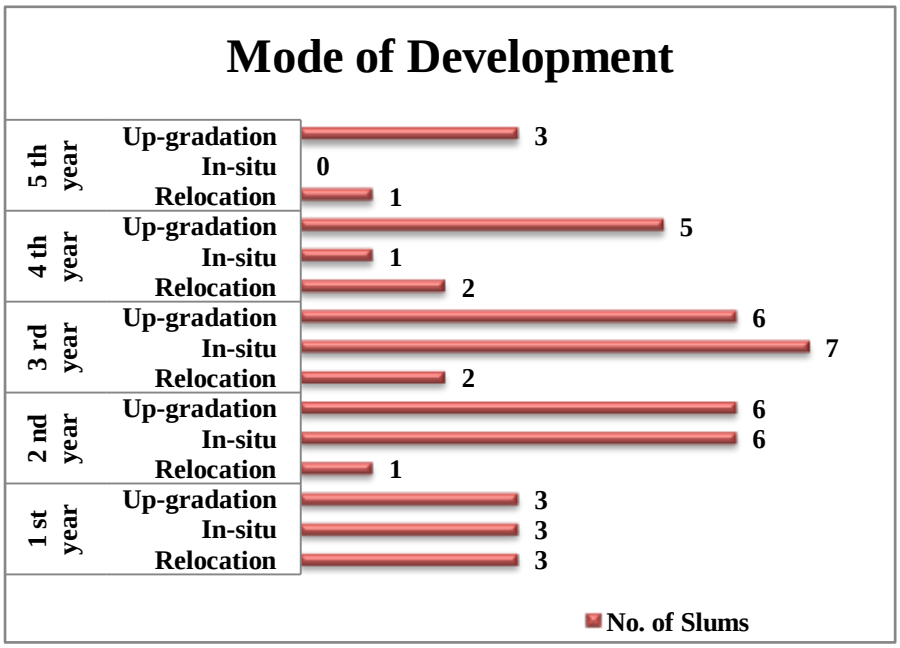


Chart 2- 2: Prioritization & Mode of development

b. Law and legislation

An appropriate legislation is a necessity to achieve and implement the development strategies formulated for Slum Free Davangere. RAY promises a secured housing, provision of urban basic services helps the slums to become "slum free" through rehabilitation strategy. Legislation forms an important tool for Govt. to assign property rights, provide basic services and achieve the holistic mission of RAY. Hence, suitable implementable and customized legislation forms an integral part of Slum rehabilitation strategy.

c. Stakeholder/ community participation

It has been proved by several previous schemes for slum development that community /stakeholder participation is a key aspect in implementing rehabilitation strategy to achieve Slum Free Davangere. Community Participation calls for a strong and active participatory chain which would be involved throughout the implementation of RAY starting from surveys until project implementation and monitoring. This particular strategy would actually make the slum dwellers realize the motive behind the programme as an opportunity to raise their standard of living, achieve higher dignity and provide better facilities for present as well as future families. Community participation strategy is a promising bridge between the governments and the beneficiaries to understand the mutual benefits of the programme.

d. Financial framework

RAY has posed a significant challenge to the state, ULB and beneficiaries by announcing its 50% contribution towards the project. This calls for development of exclusive financial development strategy to meet the remaining 50% finances through various sources and mechanism. The alternatives as proposed by Govt. of India.

The development strategy has been finalized after careful observations/scores that have been evolved through derived matrix preparation according to the Govt. of India guidelines. The strategy would enable the most needed slums to be taken care in first year in a strategic manner and continue to do so in the coming five years. The strategically financial framework would enable the project implementation smoothly without any finance hurdle.

e. Institutional mechanism

RAY is a challenging task right from policy making until project implementation and monitoring. However the city should comprise of several teams which have to be coordinated within each other and successfully channelize step by step. The roles vary from Center, State, ULB, Slum clearance boards, RAY technical cell, NGOs and other associated agencies. The city should be able to actively involve the various agencies with various tasks as the programme advances yearly. There has to be hiring done at necessary levels/positions to complete coordination cycle. Hence institutional mechanism enables and proves to be a significant strategy for slum rehabilitation.

It is a necessary exercise to assess the existing slums to propose for a development strategy. A matrix analysis was prepared for Davangere slums to identify the level of urban services. The matrix details the infrastructure and housing services among the slums.

Deficiency Matrix

According to RAY guidelines, a deficiency matrix for the existing slums is prepared using the scoring and ranking method. The matrix is based on three important parameters: Housing, Infrastructure and Tenure. Within these, Housing and Infrastructure are the physical parameters that are directly related to the existing quality of the housing condition.

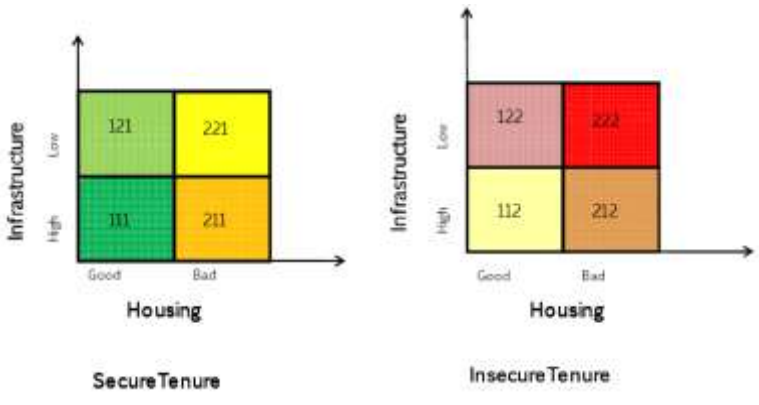


Chart 2- 3: Deficiency Matrix for development mode

For evaluating infrastructure, individual scores are assigned to indicate the levels based on various parameters such as:

- **Water supply**

  Score 1- 60% or more of household have individual connection
  Score 2- Less than 60% of households having individual connections.

- **Drainage**
  Score 1- 60% or more in-slum drains are covered and / or pucca drains
  Score 2- Less than 60% in-slums drains are covered and/or pucca drains
- **Solid waste management**
  Score 1- Every day/alternate removal
  Score 2- Removal of waste in frequent/once in fifteen days
- **Sanitation**
  Score 1- 60% or more having individual toilet unit (with toilet seats)
  Score 2- Less than 60% use individual toilets
- **Road**
  Score 1: 60% or more of the in-slum roads have a min of 3 m width
  Score 2: Less than 60% of the in-slum roads are of 3 m width.

Once the individual scores are obtained, a total score is stipulated and if the overall score of the infrastructure is greater than 7, it is considered good infrastructure and less than 7 is bad infrastructure. Based on which 10 slums were found to be having better infrastructure levels while 39 slums had lower levels of infrastructure, needing further improvement.

Similarly for housing, it is assessed by considering:

- **Structural condition**
  Score 1: semi pucca + katcha houses < 75%
  Score 2: semi pucca + katcha houses > 75%
- Age of the slum
- Space Per Person
  Score 1: 60% or more houses having > or equal to 3 Sq.m per person
  Score 2: Less than 60% houses having > or equal to 3 Sq.m per person
- **For Tenure status of the land - secured and in-secured**
  Score: 1 for secured status
  Registered (including ownership, leasehold and use/occupancy rights) Unregistered but documented (e.g. rental, rent to buy, unregistered leases, etc) Group/family/household rights Unregistered & undocumented
  Score: 2 For Unsecured status
  Documented (e.g. written agreements between irregular owners and tenants, de facto recognition, illegal subdivisions, customary rights, tenancy at will, etc) Undocumented
- **Density**

Based on the above individual scores, a final composite score for each slum is calculated using the parameters of security of tenure, housing condition and the infrastructure level. Once the score is obtained, the slums are then classified into:

- Good housing with good infrastructure
- Good housing with bad infrastructure;
- Bad housing with good infrastructure
- Bad housing with bad infrastructure;

In reference to RAY guidelines, settlements without any security of tenure are considered most vulnerable and therefore should be given priority in selection for improvement**.** In addition, settlements with bad housing bad infrastructure are also given priority for choosing the most appropriate development options. With the above classification method, suitable mode of development is selected for each slum. Once all the slums are synthesized and assigned with overall score, the slums will be categorized further based on the degree of deficiency for the three modes of redevelopment.

Detail Methodology Diagram

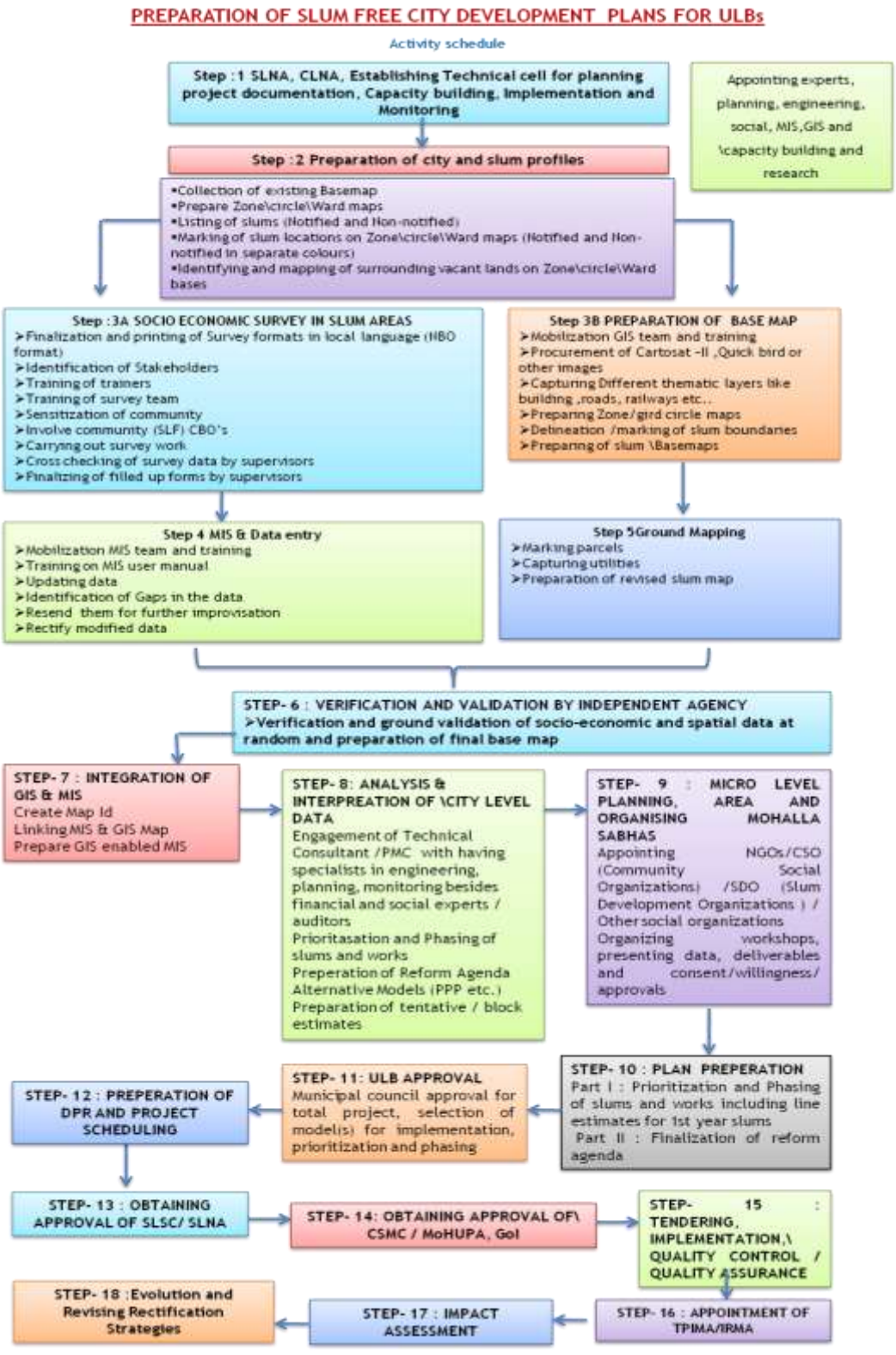


Chart 2- 4: Detail Methodology

With respect to Davangere, the above methodology in *chart 2-4* is being followed for preparation of Slum Free City Plan, starting with:

Step-1: Establishment of a **slum free technical cell** at the state nodal agency level for city for planning, documentation, capacity building and monitoring the POA through selection of professionals from various departments and disciplines.

Step-2: Preparation of city and slum profiles involves collection of secondary information such as CARTOSAT II images and relevant slum information. Next preparation of base maps to an appropriate scale using GIS application. In addition, identification and inventory of all slum clusters along with inventory of all possible vacant lands in each zone and that could be used for slum redevelopment/ rehabilitation development purposes

Step-3A: Socio Economic Survey in slum areas: reputed NGO/CBOs were selected for conducting socio economic surveys and data validation. Identification of survey personnel from nearest slums with local knowledge and extensive training to be provided for survey personnel by the local organizations on survey formats as specified by MoHUPA.

Step-3B: Preparation of GIS based maps involves mobilization of GIS team and training, acquiring Satellite images for the cities and creating geo-databases with required spatial layers such as roads, buildings, land use and capturing utilities. In addition, involves preparation of base maps, thematic maps and slum maps.

Step-4: MIS & Data Entry involves collection of data of slum dwellers, compilation and collation of primary data, preparation of a robust Slum-wise, City and State Slum Survey Database and Baseline Reports. In addition, the MIS team is responsible for identifying data gaps validation, resend them to the concerned authorities and updating the database.

Step-5: Ground Mapping involves survey personnel team to map the parcels, capture utilities and updating the revised slum maps.

Step-6: Verification and Validation by Independent Agency on socio-economic, spatial data and base maps on a random basis. [RAY: Slum Free City Planning, Davangere]

Step-7: MIS includes Integration of Slum MIS with GIS Maps to enable the preparation of GIS-enabled MIS maps for the preparation of meaningful Slum Development Plans and Slum-free City.

Step-8: Data analysis and decision for Slum Redevelopment Plan based on models like PPP development, infrastructure provision only, community-based development through involvement of the community mobilization and dialogue for deciding the model to be adopted.

Step-9: Micro level planning & organizing workshops with community stakeholders for prioritization of slums and the mode of development.

Step-10: Plan Preparation- Prioritization and phasing of slums and works including line estimates for 1st year slums.

Step-11: ULB Approval involves prioritization and phasing of slum rehabilitation models.

Step-12: Preparation of Slum-free City Plan and DPR should include strategies for the prevention of future slums, including reservation of land and housing for the urban poor. The Plan should contain timeline of activities for achieving slum-free city, phasing information and financial estimates against each of the activities.

Step-13: Obtaining approvals from ULB and other concerned authorities

Step-14: Obtaining approval of SLSC/SLNA/MoHUPA

Step 15 & 16: Tendering process, implementation of proposals and appointing of TPIMA team

Step 17: Impact Assessment

Step-18: Revisions and rectifications of the strategies, reforms.

2.1. Surveys, Investigations & Consultations

a. Introduction

Listing of Surveys and Timelines

Directorate of Municipal Administration (DMA) is the nodal agency to implement 'Rajiv Awaz Yojana' in the State. As per the directions of Government of India, Slum Survey & Mapping Process has started in Karnataka from 14.07.2009. Initially DMA has identified 2073 Notified Slums & 1495 Non-notified Slums in 214 Urban Local Bodies. Various meetings were conducted by calling different para-statal agencies to discuss the required methodology for conducting surveys and initiate the steps of RAY. A State Level Workshop was conducted on 26.11.2009 by calling all the Deputy Commissioners /Project Directors/ Commissioners /Chief Officers/ Master Trainers. Several discussions were held at length and in depth about the conduction of surveys and to finalize a methodology. The following institutional methodology has been adopted for the state.

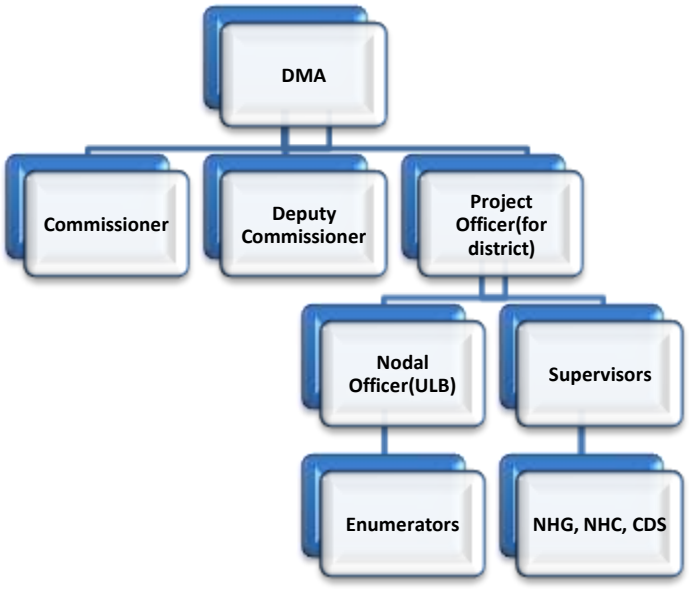


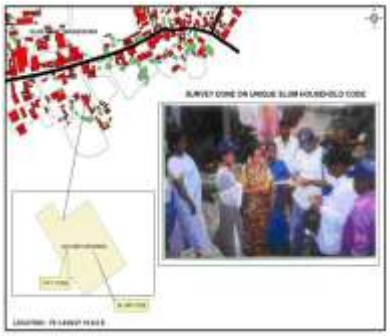
Chart 2- 5: Institutional arrangement of agencies

Agencies (including procurement process) & Stakeholders involved

DMA has been the Nodal agency to monitor the quantity and quality of surveys performed by individual cities. Commissioners and deputy commissioners have established a system where in a Project Officer has taken in charge for one district, a project officer for a ULB and number of supervisors for quality and quantity check upon the enumerators who have done the surveys. Member of Self Help Groups constituted under SJSRY/Urban Sthree Shakthi Scheme & Anganwadi Teachers with minimum qualification of SSLC were taken as Enumerators to collect information and to fill up the survey forms. A set of two Enumerators to cover 20-22 households in a day for every 300 to 400 households one set of enumerator was appointed. The various stakeholders involved in the process comprised of NHG's, NHC's, CDS and reputed NGO's working in the local areas.

b. GIS mapping

Methodology: Karnataka State Remote Sensing Applications Center (KSRSAC) has been awarded the job of GIS Mapping. The satellite images were acquired for all cities and digitization of city and slum boundaries are in process. KSRSAC is the only stakeholder involved in preparation of GIS maps for the state and it directly reports to DMA.



c. MIS

Methodology: DMA has initiated a project division under the operation of Municipal Reforms Cell (MRC), which has performed the operations of MIS. Data Entry has been done at ULB level and ported the data to the main server at MRC. A routine checkup of data has been performed and uploaded in a web tool specially prepared for RAY project called Asha Kiran Mahithi (AKM) @ http://www.mrc.gov.in/akm. Every ULB has given a USER Name & PASSWORD to access their data from the Central Server. The front and back end of the web tool is Java and Oracle. Once the data is frozen and migrated to centralized data base at MRC, any editing of data will be done by the Project Director, DUDC in case of Town Panchayath, Town Municipal Council, City Municipal Council and by Commissioners in case of City Corporations. In case of BBMP it will be done by Zonal Commissioners. AKM web tool has the synchronizing database structure with that of national MIS database prepared by Centre for Good Governance (CGG), so that at any required time, database can be transferred to the national tool.

d. Stakeholder Consultation

The stakeholder consultations are done at 3 stages:

1) **City level consultation:** This is the first stage of stake holder meeting where the city level data is analyzes and the major problems in the city are discussed with sectoral officials like water supply, sanitation, slum clearance board, etc.
2) **Slum level consultation:** At this stage the slum dwellers play a key role in explain the existing situation of slums and in giving the correct picture of the basic employment and other details of the slums.
3) **Official meeting:** At this stage of meeting the proposals of the development are discussed in detail with the commissioner, urban poverty alleviation cell, slum clearance board and other officials concerned.

Once a development option is chosen for a particular slum habitation, the implementation structures are to be decided based on the extent of public, community and private involvement. It is envisaged that for any of the implementation structures chosen, the community and the implementing ULB will have overarching roles as set out below. The same would need to be taken into account while formulating the implementation options.

Picture 2- 1: Images Showing Discussion summaries on Boundary Conformation, Hazardous slums and Prioritization

2.2. Slum Categorization

The Categorization of Slums is done based on the scoring and ranking method where certain parameters are taken into account to identify the deficiencies and make suitable decisions. The three important parameters that play equal role in determining the slums that are deficient are **Housing, Infrastructure and Tenure status**. In this section, the following parameters such as ***Tenability, Abutting Land use, Tenure status, Ownership of the land, density and land value*** *are being discussed.*

a. Tenability

As a first step, the slums and vacant lands will be categorized as tenable, or untenable. Untenable slums will be only those which are 'unsafe' or 'health hazard' to the inhabitants or to their neighborhoods, even if redeveloped. Such untenable sites or portions will be earmarked for relocation to other redevelopment/vacant sites, preferably within the same zone.

As a first step, the slums and vacant lands will be categorized as tenable, or untenable. Untenable slums will be only those which are 'unsafe' or 'health hazard' to the inhabitants or to their neighborhoods, even if redeveloped. Such untenable sites or portions will be earmarked for relocation to other redevelopment/vacant sites, preferably within the same zone.

Table 2- 1: List of Tenable, semi-tenable, non-tenable slums

	Tenable	Semi - Tenable	Un- Tenable
No of Slums	24	16	9

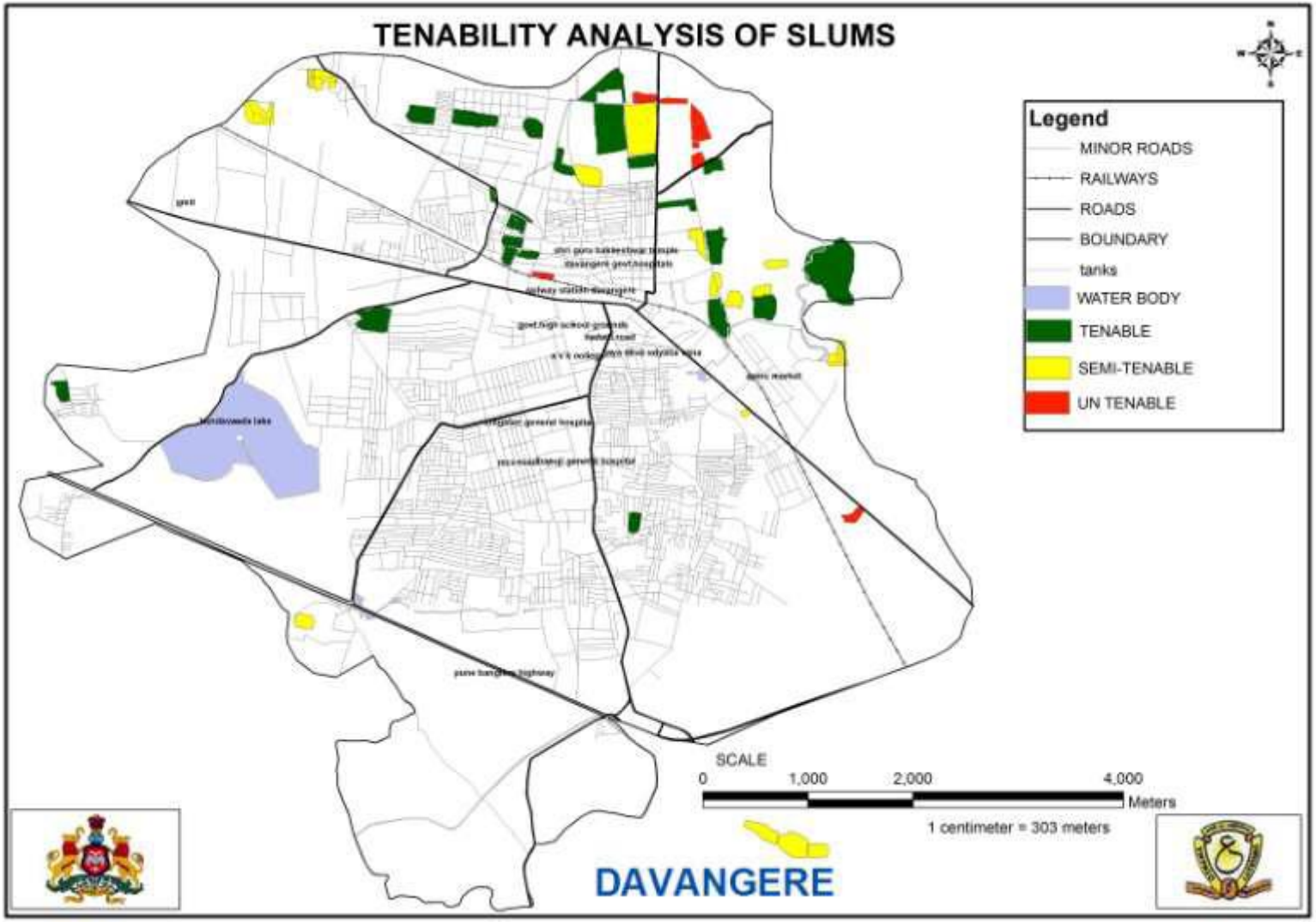
Source: Guidelines for preparation of slum free plan of action-2011

Of 49 slums identified, 44% of the slums are found to be tenable while 33% to be semi-tenable[3] and 18% of the slums are Un-tenable. Due to surrounding land use non-residential uses and any other land reservation. In order to make these slums tenable it is recommended to change in present land use zoning be made however it will be decided competent authority.

For visual illustration of tenability analysis of slums, please refer *Map 2-1* and for slum wise details refer **Annexure – IA.**

Picture 2- 2: Images showing housing conditions in slums

[3] Slums are those slums which are located on land zoned for non-residential uses



Map 2- 1: Tenability analysis of slums

b. Abutting Land use

Table 2- 2 Notification Status / land use

Legal Status/ Land use	Notified		Non - Notified		Slums in category as % of Total Number of Slums	Households in category in % terms of Total Number of slum Households
	No of slums	No of Households	No of slums	No of Households		
Residential	20	5185	6	2293	53%	59%
Commercial	3	405	0	0	6%	3%
Institutional	2	426	0	0	4%	3%
Industrial	9	2622	4	998	27%	28%
Others	2	410	3	553	10%	7%
Total	36	9048	13	3844	100%	100%

Source: AKM data

From the above *table 2-2*, it is established that 59% of households are surrounded by residential use, followed by 3% Institutional and 3 % commercial. Although residential is the major land use surrounding 13 slums are non-notified, it is the other uses that forms 7% of the land use abutting the slums. To identify vacant lands for slum rehabilitation and prevention, the information to be procured is of vital importance to enable further classification of the slums based upon land value and to decide upon redevelopment models for each slum pocket within the zones.

c. Land tenure of slums

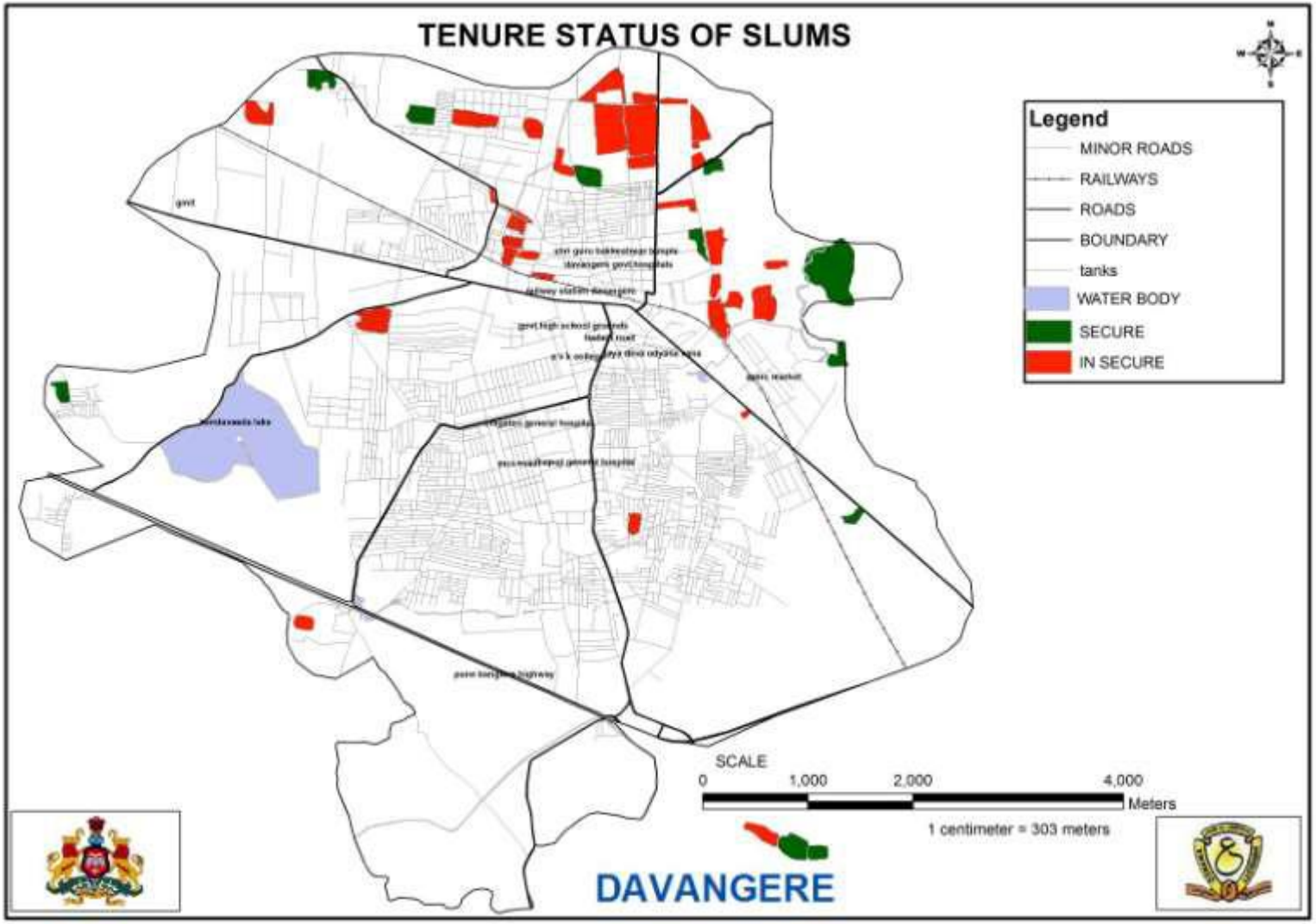
Table 2- 3: Land tenure status

Land tenure status					
With Patta	Possession Certificate / Occupancy Right	Encroached - private Land	Encroached - Public Land	On rent	Other
3078	3850	428	1196	4224	115

Source: AKM data

As seen in the *table 2-3*, 30% of the slum households have registered with possession certificates while 24% are registered and have pattas for their respective lands. On the contrary, 12% of the households are not registered and hence live on encroached lands of private as well as public owned and remaining 34% of the households are rentals and others.

For visual illustration of tenure status of slums, please refer *map 2-2*.



Map 2- 2: Tenure status of slums

d. Ownership of Land Status

The categorization based on land ownership of slums can be used in assigning strategies for development and priorities for implementation under various strategies for development. The following table 2-4 classifies the legal status of the slum households based on the ownership and land tenure status.

Table 2- 4: Ownership of Land Status

	Ownership of Land/ Land tenure	ULB	State government	Private
Registered	Pattas (No of HH's)	1453	691	935
	Possession certificate (No of HH's)	1776	1147	927
Un - Registered	Encroached (No of HH's)	786	686	152
	On Rent (No of HH's)	1728	1226	1270
	Others (No of HH's)	59	38	18

Source: AKM data

The *table 2-4* indicates that 54% of total households have registered and the remaining 46% are not registered with any agency. Under the ownership of ULB, 56% of the households are registered and 44% are unregistered. Similarly 56% are registered and 44% households are unregistered, belong to the private ownership of the land. Overall under the State Govt. owned lands, 49% belong to registered and 51% unregistered. Speaking of ownership, Urban Local Body ownership is termed to be the highest with 45% of the households under it. Still 55% of the households need a secured status in order to avail better infrastructure.

Table 2- 5: Ownership of Land / Notification Status

Ownership of Land / Legal Status	ULB	State government	Private
Notified Slums	13	13	10
Non - Notified Slums	9	1	3

Source: AKM data

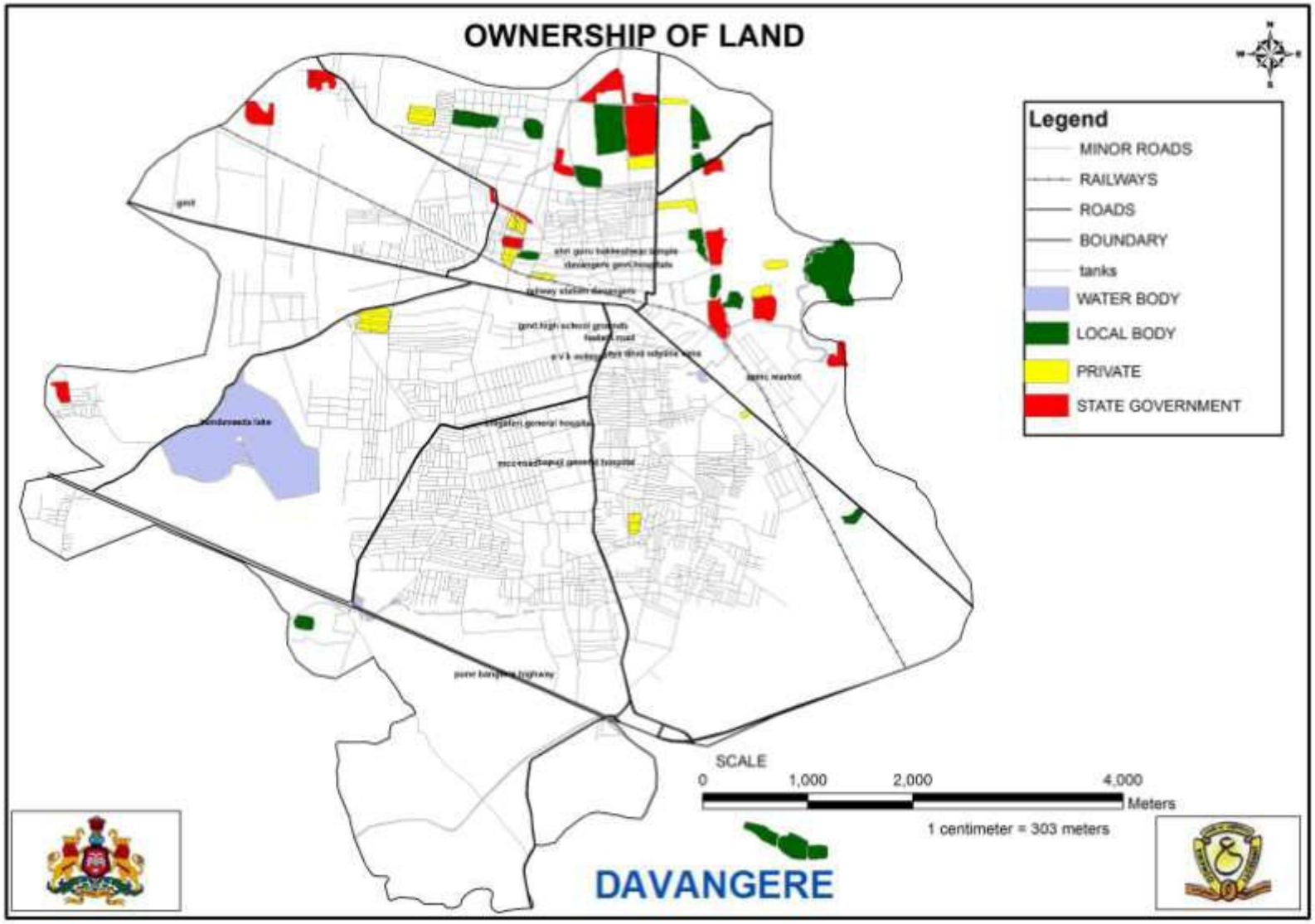
As seen in the *table 2-5*, 73% of the notified and 27% of the non-notified slums were built on lands owned by the ULB, thus making it the largest owner among the public owned properties.

Table 2- 6: Land Ownership / Area

Land Ownership / Area	ULB	State government	Private
% of Area	49%	34%	16%

Source: AKM data

As seen in *table 2-6,* 13 are notified slums with land owned by ULB and the remaining 23 slums are owned by State Govt. and Private. Similarly the 9 non notified slums identified were found to be having the maximum land ownership of ULB. When looking into land area owned by respective agencies, it is found that ULB holds the highest percent of 49% owning the lands under slums.



Map 2- 3: Land Ownership of slums

e. Density

In this context, due consideration will have to be given to existing density of each slum pocket within a zone, in order to propose a suitable development option. Based on Section-I data analysis, the classification of the slums is based on the values of density where:

- **Low** where density is less than 120 persons per hectare
- **Medium** where density ranges from 120- 250 persons per hectare
- **High** where density is greater than 250 persons per hectare

The following *table 2-7* presents the mode of development and additional accommodation of density for the slums based on its classification:

Table 2- 7: Density / Mode of Development

Density / Mode of Development	Low Density	Medium Density	High Density
Relocation (No of Slums)	5	2	2
In - Situ (No of Slums)	15	2	0
Upgradation (No of Slums)	14	8	1

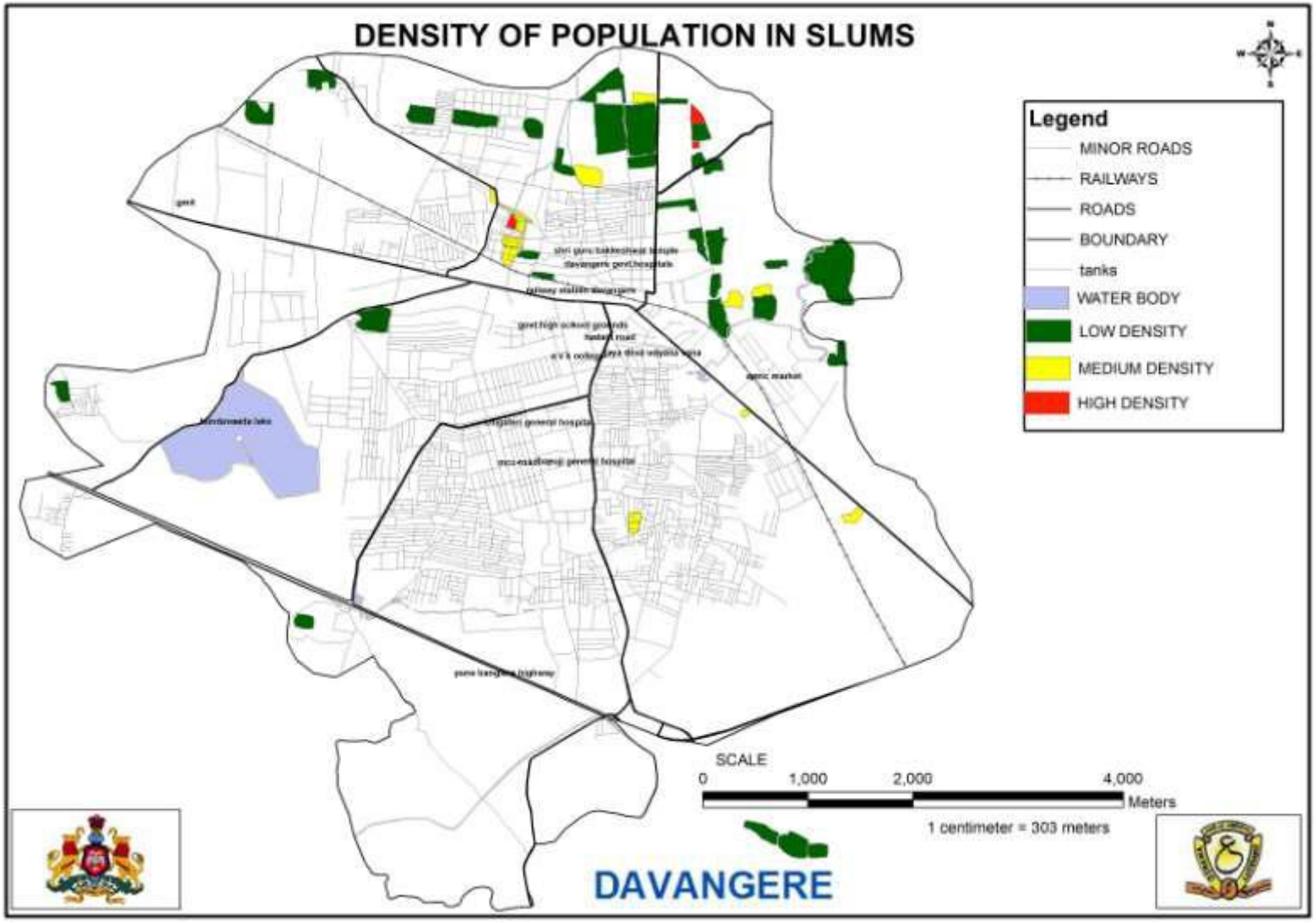
Source: Guidelines for preparation of slum free plan of action-2011

As per the prioritization, it was found that 34 slums have Low density while 12 slums are moderately dense. Under the category of low density, 15 slums have been chosen for In-situ and 14 slums for up-gradation. At the same time, 2 slums have been chosen for In-situ and 8 slums which are moderately dense have selected for up-gradation mode.

f. Land value

For Davangere City, the land values will be determined with reference to the slum and it is case specific and based on the mode of development, which will be calculated during preparation of DPR. At this is stage, it might be difficult to determine the land value as it is expected to vary in concord with market prices.

For slum wise details please refer Annexure -2D



Map 2- 4: Dwelling unit density of slums

2.3. Slum Rehabilitation Framework

According to RAY guidelines, preparation of housing condition & infrastructure deficiency and tenure insecurity matrix for all slum settlements is based on scoring and ranking. The matrix is based on three important parameters: Housing, Infrastructure and Tenure. Within these, Housing and Infrastructure are the physical parameters that are directly related to the existing quality of the housing condition, while land tenure defines the legal status of land ownership.

In this section, the following infrastructure components were considered for calculating deficiency from the existing data:

- Percentage of households not covered with piped water supply
- Percentage of households that are not covered with sewerage system and storm water drainage system
- Percentage of households that do not have any form of solid waste clearance
- Percentage of households not covered with toilets
- Percentage deficiency in availability of street lights

a. Observations / Findings of Analysis of Existing Situation

Housing

- 31% of the slums have been into existence for more than 30 years in the city with outdated infrastructure
- 9 slums found to be located on Hazardous/Objectionable sites, indicating lack of safety to the slum dwellers
- Even though 39% of the total houses are Pucca in nature, but most of them are found to be in dilapidated condition. 61% of the houses are found to be Semi-Pucca and Katcha in nature indicating poor housing condition in Davangere slums and most vulnerable to any kind of disaster.
- As far as electricity connection is concerned, nearly 8% of the total houses do not have electricity connection.

Demography & Employment

- Nearly 84% of the total slum population is below poverty line (BPL) with 10996 households.
- Of 8644 child laborers, 22% of the Child Labor falls under the social category of SC and 62% under OBCs, indicating that there is a requirement to mobilize community and building an environment to prevent child labour.
- In regards to the slums, 63% of the households are employed in various informal activities such as vegetable vendors, rickshaw pullers, and small scale industrial workers contributing the revenue however 37% are still unemployed.
- 31% of households are working as casual laborers and 23% on regular wage basis, together forming unskilled labour in Davangere slums. Therefore, nearly 60% of the poor households do not have access to a dependable occupation and secure incomes.

Water supply

Table 2- 8: Water Supply details

	Notified Slums		Non Notified Slums		Total		% HH's of total Households
	No of slums	No of HH's	No of slums	No of HH's	No of slums	No of HH's	
Connectivity to Water Supply							
Fully	32	8022	10	3483	42	11505	**89%**
Partially	1	281	0	0	1	281	**2%**
Not Connected	3	745	3	361	6	1106	**9%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Duration of Water Supply							
daily Less than 1 hr	0	0	2	270	2	270	**2%**
daily 1-2 hrs	3	649	0	0	3	649	**5%**
Daily more than 2 hrs	1	488	0	0	1	488	**4%**
Once a week	1	183	0	0	1	183	**1%**
Twice a week	29	7083	7	2108	36	9191	**71%**
Not regular	0	0	2	1141	2	1141	**9%**
No Supply	2	645	2	325	4	970	**8%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Source of Drinking Water							
Individual tap	28	1739	8	595	36	2334	**18%**
Public tap	36	5911	13	2356	49	8267	**64%**
Tubewells/Bore well/hand pump	30	431	12	303	42	734	**6%**
Open well	18	42	7	19	25	61	**0.5%**
Tank/pond	3	15	3	28	6	43	**0.3%**
River/canal/lake/spring	2	3	1	17	3	20	**0.2%**
Others	7	26	3	44	10	70	**1%**
Water tanker	32	881	12	482	44	1363	**10%**
Total	**156**	**9048**	**59**	**3844**	215	**12892**	**100%**

Source: AKM data

Of the total households, 89% are fully connected to city wide water supply system. With respective drinking water sources 18% slum households have individual taps as primary source and 82% dependent on public water taps, tube wells, open wells, hand pump, water tankers and other sources. Hence 82% households that needs to be addressed for the provision of individual taps. Regardless of the connectivity city water supply system, the major problem in Davangere slum is poor quality of water caused due to waste disposal and contamination of leaked water pipes.

Picture 2- 3: Images showing public and individual taps in Slums

Sanitation

Table 2- 9 Sanitation details

	Notified Slums		Non Notified Slums		Total		% HH's of total House holds
	No of slums	No of HH's	No of slums	No of HH's	No of slums	No of HH's	
Connectivity to wide Sewerage system							
Fully Connected	31	7909	10	3517	41	11426	**89%**
Partially Connected	0	0	0	0	0	0	**0%**
Not Connected	5	1139	3	327	8	1466	**11%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Connectivity to Storm water drainage							
Fully Connected	33	8522	10	3517	43	12039	**93%**
Partially Connected	0	0	0	0	0	0	**0%**
Not Connected	3	526	3	327	6	853	**7%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Drainage and Sewerage Facility							
Access to storm water drainage	36	6779	13	1884	49	8663	**67%**
Access to underground drainage/sewer line	36	5930	13	1654	49	7584	**59%**
Access to digester	36	4847	13	1715	49	6562	**51%**
Not connected to sewer or digester	32	1494	13	1893	45	3387	**26%**
Latrine Facilities							
Public/Community latrine-Septic tank/flush	25	414	7	164	32	578	4%
Public/ Community latrine-service latrine	0	0	0	0	0	0	0%
Public/ Community latrine-Pit	19	112	6	50	25	162	1%
Shared latrine -Septic tank/flush/	23	347	6	161	29	508	4%
Shared latrine- Service latrine	0	0	0	0	0	0	0%
Shared latrine-Pit	24	386	9	101	33	487	4%
Own latrine -Septic tank/flush/	30	3130	12	1191	42	4321	34%
Own latrine- Service latrine	0	0	0	0	0	0	0%
Own Latrine-Pit	22	577	8	164	30	741	6%
Open Defecation	34	4082	12	2013	46	6095	47%
Total		**9048**		**3844**		**12892**	**100%**

Source: AKM data

- Of 49 slums, only 11% do not have access to city wide sewerage system.
- With regards to storm water drainage, 93% of slums are connected city system and 7% slums do not have city facility.
- For drainage and sewerage facility 59% households have access to underground drainage/sewer lines, and 33% don't have access to storm water drainage. 51% households have digester system. Hence there is deficiency in overall sewerage and storm water drainage system which needs to more complete as well as sustainable underground sewerage system.
- 26% of the total slum households has neither digester nor sewer lines.
- 47% of households do not have proper individual toilet systems. Hence resulting in open defecation.

Solid waste management

Table 2- 10 Solid waste management details

	Notified Slums		Non Notified Slums		Total		% HH's of total House holds
	No of slums	No of HH's	No of slums	No of HH's	No of slums	No of HH's	
Arrangement of Garbage Disposal							
Municipal Staff	32	8441	12	3693	44	12134	**94%**
Municipal Contractor	4	607	1	151	5	758	**6%**
Residents themselves	0	0	0	0	0	0	**0%**
Others	0	0	0	0	0	0	**0%**
No Arrangements	0	0	0	0	0	0	**0%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Frequency of Garbage Disposal							
Daily	3	887	0	0	3	887	**7%**
Once in 2 days	5	1238	0	0	5	1238	**10%**
Once in a week	24	5851	8	3094	32	8945	**69%**
Once in 15 days	4	1072	4	609	8	1681	**13%**
Not Collected	0	0	1	141	1	141	**1%**
Total	**36**	**9048**	**13**	**3844**	**49**	**12892**	**100%**
Frequency of clearance of open drains							
Daily	0	0	0	0	0	0	**0%**
Once in 2 days	2	584	0	0	2	584	**5%**
Once in a week	28	7017	7	2832	35	9849	**76%**
Once in 15 days	6	1447	6	1012	12	2459	**19%**
Not Collected	0	0	0	0	0	0	**0%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**

Source: AKM data

- 83% of slum households are not adequately covered with solid waste disposal.
- 95% of the slum households lack in frequent clearance of open drains, leading to further deterioration of environmental conditions and thereby contaminating the ground water quality.

Picture 2- 4: Images showing Open garbage dumping in slums

Roads and street light

Table 2- 11 Road and Street lights details

	Notified Slums		Non Notified Slums		Total		% HH's of total House holds
	No of slums	No of HH's	No of slums	No of HH's	No of slums	No of HH's	
Approach Road/Lane/Constructed Path to the slum							
Motorable Pucca	32	7936	12	3673	44	11609	**90%**
Motorable Katcha	4	1112	1	171	5	1283	**10%**
Non Motorable Pucca	0	0	0	0	0	0	**0%**
Non Motorable Katcha	0	0	0	0	0	0	**0%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Internal Road							
Motorable Pucca	17	4649	4	922	21	5571	**43%**
Motorable Katcha	8	2427	8	2533	16	4960	**33%**
Non Motorable Pucca	9	1477	1	389	10	1866	**20%**
Non Motorable Katcha	2	495	0	0	2	495	**4%**
Total	**36**	**9048**	**13**	**3844**	49	**12892**	**100%**
Distance from Nearest Motorable Road							
Less than 0.5 Km	36	9048	13	3844	49	12892	**100%**
0.5-1 Km	0	0	0	0	0	0	**0%**
1-2 Km	0	0	0	0	0	0	**0%**
2-5Km	0	0	0	0	0	0	**0%**
>5 Km	0	0	0	0	0	0	**0%**
Total	**36**		**13**		**49**	**12892**	**100%**
Availability of Street Light							
Yes	36	9048	13	3844	49	12892	100%
No	0	0	0	0	0	0	0%
Total	**36**	**9048**	**13**	**3844**	**49**	**12892**	**100%**

Source: AKM data

- 90% of slums have Motorable Pucca roads and 10% with Motorable katcha approach roads; which needs to be upgraded.
- 57% of slums are lack in proper internal roads with BT surface.
- In case of street lighting, 100% of slums have street lights.

Picture 2- 5: Images showing condition of roads in slums

Slum Deficiency matrix& Development Options

With reference to process for generating deficiency matrix in Chapter -2 and based on the data analysis, 49 slums in Davangere City have been categorized based on housing condition and the infrastructure levels. As a result, the existing condition is assessed in the following way:

- Good housing with good infrastructure
- Good housing with bad infrastructure;
- Bad housing with good infrastructure
- Bad housing with bad infrastructure;

Given in RAY guidelines, settlements without any security of tenure are most vulnerable and therefore should be given priority in selection for improvement/ gradation. In addition, settlements with bad housing and infrastructure should also be priority for selecting appropriate mode of development. As mentioned earlier, to obtain the above result, it is necessary to evaluate each parameter using the following criterions viz.

- **Water supply**

  Score 1- 60% or more of household have individual connection and
  Score 2- Less than 60% of households having individual connections.

- **Drainage4**

  Score 1- 60% or more in-slum drains are covered and / or pucca drains
  Score 2- Less than 60% in-slums drains are covered and/or pucca drains

- **Solid waste management**

  Score 1- Every day/alternate removal
  Score 2- Removal of waste in frequent/once in fifteen days

- **Sanitation**

  Score 1- 60% or more having individual toilet unit (with toilet seats)
  Score 2- Less than 60% use individual toilets

- **Roads**[5]

  Score 1: 60% or more of the in-slum roads have a min of 3 m width
  Score 2: Less than 60% of the in-slum roads are of 3 m width.

Once the individual scores are obtained, a total score is stipulated and if the overall score of infrastructure is greater than 7, it is considered good infrastructure and less than 7 is bad infrastructure. Based on which 10 slums were found to be having better infrastructure levels while 39 slums had lower levels of infrastructure, needing further improvement. Similarly for housing, it is assessed by considering:

[4] Running length of existing sewer lines are not available
[5] Since data far Current widths of roads is not available, condition of roads is taken into account

Similarly for housing, it is assessed by considering:

- **Structural condition**
  Score 1: semi pucca + katcha houses < 75%
  Score 2: semi pucca + katcha houses > 75%
- **Age of the slum**
- **Density for housing Units**
  Score 1: 60% or more houses having > or equal to 3 Sq.m per person
  Score 2: Less than 60% houses having > or equal to 3 Sq.m per person
- **Tenure status of the land - secured and in-secured**
  Score: 1 for secured status
    - Registered (including ownership, leasehold and use/occupancy rights)
    - Unregistered but documented (e.g. rental, rent to buy, unregistered leases, etc)
    - Group/family/household rights Unregistered & undocumented

  Score: 2 For Unsecured status
    - Documented (e.g. written agreements between irregular owners and tenants, de facto recognition, illegal subdivisions, customary rights, tenancy at will, etc)
    - Undocumented

The following *table 2-12* presents the tenure status with reference to housing and infrastructure condition.

Table 2- 12 Slum Deficiency & Vulnerability Matrix

	Secure Tenure	**Non - Secure**	
% of Security	24%	76%	
Status of tenure			No of slums
Secure tenure	Good housing	Good infrastructure	0
	Good housing	Bad infrastructure	4
	Bad housing	Good infrastructure	3
	Bad housing	Bad infrastructure	7
Non-Secure tenure	Good housing	Good infrastructure	1
	Good housing	Bad infrastructure	5
	Bad housing	Good infrastructure	6
	Bad housing	Bad infrastructure	23

Source: Guidelines for preparation of slum free plan of action-2011

As seen *table 2-12*, 24% of the slums are secured and the remaining 76% is not secured. On the other hand, 61% of the slums (14% under secured and 47% in-secured) are found to be having bad housing and poor infrastructure. Hence, those slums with bad housing and bad infrastructure as well as in-secured are considered as a priority for redevelopment model.

In addition to the above characteristics additional parameters such as land ownership, housing densities and land values has been consider to evaluate development option for each slums. Based on data findings, it is observed that there are no slums in the current land tenure status is secured with good housing and infrastructure however the ground reality shows that these slums still requires Upgradation of existing housing and infrastructure.

For more details please refer *Annexure-2D* for slum wise evaluation index and choice of development.

b. Physical requirements for housing

As seen in earlier section, the variables of tenure status, tenability, density, housing type, housing condition and age of the structure has been considered to calculate the housing deficiency. To determine the mode of development for the identified slums based on their deficiencies, it was decided to use the following criterions has been taken into account:

Relocation of slums

- Physical location of slums –along nallah and on hazardous sites.
- Flood prone – water logging for a month or more.
- Land ownership under local bodies; earmarked land use zones in master plan.
- Slums in close proximity to high transmission lines , such as 220KV

In situ

- Semi Pucca and katcha houses greater than 75%

Up gradation of slums

- Semi Pucca and katcha houses less than 75%

Table 2- 13 Housing requirements

Mode of development	Hazardous	Non-Hazardous	
		Semi-Pucca + Katcha houses More than 75%	Semi-Pucca + Katcha houses Less than 75%
	Relocation	In – Situ	Up-Gradation
No. of Slums	9	17	23
No. of Households Deficit	1942	5190	2064
Housing Deficit	**9196**		

From the *Table 2-13*, it was identified that there is a housing deficit of **9196** households in 49 slums. From development point of view, 17 slums are found to be having semi Pucca and katcha houses greater than 75%, hence considered for In-Situ development while 23 slums with semi Pucca and katcha houses less than 75% for slum up gradation. As per the data findings, 9 slums were found to be hazardous in nature which is considered for Relocation. 18% of the slums have been considered for relocation; 35% of slums are considered for In-situ development and 47% for slum up gradation.

Picture 2- 6: Images showing Semi-pucca and Kutcha housing conditions in the slums

c. Physical requirements for Infrastructure

With reference to RAY and UDPFI guidelines, additional requirement for the existing slums have been calculated for each element where the following assumptions were made in terms of:

Water supply

- For sub line running length, 98% of the total internal roads were considered
- Raising main length = total households x 3m(In-situ development)
- Raising main length = Proposed Taps x 3m(Up-gradation)
- Proposed number of taps = Total households-Existing Taps
- For every 2500 population, an overhead tank of capacity 1 lakh litre

Sanitation

- Additional length of underground sewer lines and Storm water drainage line=80% of the total road length
- Proposed toilets = Total households-Existing individual Toilets(Up-gradation)

Solid waste management

- For every 30 households = 1 garbage bin

Street lighting

- For every 30 m = 1 street light/light pole

Roads

- Approach road = 2% of the total road length with a width of 4.5 m
- Internal roads = 98% of the total road length with a width of 3 m

The following *tables 2-14* and *2-15* presents the proposed requirements for each element of the physical and social infrastructure that needs to be implemented for the existing slums.

Table 2- 14 Physical Infrastructure requirements

Sl. No	Sector	Unit	Requirement
1	Water Supply System	Running length of sub line (KM)	57.26
		Raising Main (KM)	34.16
		No. of individual taps	10558
		Overhead water tanks	15
2	Sanitation	Length of Underground Drainage/Sewer Lines (KM)	42.91
		Length of storm water Drainage Lines (KM)	60.35
		No. of individual toilets	3651
3	Solid waste management	No. of Bins	423
4	Roads	Total length of Approach roads in KM	3.77
		Total length of Internal roads in KM	152.88
5	Street Lighting	No. street lights	1524

Table 2- 15 Social Infrastructure requirements

Sl. No	Sector	Unit	Proposed
6	Education facilities	Anganwadi/Pre-primary, Primary and High schools	0
7	Health Facilities	Primary Health Centre	0
8	Social development	Community Halls	2
		Recreational & open spaces (Sq.Km)	0.045

As per UDPFI Guidelines, for every 7500 population, a secondary school is required; for every 2500 population a pre-primary school and a primary school for 5000 persons has been recommended. Similarly for every 5000 population, a community hall has been proposed. In addition to social infrastructure, recreation and open places has been recommended with an area of 0.045 Sq.km.

d. Implementation Plan

A DPR would be recommended for each and every slum for implementation of slum development plan. The plan implementation and modalities would be discussed in detail through slum level community participation.

Prioritization of slums

Parameters for prioritization of slums for implementation of in-situ improvement/redevelopment for first phase of implementation for tenable slums are suggested below:

- **Insecure tenure of slum pockets:** Settlements without any security of tenure are most vulnerable and therefore should be given priority in selection for improvement.
- **Housing conditions and infrastructure deficiency**: Settlements with poor housing conditions and infrastructure deficiency should be given high priority for improvements.
- **Public land ownership**: Slum pockets on public sector owned land should be prioritized for improvement, as slums on private land would either require negotiations with owner or time consuming acquisition. Slum improvement/redevelopment should first be taken up where land is owned by Government agencies.
- **Existence of trunk infrastructure**: - Areas near existing trunk infrastructure with spare capacity should receive priority, since investments will be more cost effective.
- **Population Density**: - Priority should be given to small and medium size slums with low or moderate densities as it is difficult to improve very high density /large slums.

The total percentage is divided into 5 ranges and five (5) ranks have been given for prioritization. Then, addition of ranks for each indicator has done for all the slums. Mean from this total have been taken to prioritize slums year-wise for period of 5 years.

All the slums in the ULB are proposed to be covered under RAY in the phased manner indicated in the *Table 2-16*. As mentioned above, three different mode of development has been chosen to improve the existing slum conditions as well prevent future growth of the same. The following gives a brief these modes and its characteristics:

Relocation

- Depending on the location and where there is no alternative
- Involves communities in identification of alternative sites
- Ensures that education, health, transport, basic services and infrastructure are provided before relocation

In situ redevelopment

- Involves redevelopment of whole site to provide more living space and improved environmental conditions such as those in high density areas.
- Provision of transit accommodation and including of all residents, especially the extremely poor critical to success

Slum Up-gradation

- Involves a mixture of provision or upgrading of service and infrastructure levels, incremental housing improvements or selective replacement of katcha houses

The following *table 2-16* gives a brief picture of the year wise phasing of development that needs to be taken up to improve the living conditions of the already existing slums for the next 5 years:

Table 2- 16: Slums to be covered under RAY in the Next 5 Years

Year of Development	Period	No of Slums	Mode of Development
I	2012-13	3	Relocation
		6	In - Situ Development
		0	Infrastructure Development
Total		**9**	
II	2013-14	1	Relocation
		10	In - Situ Development
		2	Infrastructure Development
Total		**13**	
III	2014-15	2	Relocation
		11	In - Situ Development
		2	Infrastructure Development
Total		**15**	
IV	2015-16	2	Relocation
		3	In - Situ Development
		3	Infrastructure Development
Total		**8**	
V	2016-17	1	Relocation
		0	In - Situ Development
		3	Infrastructure Development
Total		**4**	
Total 5 Years		**49**	

Source: Guidelines for preparation of slum free plan of action-2011

In Davangere's case, almost 49% of registered and 51% of the unregistered households falls under State Govt. category and where the in situ mode of development has been chosen with multiple options such as (RAY Guidelines)

Under Private

- In situ redevelopment+Incentive FSI or TDR
- In-situ improvement/Upgradation with but with consent of the owner and purchase of property rights by the occupants TDR to owner
- In situ with land sharing
- In situ development+Incentive FSI or TDR

Under State Govt and Urban local body

- In situ redevelopment with densification
- In situ redevelopment with densification and credit support to households
- Insitu redevelopment by public agency and credit support /TDR
- Insitu redevelopment by public agency/PPP
- Redevelopment by group housing with densification including remunerative use of land

Proposed Housing

To make Davangere a slum free city, there is a need to redevelop housing for 9196 households as estimated. Based on the physical location, ULB land ownership and surrounding land use, three slums have been chosen to replicate the future development and improved livelihood in terms of housing layout shown with all services. The layouts developed are in accordance with byelaws, JNNURM standards and facilitated with infrastructure services. According to Norms and Standards of Municipal Basic Services in India given by Jawaharlal Nehru National Urban Renewal Mission (JNNURM) for Housing, each flat has a plinth area of 330.60 square feet including common area.

Picture 2- 7: proposed single dwelling unit

Proposed Layout

All proposed housing units will be are facilitated with a living room, a bedroom, kitchen and toilet with total covered area with provision of 6 nos. houses has been kept on each floor to minimize the common area. The proposed structure would consist of Ground +2 stories, with 15% ground coverage and a proposed density of 100 dwelling units per acre. The following table and plan provides a brief specification of a single unit.

The plan and specifications of single dwelling Unit is as follows.

Area of Dwelling Unit – 330 sq.ft
Bed room – 9 ’ 0 ” X 9 ’ 0 ”
Living – 8 ’ 6 ” X 17 ’ 0 ”
Toilet – 6 ’ 0 ” X 5 ’ 0 ”
Kitchen – 7 ’ 0 ” X 5 ’ 6 ”
Balcony – 10 ’ 0 ” X 2 ’ 6 ”

Infrastructure

Provision for individual sump tank, over head LDPE tanks and pumps with all accessories will be made available to each of the building blocks for water supply arrangement.

Construction

The type of construction will vary with several factors like soil conditions, local requirements and cost of the land. Generally in the smaller towns, which basically have rural culture, multistoried buildings are not acceptable but with circumstances, G+3 has been proposed for slums where ever required. The type of housing would generally be small but independent houses/ combined houses with some free space around the houses. Given the occupation status of the slum households, some of them might have push carts or some of them may use this space for cottage industries or vegetable gardening.

Structure wise, a permanent housing unit with a plinth area of 330.60 Square feet will be constructed. The walls shall be built with solid concrete blocks and slabs shall be RCC. Ready mixed concrete shall be used in all RCC elements of the building for quality assurance and providing a smooth finish to the surface requiring less finishing.

The specifications of plan of single block are as follows:

Area of Block – 2670.40 sq. ft.Six Dwelling Units

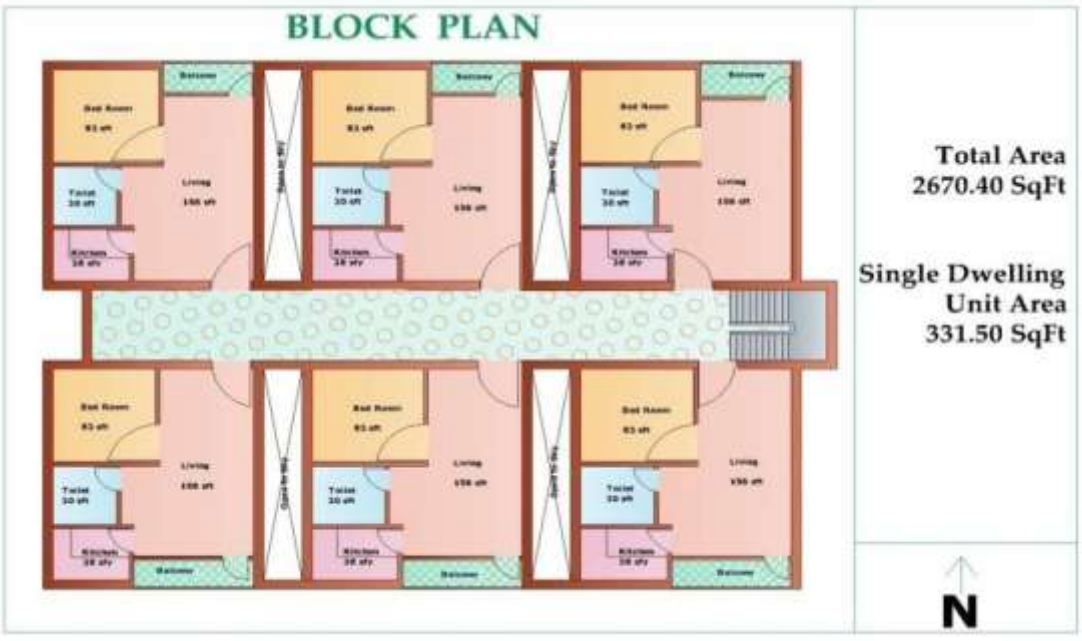
Corridor – 7’ wide

Stair case – 45 sq.ft

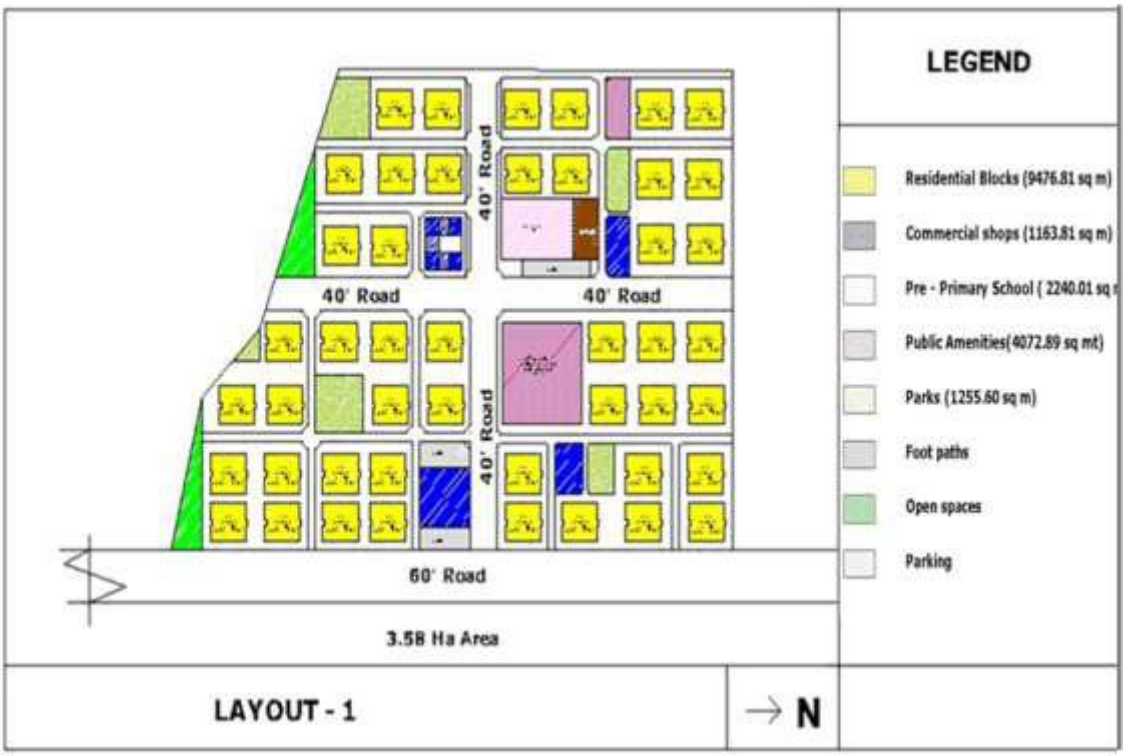
Area of layout – 3.58 ha

No of Blocks – 46

No of Dwelling units - (46*18) = 828



Picture 2- 8: Model layout for Slum development



Picture 2- 9: Proposed layout for Single block

e. Modalities / Approach

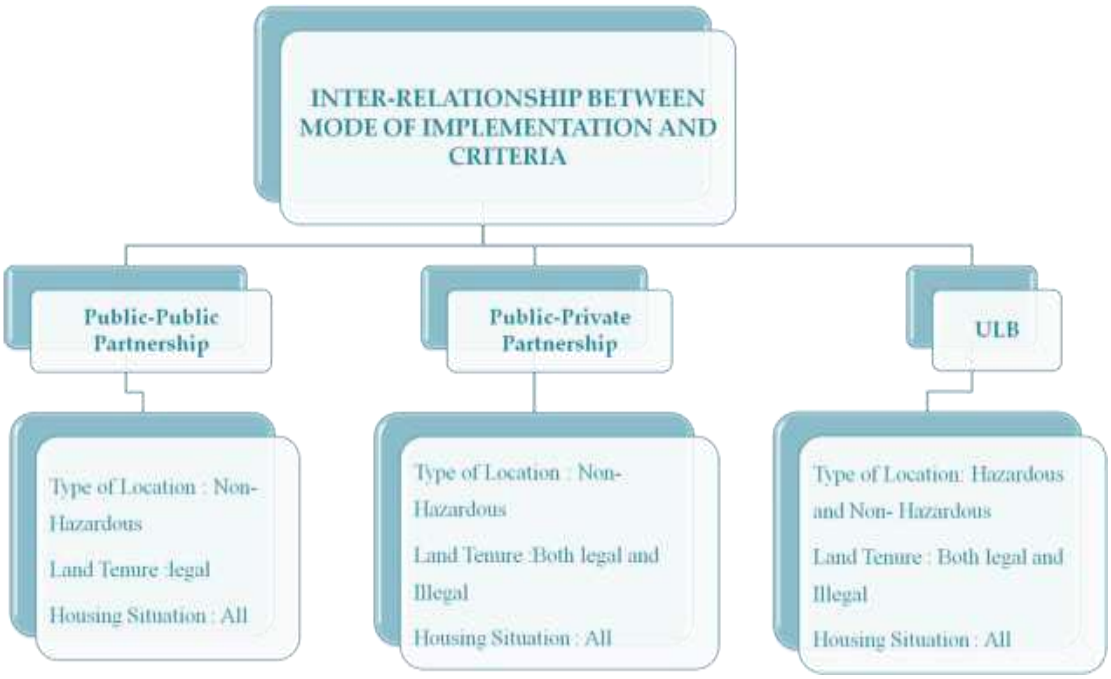


Chart 2- 6: Modalities & Approach

A gap is sometimes called "the space between where we are and where we want to be." A gap analysis helps bridge that space by highlighting which requirements are being met and which are not. The tool provides a foundation for measuring the investment of time, money and human resources that's required to achieve a particular outcome.

Slum Up-gradation/Redevelopment Options

Based on the spatial analysis and situation assessment done as above, a participative process will need to be undertaken with slum communities with the assistance from NGOs/CBOs active in the area of slum housing/ development to identify the possible development options. The Table below provides an indicative list of alternative development options and implementation modalities. The dialogue for choice of the model will also explore the possibilities of relocating slum households from high density/untenable slums to low-density tenable slums within the same zone. The following physical development options are possible:

i. **Slum Improvement:** Extending infrastructure in the slums where residents have themselves constructed incremental housing.
ii. **Slum Up gradation:** Extending infrastructure in the slums along with facilitation of housing unit up gradation, to support incremental housing.
iii. **Slum Redevelopment:** In-situ redevelopment of the entire slum after demolition of the existing built structures
iv. **Slum Resettlement:** In case of untenable slums to be rehabilitated on alternative site

Potential for Private Sector Participation

Private sector participation can be envisaged in redevelopment of slums where reasonable returns are expected for the investor. In order to assess the potential for PPP, ULB will need to map and tabulate land values in immediate environs of all slum pockets.

Outputs of the Slum Redevelopment Plans

- Development options and cost of each option for different categories of slums, which are to be proposed and vetted by community.
- Identification of options for development model proposed for each slum.
- Selection of development model for the slums to be followed by project development in consultation with the communities
- Identification of resettlement pockets
- Identification of slums to be densified
- Creation of vacant land,
- Identification of TDR loading corridors
- Integrated infrastructure planning including the identification of trunk infrastructure alignments and capacities(existing & proposed)

In relation to slum pockets

- Analysis of slums with low densities to assess slum pockets with possibility of densification to rehabilitate households from other slum pockets and creating vacant land pockets
- Exploring relocating possibility of untenable slums in nearby (within the zone) vacant pockets/ existing low density slum keeping their relation to employment centres

Outputs

- Development Options for different categories of slums
- Implementation Structure.

2.4. Investment Requirements

Accurate assessment of investment requirements and devising a suitable financing strategy are the key components for any sustainable slum rehabilitation program. It is of vital importance that implementing bodies recognize and measure the various costs of developing infrastructure and housing, including the costs for subsequent maintenance of the same. The success of the slum rehabilitation program would depend on matching the investment needs with the vibrancy/buoyancy of the various elements of the proposed finances. The following section describes the costs projected for various sectors from 2012-2017.

a. Housing

Table 2- 17 Investment requirements for Housing

Mode of development	Hazardous	Non-Hazardous	
		Semi-Pucca + Katcha houses More than 75%	Semi-Pucca + Katcha houses Less than 75%
	Relocation	In – Situ	Up-Gradation
No. of Slums	9	17	23
No. of Households	1942	5190	2064
Housing Deficit	**9196**		
Cost	6266.20	16041.32	4628.34
Total Cost(In Lakhs)	**26935.87**		
Total Cost(In Crores)	**269.36**		

As illustrated in *table 2-17*, 60% of the total estimated costs is allocated for In situ mode of development while 17% for slum up-gradation and 23% for relocation in Davangere City. For calculation purpose, costing per unit @2.9 lakh per houses for Kutcha houses and @1.45 lakh per house for semi Pucca houses have been taken into view for the first year. Additionally for a duration of 5 years, an increase of 1% in the costs has been assumed with due consideration to changing market rate.

b. Infrastructure

This section covers the existing physical and social infrastructure and also the requirements for the same in **all slums** of the ULB including **Perspective plan for 5 years.** Taking into account the additional requirement as mentioned in *tables 2-14 and 2-15*, the costing has been calculated for each sector shown in *table 2-18.*

Table 2- 18 Investment requirements for infrastructure

S. No	Sector	Sector / Unit	Cost for 2012-17 (Rs. in Lakhs)
	Physical Infrastructure		
1	Water Supply System	Running length of sub line (KM)	224.63
		Raising Main (KM)	64.47
		No. of individual taps	0.00
		Overhead water tanks	260.47
		Sub Total	**549.97**
2	Sanitation	Length of Underground Sewer Line (KM)	680.64
		Length of storm water Drainage Lines (KM)	952.73
		No. of individual toilets	442.49
		Sub Total	**2075.86**
3	Solid waste management	No. of Bins	37.06
		Sub Total	**37.06**
4	Roads	Length of Approach roads in KM	44.27
		Length of Internal roads in KM	1299.33
		Sub Total	**1343.60**
5	Street Lighting	No. street lights	183.58
		Sub Total	**183.58**
		Total Physical Infrastructure	**4189.68**
Social Infrastructure			
6	Education facilities	Anganwadi/Pre-primary schools	0.00
		Primary school	0.00
		High school	0.00
		Sub Total	**0.00**
7	Health Facilities	Primary Health Centre	0.00
		Sub Total	**0.00**
8	Social development	Community Halls	11.55
		Recreation and Open spaces (Sq Km)	**126.62**
		Total Social Infrastructure	**138.17**
		Grand total Cost (Physical + Social) Infrastructure	**4327.84**

From the table, it is observed that total cost estimates for physical and social infrastructure is Rs. **43.28** Crores where physical infrastructure is estimated for Rs.**41.90** Crores and for social infrastructure it is around Rs.**1.38** Crores.

The *table 2-19* presents sector wise cost estimated for five years (2012-17) by taking into consideration the cost calculated for the additional provisions/requirements, mentioned in earlier section:

Table 2- 19: Sector Wise Estimated Cost (Rs. in Lakhs)

Sector	Estimated Cost for 2012-13	Estimated Cost for 2013-14	Estimated Cost for 2014-15	Estimated Cost for 2015-16	Estimated Cost for 2016-17	Total Project Cost for 5 years
Housing	3852.65	8667.59	9272.03	3828.79	1314.81	**26935.87**
Water Supply	50.22	219.65	175.08	73.25	31.37	**549.57**
Sanitation	207.00	607.07	601.45	355.22	305.13	2075.86
Solid waste management	4.16	10.58	11.73	6.11	4.47	**37.06**
Roads	164.77	541.80	424.13	119.88	93.02	**1343.60**
Street Lighting	13.97	72.88	42.69	26.23	27.81	**183.58**
Education	0.00	0.00	0.00	0.00	0.00	**0.00**
Health	0.00	0.00	0.00	0.00	0.00	**0.00**
Social development	19.41	31.15	42.96	24.08	20.57	**138.16**
Others	642.23	1507.78	1572.53	658.99	264.76	4646.29
Total	**4954.40**	**11658.50**	**12142.58**	**5092.55**	**2061.95**	**35909.99**

As seen *table 2-19*, the total cost projected for 5 years is Rs. **359.10** crores, in which 75% is allocated for housing with top priority; 12% for physical infrastructure and 0.4% for social infrastructure. Among physical infrastructure elements, due priority is given for sanitation for the next 5 years followed by roads. The above cost includes additional financing costs such as the rehabilitation costs, DPR, O& M, pre construction and others.

c. Operation & maintenance

In general, operation and maintenance costs form a sizeable share of a slum redevelopment budget. In case of Davangere slums, O& M costs makes up 15% of the total estimated cost for each year. The following list of related costs that will be incurred during the implementation of a slum rehabilitation/redevelopment includes:

- Pre cost Housing (1% of Housing)
- Temporary accommodation (5%)
- A& OE (2.5%)
- O&M (2.5%)
- DPR (1%)
- Project Implementation (1%)
- Capacity Building (1%)
- Offsite cost (1%)

Table 2- 20 Estimated O&M Cost (in INR/ Lakhs)

Year Wise	Temporary accommodation	A & OE	O & M	DPR Prep. , IEC	Project preparation	Capacity building	Offsite costing	Pre cost construction	Annual Estimated O&M (In INR /Lakhs)
Ist Year	215.61	107.80	107.80	43.12	43.12	43.12	43.12	38.53	**642.23**
IInd Year	507.54	253.77	253.77	101.51	101.51	101.51	101.51	86.68	**1507.78**
IIIrd Year	528.50	264.25	264.25	105.70	105.70	105.70	105.70	92.72	**1572.53**
IVth Year	221.68	110.84	110.84	44.34	44.34	44.34	44.34	38.29	**658.99**
Vth Year	89.86	44.93	44.93	17.97	17.97	17.97	17.97	13.15	**264.76**
Total	**1563.19**	**781.59**	**781.59**	**312.64**	**312.64**	**312.64**	**312.64**	**269.36**	**4646.28**

Depending upon the mode of development, the operation and maintenance costs will vary for the slums. From *table 2-20*, the O & M cost catering to the housing & infrastructure investment requirements as set out earlier includes 8 sectors where **46.46** Crores has been estimated for a period of 5 years. Of the total estimated costs, 34% is allocated for temporary accommodation for slum dwellers and 17% for acquiring and operation expenses. Moreover, the initial costs such as preparation of project, DPR and pre construction expenses alone constitute 19%.

2.5. Capacity Building

Through the medium of ULB & community organizations, SJSRY Schemes will be integrated with MoHUPA.

a. Slum dwellers

Slum dwellers also act as **stakeholders** in planning for slums as they understand the slums, strategies implemented in those slums and future requirements. Hence they should be trained in developing their respective slums, otherwise the aims of SJSRY staff not be fulfilled.

b. Intermediaries

CO's, CBO's and community volunteers are the **Intermediary stakeholders** to train the trainer's. Capacity building for them is convincing & managing the slum association to accept proposals. Training and adequate guidance to the CBO's and the community volunteers can be organized by the concerned cells/agencies/lead NGO to build common understanding on their role and purpose of data collection for the SFCP. The capacity building activities can also be undertaken by the National Network Resource Centers (NNRCs), empanelled by the Mo/HUPA.

It is expected that the SFCPoA is prepared with active participation of community during the planning process. To enable the same suitable structures (cooperatives/ societies) might need to be formed, where necessary. The communities would need to demonstrate willingness to adopt the implementation option, plan for livelihood/ economic activities within the slum. Communities are also expected to assist in generating the beneficiary contribution.

c. Urban Local Body performs tasks under Government stakeholders

Being the main sponsor of the RAY scheme, ULB would prepare the SFCPoA as a first step to clearly articulate the action plan for making the city "slum free". During the preparation of Slum Free City Plan of Action, ULB would continuously consult with the community in the planning process. During the process, ULB would categorize and prioritize for rehabilitation/ redevelopment, and would provide/ facilitate provision of infrastructure. ULB, in consultation with the community, will also allot dwelling units and enable provision of the legal titles to the beneficiaries.

Section – III:

Slum Prevention Strategy

CHAPTER 3 - Slum Prevention Strategy

Strategy for prevention of slums in future will include prevention of encroachments and illegal structures and further supply of affordable housing on the other. The plan of action should encompass proposed action to be undertaken by the city to commensurate the lands and promote the construction of affordable housing in consonance with the housing demand. City-wide policies for slum prevention should include:

- Inventory of Vacant and underutilized lands through GIS mapping
- Assessment of Housing demand for current slum population and future using Master Plan estimated values
- Formulation of demand side as well as supply housing strategies through exploration for various development options such as PPP model, direct subsidies and incentives

Land Reservation/Land pooling

- Reservation of 20-25% of developed land for EWS/LIG housing
- Land assembly mechanisms and policy obstacles to land supply
- Ensure continuous supply of developed land for EWS/LIG housing

Allocation of land to various organizations

- In new cases where land is allotted to various organizations or institutions by the government for development of work space, or industries, or institutions etc., there shall be reservation of land for economically weaker sections and low income groups of persons in respect of all municipalities, municipal corporations and urban development authorities.
- In respect of land where it has already been allotted, the unutilized portion may be reserved for economically weaker sections.

New Housing

- Public vacant lands available
- Incentives provided to private sector
- Availability of housing finance to be ensured for low income groups through public agencie and retail finance.

Rental

- Decide eligibility of tenants
- Standards for rental housing
- Decide for rental housing policy for rents, modalities for allotment, evictions
- Mechanisms for maintenance and management
- Incentives for rental housing

3.1.Housing Stock Assessment

a. Population Projections

Population projection is important and basic requirement for the provision of basic services to the people. It is also required to plan for service provision and revenue realization from the users in a city, which is the direct function of the population and population growth. Given the fact that Davangere is one of the oldest inhabited cities, an increase of the population at 1% growth rate is taken into consideration to forecast the population from 2012-17.

Table 3- 1: Projected population for 5 years

Population Projection		
Year	**Projected increase**	**Projected population**
2012-2013	630	63669
2013-2014	637	66853
2014-2015	643	64949
2015-2016	649	65599
2016-2017	656	66255
Total	3216	----------

At the end of five years, a total population of **66255** is estimated for 49 slums in Davangere.

b. Household requirements

Table 3- 2: Projected Households (2012 to 2017)

Projection	
Year	**Households**
2012-2013	126
2013-2014	127
2014-2015	129
2015-2016	130
2016-2017	131
Total	**643**

Similar to estimated population in slums, the additional requirement of households in the slums has been projected for a 5 year period assuming a growth rate of 1%. Assuming that the growth rate would be constant for every year, an increase of **643** households has been projected for five years.

c. Infrastructure requirements

Using the model layout costs for proposed infrastructure elements has been calculated. The proposed dwelling units are **643** which indicate **1** model layouts are required for future demand. Hence the infrastructure requirement is indicated in the *table 3-3*:

Table 3- 3: Infrastructure requirement for 5 years

Sl. No	Sector	Unit	Requirement for slum prevention
1	Water Supply System	Running length of sub line (KM)	12.29
		Raising Main (KM)	2
		No. of individual taps	643
		Overhead water tanks	1
2	Sanitation	Length of Underground Drainage/Sewer Lines (KM)	10.24
		Length of storm water Drainage Lines (KM)	10.24
		No. of individual toilets	0
3	Solid waste management	No. of Bins	21
4	Roads	Total length of Approach roads (4.5 mts wide)	0.25
		Total length of Internal roads (3.0 mts wide)	12.54
5	Street Lighting	No. street lights	426
Social infrastructure			
6	Education facilities	Pre-primary schools	1
		Primary school	1
		Secondary school	0
7	Health Facilities	Primary Health Centers	0
8	Social and community utilities	Community Halls	0
		Recreation & Open spaces (Sq. KM)	0.17

d. Land requirements

Land requirement is estimated as per the spatial analysis of slums in the city. The location of high density slums is identified, city is divided into zones and land requirement for each zone is indicated for accommodating future population.

3.2.Implementation Plan

a. Options for Generating Stock

Public Private Partnership

The rationale behind creating public-private partnerships is that the private sector typically has access to upfront capital and a track record of delivering products efficiently, while the public sector/state/central Govt. controls the regulating environment and, occasionally, crucial resources needed to implement a project, such as land. The proposed layout plan is an alternative to develop the 3 slums, however it has to be approved by DCC & get community consensus from the residents. The layouts are subjected to change with respect to the inputs / insights provided by CCG & Stakeholders. The following illustrates three different slums chosen for PPP model wherein the housing type with infrastructure has been proposed

ANEKONDA A.K.HATTI: LAYOUT -1

Anekonda A.K.Hatti is one among the 22 slums located in the Core area of Davangere City. It has a total population of 961 with 192 households and an area of 21638.74 Sq.m. Under the ownership of Davangere City Corporation, Anekonda A.K.Hatti slum is located in the Core area and surrounded by residential use. Of the 192 houses, 97% are semi pucca and katcha in nature. As far as water supply is concerned, 100% of the slum is not covered. Due to lack of well built housing structures and inadequate physical infrastructure, there is a need to improve the living conditions in Anekonda A.K.Hatti slum.

Proposals

Based on the above information, in situ mode of development has been recommended to make the areas habitable and for provision of tenure rights to the slum dwellers. As part of in situ development, 216 dwelling units have been proposed with each unit of area 331.50 Sq.ft and comprises of living room, single bedroom, a kitchen and toilet. The description of a single housing unit →

Description	Dimensions (Feet)
Bed room	9.0 x9.0
Living	8.0 x 17.0
Toilet	6.0x5.0
Kitchen	7.0x5.6
Balcony	6.6x7.5
Total area of Dwelling unit	331.50 (Sq.ft)

Specifications for Doors & Windows in a single Dwelling unit:

Description		Dimensions (Feet)
Doors	D1	3.11 x 6.5
	D2	3.30x 6.5
Windows		3.3x4.11
Ventilators		1.12x4.11

Housing plan:

Per block 12 dwelling units (DU) has been proposed with a total area of 2636.10 sq. ft. A total of 18 blocks has been proposed preferred floors to be G+1 for each.

The specifications and plan of a single block has been shown below:

- Area of Block – 2636.10 sq ft.
- No. of Dwelling Units – 6 per floor , total 12 units
- Corridor – 6' wide
- Stair case

Block Details:

Sl.No	Description	Units
1	Earth Work Excavation for RCC footing	3.28' depth
2	CC 1:4:8 for footing	4'' thick
3	VRCC footing M20	5'X5'X12''thick
4	VRCC columns M20	9'' x12'' size
5	VRCC Plinth beam M20	9''x 12'' size
6	PCC BED for plinth beam	4'' depth
7	Earth Filling to foundation & Basement	1'5'' Depth
8	40x15x22.5 cms CC solid Blocks for Walls	9'3'' height
9	40x10x22.5 cms CC solid Blocks for partition walls	9'3'' & 6'10'' height
10	VRCC M20 for lintel	9'' Width
11	VRCC roof Slab M20	4'' Thick
12	Ceiling plastering	CM 1:4 of 2'8''thick
13	Wall plastering inside	CM1:4 of 2'8'' thick
14	Wall plastering outside	CM1:3 of 4'' thick
15	MS hallow Door with shutters for main Door & Bedroom	2'11'' X 6'5'' & 2'5''x 6'5''
16	NCL Windows & Ventilators	2'11'' x 6'5'' ,1'11'x 6'5'' etc
17	Acrylic Emulsion Paint	Inside walls & Ceiling
18	Acrylic Emulsion Paint	outside
19	Flooring	Inside houses
20	Internal Electrification	Provided
21	Internal Sanitation	Provided
22	Internal Water supply	Provided
23	Painting to Doors & Windows	Provided
24	Rooftop Plastering	Provided
25	Staircase	Provided

Source: 25th Revised Edition Estimation and Costing in Civil Engineering. (By B.N. DUTTA)

LAND USE:

According to the land value records available at Davangere City Corporation, it has been decided the price per Square feet is Rs 1500 per for residential while for commercial it is Rs 2200 per Sq.ft. The following table presents the proposed land use for Anekonda A.K.Hatti Slum:

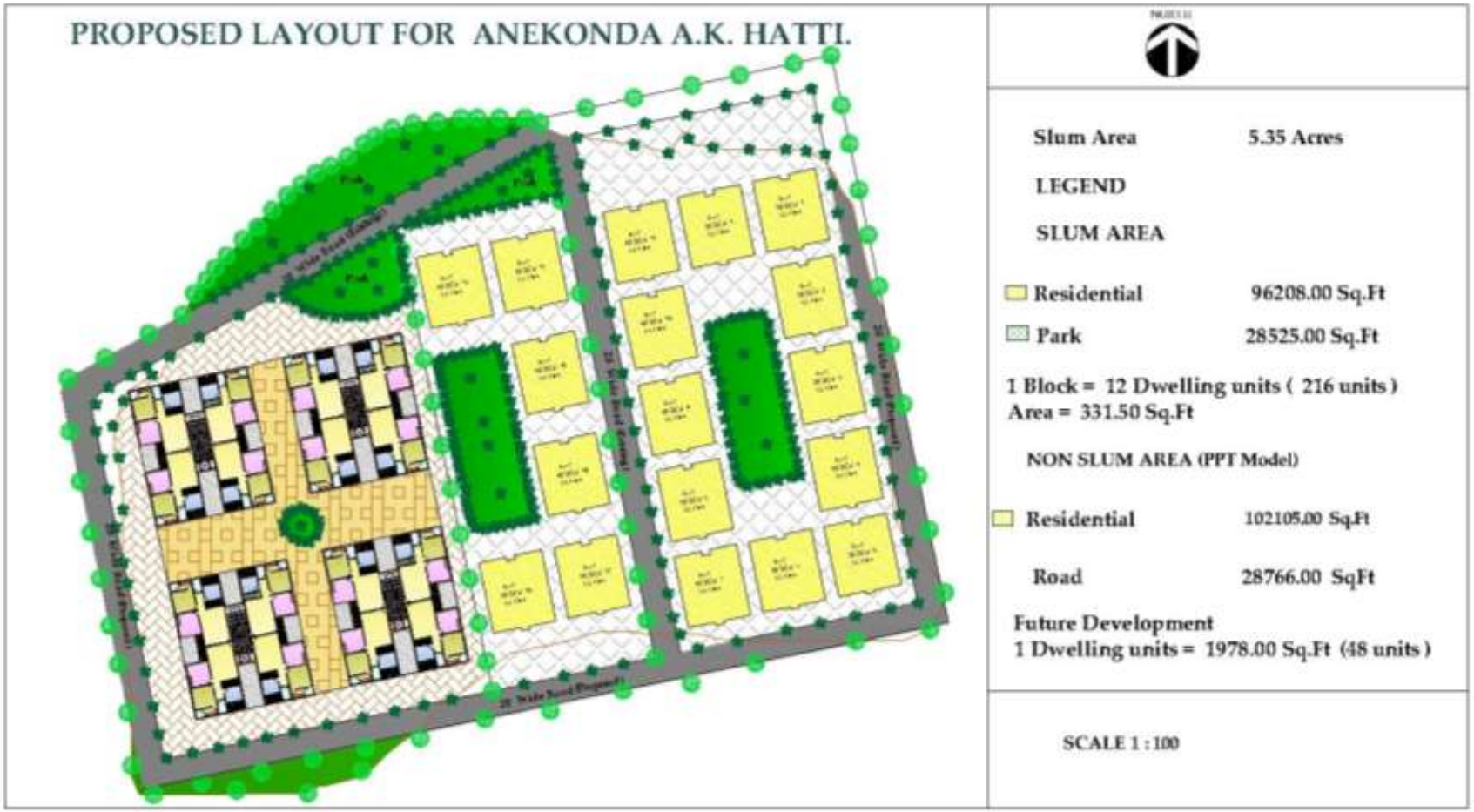
Description	**Area (Sq.ft)**
Slum Area	**5.35 Acres**
Proposed Slum Area	96208.00
Residential area	102105.00
Park	28525.00
Roads	28766.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 102105.00 Sq.ft of land is allocated for regular residential space and 13% for roads has been reserved. Under this model, potential business opportunities can be created as well as better access to improved infrastructure, thus fostering Anekonda A.K.Hatti slum development in the long run.

PHYSICAL INFRASTRUCTURE

- **Roads** - B.T. are proposed as per the requirement
- **Surface / storm water drains** -RCC U-Shape drains are proposed on both sides of the road to drain out the Surface water as per the site requirement.
- **Sewerage** -Provision for sewerage distribution system has been made and the same will be connected to main Sewer line nearby wherever sewer facility is available.
- **Water Supply** -water supply distribution network linked to city wide has been proposed as per the requirement and individual sumps and overhead tanks have also been proposed.
- **Electricity -**Lump sum provision for layout electrification has been made along with provision for individual house connection. Obtaining the electricity Service Connection will be the responsibility of the dweller and observing the necessary formalities by metering. The houses will be provided with internal and external wiring for getting service connection from the electricity authorities concerned.

The following page presents the model layout for **Anekonda A.K.Hatti** slum:



Map 3- 1: Proposed layout for Anekonda A.K. Hatti Slum

K.G. KALLAPPA RICE MILL (H.K.R NAGARA)

Behind K.G.Kallappa Rice Mill (H.K.R nagar) is one among the 22 slums located in the core area of Davangere City. It has a total population of 1632 with 364 households and an area of 21380.70 Sq.m. Under the ownership of Davangere City Corporation, Behind K.G.Kallappa Rice Mill (H.K.R nagar) slum is located in the Core area and surrounded by Industrial use. Of the 364 houses, 97% are Semi pucca and katcha in nature. As far as water supply is concerned, 99% of the slum is not covered. Due to lack of well built housing structures and inadequate physical infrastructure, there is a need to improve the living conditions in Behind K.G.Kallappa Rice Mill (H.K.R nagar) Slum.

PROPOSALS

Based on the above information, in situ mode of development has been recommended to make the areas habitable and for provision of tenure rights to the slum dwellers. As part of in situ development, 414 dwelling units have been proposed with each unit of area 331.50 Sq.ft and comprises of living room, single bedroom, a kitchen and toilet .The following gives a description of a single housing unit:

Description	Dimensions (Feet)
Bed room	9.0 x9.0
Living	8.0 x 17.0
Toilet	6.0x5.0
Kitchen	7.0x5.6
Balcony	6.6x7.5
Total area of DU	331.50 (sq.ft)

Specifications for Doors & Windows in a single Dwelling unit:

Description		Dimensions (Feet)
Doors	D1	3.11 x 6.5
	D2	3.30x 6.5
Windows		3.3x4.11
Ventilators		1.12x4.11

Housing plan:

Per block 18 dwelling units (DU) has been proposed with a total area of 2636.10 sq. ft. A total of 23 blocks has been proposed preferred floors to be G+2 for each. The specifications and plan of a single block has been shown below:

- Area of Block – 2636.10 sq ft.
- No. of Dwelling Units – 6 per floor , total 18 units
- Corridor – 6’ wide
- Stair case

Block Details:

Sl.No	Description	Units
1	Earth Work Excavation for RCC footing	3.28' depth
2	CC 1:4:8 for footing	4'' thick
3	VRCC footing M20	5'X5'X12''thick
4	VRCC columns M20	9'' x12'' size
5	VRCC Plinth beam M20	9''x 12'' size
6	PCC BED for plinth beam	4'' depth
7	Earth Filling to foundation & Basement	1'5'' Depth
8	40x15x22.5 cms CC solid Blocks for Walls	9'3'' height
9	40x10x22.5 cms CC solid Blocks for partition walls	9'3'' & 6'10'' height
10	VRCC M20 for lintel	9'' Width
11	VRCC roof Slab M20	4'' Thick
12	Ceiling plastering	CM 1:4 of 2'8''thick
13	Wall plastering inside	CM1:4 of 2'8'' thick
14	Wall plastering outside	CM1:3 of 4'' thick
15	MS hallow Door with shutters for main Door & Bedroom	2'11'' X 6'5'' & 2'5''x 6'5''
16	NCL Windows & Ventilators	2'11'' x 6'5'' ,1'11'x 6'5'' etc
17	Acrylic Emulsion Paint	Inside walls & Ceiling
18	Acrylic Emulsion Paint	outside
19	Flooring	Inside houses
20	Internal Electrification	Provided
21	Internal Sanitation	Provided
22	Internal Water supply	Provided
23	Painting to Doors & Windows	Provided
24	Rooftop Plastering	Provided
25	Staircase	Provided

Source: 25th Revised Edition Estimation and Costing in Civil Engineering. (By B.N. DUTTA)

LAND USE

According to the land value records available at Davangere Corporation, it has been decided the price per Square feet is Rs 1500 per for residential while for commercial it is Rs 2200 per Sq.ft. The following table presents the proposed land use Behind K.G.Kallappa Rice Mill (H.K.R nagar) Slum:

Description	**Area (Sq.ft)**
Slum Area	**5.28 Acres**
Proposed Slum Area	184401.00
Commercial use	101847.00
Park	22631.00
Roads	33232.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 101847.00 Sq.ft of land is allocated for commercial space and 15% for roads has been reserved .Under this model, potential business opportunities can be created as well as better access to improved infrastructure, thus fostering Behind K.G.Kallappa Rice Mill (H.K.R nagar) slum development in the long run.

PHYSICAL INFRASTRUCTURE

- **Roads** - B.T. are proposed as per the requirement
- **Surface / storm water drains** -RCC U-Shape drains are proposed on both sides of the road to drain out the Surface water as per the site requirement.
- **Sewerage** -Provision for sewerage distribution system has been made and the same will be connected to main Sewer line nearby wherever sewer facility is available.
- **Water Supply** -water supply distribution network linked to city wide has been proposed as per the requirement and individual sumps and overhead tanks have also been proposed.
- **Electricity -**Lump sum provision for layout electrification has been made along with provision for individual house connection. Obtaining the electricity Service Connection will be the responsibility of the dweller and observing the necessary formalities by metering. The houses will be provided with internal and external wiring for getting service connection from the electricity authorities concerned.

The following page presents the model layout for **Behind K.G.Kallappa Rice Mill (H.K.R nagar)** slum:

Map 3- 2: Proposed layout for Behind K.G. Kallappa rice mill

KADAPPANA KANA

Kadappana Kana is one among the 22 slums located in the Core area of Davangiri City. It has a total population of 675 with 157 households and an area of 14143.68 Sq.m. Under the ownership of Davangere City Corporation, Kadappana Kana slum is located in the Core area and surrounded by residential use. Of the 157 houses, 99% are semi pucca and katcha in nature. As far as water supply is concerned, 100% of the slum is not covered. Due to lack of well built housing structures and inadequate physical infrastructure, there is a need to improve the living conditions in Kadappana Kana slum.

PROPOSALS

Based on the above information, in situ mode of development has been recommended to make the areas habitable and for provision of tenure rights to the slum dwellers. As part of in situ development, 162 dwelling units have been proposed with each unit of area 331.50 Sq.ft and comprises of living room, single bedroom, a kitchen and toilet .The following gives a description of a single housing unit:

Description	Dimensions (Feet)
Bed room	9.0 x9.0
Living	8.6 x 17.0
Toilet	6.0x5.0
Kitchen	7.0x5.6
Balcony	10.0x2.6
Total area of Dwelling unit	331.50 (Sq.ft)

Specifications for Doors & Windows in a single Dwelling unit:

Description		Dimensions (Feet)
Doors	D1	3.11 x 6.5
	D2	3.30x 6.5
Windows		3.3x4.11
Ventilators		1.12x4.11

Housing plan:

Per block 18 dwelling units (DU) has been proposed with a total area of 2636.10 sq. ft. A total of 9 blocks has been proposed preferred floors to be G+2 for each. The specifications and plan of a single block has been shown below:

- Area of Block – 2636.10 sq ft.
- No. of Dwelling Units – 6 per floor , total 18 units
- Corridor – 6’ wide
- Stair case

Dwelling Unit Construction Specifications:

Sl.No	Description	Units
1	Earth Work Excavation for RCC footing	3.28’ depth
2	CC 1:4:8 for footing	4’’ thick
3	VRCC footing M20	5’X5’X12’’thick
4	VRCC columns M20	9’’ x12’’ size
5	VRCC Plinth beam M20	9’’x 12’’ size
6	PCC BED for plinth beam	4’’ depth
7	Earth Filling to foundation & Basement	1’5’’ Depth
8	40x15x22.5 cms CC solid Blocks for Walls	9’3’’ height
9	40x10x22.5 cms CC solid Blocks for partition walls	9’3’’ & 6’10’’ height
10	VRCC M20 for lintel	9’’ Width
11	VRCC roof Slab M20	4’’ Thick
12	Ceiling plastering	CM 1:4 of 2’8’’thick
13	Wall plastering inside	CM1:4 of 2’8’’ thick
14	Wall plastering outside	CM1:3 of 4’’ thick
15	MS hallow Door with shutters for main Door & Bedroom	2’11’’ X 6’5’’ & 2’5’’x 6’5’’
16	NCL Windows & Ventilators	2’11’’ x 6’5’’ ,1’11’x 6’5’’ etc
17	Acrylic Emulsion Paint	Inside walls & Ceiling
18	Acrylic Emulsion Paint	outside
19	Flooring	Inside houses
20	Internal Electrification	Provided
21	Internal Sanitation	Provided
22	Internal Water supply	Provided
23	Painting to Doors & Windows	Provided
24	Rooftop Plastering	Provided
25	Staircase	Provided

Source: 25th Revised Edition Estimation and Costing in Civil Engineering. (By B.N. DUTTA)

LAND USE

According to the land value records available at Davangere City Corporation, it has been decided the price per Square feet is Rs 1500 per for residential while for commercial it is Rs 2200 per Sq.ft. The following table presents the proposed land use for Kadappana Kana Slum:

Description	**Area (Sq.ft)**
Slum Area	**3.49 Acres**
Proposed Slum Area	72156.0
Residential use	17018.00
Commercial use	35840.00
Parking	32054.00
Roads	27542.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 17018.00 Sq.ft of land for regular Residential use, 35840.00 Sq.ft of land is allocated for commercial space and 18% for roads has been reserved. Under this model, potential business opportunities can be created as well as better access to improved infrastructure, thus fostering Kadappana Kana Slum development in the long run.

PHYSICAL INFRASTRUCTURE

- **Roads** - B.T. are proposed as per the requirement
- **Surface / storm water drains** -RCC U-Shape drains are proposed on both sides of the road to drain out the Surface water as per the site requirement.
- **Sewerage** -Provision for sewerage distribution system has been made and the same will be connected to main Sewer line nearby wherever sewer facility is available.
- **Water Supply** -water supply distribution network linked to city wide has been proposed as per the requirement and individual sumps and overhead tanks have also been proposed.
- **Electricity -**Lump sum provision for layout electrification has been made along with provision for individual house connection. Obtaining the electricity Service Connection will be the responsibility of the dweller and observing the necessary formalities by metering. The houses will be provided with internal and external wiring for getting service connection from the electricity authorities concerned.

The following page presents the model layout for **Kadappana Kana** Slum:

Map 3- 3: Proposed layout for Kadappana kana Slum

- **Rental Housing**

Rental housing shall be developed in partnership with the private sector and ULBs may determine rents to be paid by the households. Families may also contribute to a maintenance fund. Both amounts shall be based on an assessment of affordability by the ULB. Developers, where applicable, may be permitted to collect rentals to recover the cost of construction in BOT arrangements, as appropriate. Maintenance charges may be collected by the cooperative/Resident Welfare Association/land trust, as the case may be.

The following are the list of options available under rental housing:

a. Rental housing by employers/industries/SEZ - Employees housing for high paid employees
b. Rental housing by employers/industries/SEZ - Employees housing for low paid employees
c. Dormitory housing
d. Subsidy housing / FAR incentive
e. Others- Group housing

b. Targets & Timelines

Table 3- 4 Targets and time lines

Year of Development	Period	No of the Slums	Mode of Development
I	2012-13	3	Relocation
		6	In - Situ Development
		0	Infrastructure Development
Total		**9**	
II	2013-14	1	Relocation
		10	In - Situ Development
		2	Infrastructure Development
Total		**13**	
III	2014-15	2	Relocation
		11	In - Situ Development
		2	Infrastructure Development
Total		**15**	
IV	2015-16	2	Relocation
		3	In - Situ Development
		3	Infrastructure Development
Total		**8**	
V	2016-17	1	Relocation
		0	In - Situ Development
		3	Infrastructure Development
Total		**4**	
Total 5 Years		**49**	

As seen in *table 3-4*, for 49 slums in Davangere city, 9 slums for relocation while17 slums for in-situ mode of development and 23 for up-gradation programme based on assessment of the living conditions in those areas. Given the magnitude of problems faced, the slums have been prioritized and to be implemented year wise respectively. Once the redevelopment process is initiated, it is imperative that slum wise targets should be set and adhered in order for the rehabilitation process to be accomplished within the set time frame. For this to happen, it is necessary that there needs to be high level coordinating mechanism between wide group of stakeholders such as Govt. officials, professionals from different disciplines, NGOs/CBOs, and slum dwellers**.**

3.3.Investment requirements

a. Housing

Table 3- 5 costing for projected households

Costing for projected households		
Year	Households	Estimated cost (In Lakhs)
2012-2013	126	365.63
2013-2014	127	388.38
2014-2015	129	411.56
2015-2016	130	436.46
2016-2017	131	461.81
Total	**643**	**2063.84**

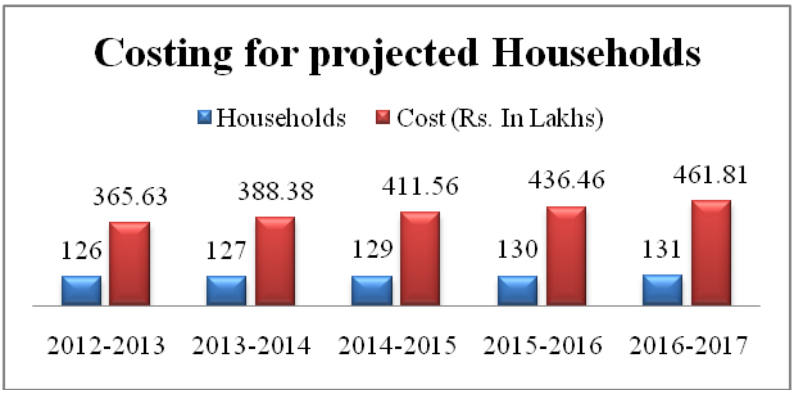


Chart 3- 1: Costing for Projected Households

As seen in the above chart, an increase of 643 households is expected, for which the estimated costs for 5 years is Rs.2063.84 lakhs with yearly rate of 1% (construction inflation cost) per year.

b. Infrastructure

For the purpose of calculations, the following factors were taken into consideration:

- For sanitation, the total city wide trunk is considered to be as 1% of the total project cost
- For roads, new formation costs is considered based on length of the roads proposed in the layout.

The following table shows the estimated costs for future physical infrastructure & Social components for a period of 5 years (2012-2017):

Table 3- 6 Estimated Infrastructure Cost for Projected Households (in INR /Lakhs)

Sl. No	Sector	Description	Estimated Cost for 2012-17 (Rs. in Lakhs)
Physical Infrastructure			
1	Water Supply System	Running length of sub line (KM)	44.24
		Raising Main (KM)	3.48
		No. of individual taps	0
		Overhead water tanks	15
2	Sanitation	Length of Underground Drainage/Sewer Lines (KM)	147.45
		Length of storm water Drainage Lines (KM)	147.45
		No. of individual toilets	0
3	Solid waste management	NO. of Bins	1.63
4	Roads	Total length of Approach roads (4.5 mts wide)	2.75
		Total length of Internal roads (3.0 mts wide)	100.32
5	Street Lighting	No. street lights	46.89
		Physical Infrastructure	**509.24**
Social Infrastructure			
6	Education facilities	Pre-primary schools	3.76
		Primary school	1.57
		Secondary school	0.00
7	Health Facilities	Primary Health Centers	0.00
		Community Halls	0.00
		Recreational & Open spaces (Sq. Km)	0.44
		Social infrastructure	**5.77**
		Physical + Social Infrastructure (Total)	**515.01**

c. Operation & Maintenance

The following table shows the estimated costs for additional components and operation and maintenance for Davangere slums for a period of 5 years (2012-2017):

Table 3- 7 Estimated O & M Cost for Projected Households (in INR/ Lakhs)

Year Wise	A & OE (Acquired and operationing expences)	O & M	DPR Prep. , IEC	Project preparation	Offset costing	Pre cost construction	Annual Estimated O&M (In INR /Lakhs)
Ist Year	12.89	12.89	5.16	5.16	5.16	4.13	**45.39**
IInd Year	12.89	12.89	5.16	5.16	5.16	4.13	**45.39**
IIIrd Year	12.89	12.89	5.16	5.16	5.16	4.13	**45.39**
IVth Year	12.89	12.89	5.16	5.16	5.16	4.13	**45.39**
Vth Year	12.89	12.89	5.16	5.16	5.16	4.13	**45.39**
Total	**64.47**	**64.47**	**25.79**	**25.79**	**25.79**	**20.64**	**226.95**

A total of **381.68** lakhs has been estimated for the additional costs that are going to be incurred during and after the implementation of the project.

Housing + Infrastructure +Operation and Maintenance = 2063.84+515.01 +226.95
= 2805.80 Lakhs

The total of **2805.80** lakhs has been estimated tentatively for the Proposed Development.

3.4.Slum Prevention Reforms

For any city, preventing the formation of newer slums is quite critical and pretty much the same as dealing with the existing slums. A key component in preventing future slums is the availability of developed lands at affordable prices, set aside for meeting the needs of the urban poor. To prevent further growth of slums and improve the social status of existing ones along with reconstruction, the states need to make the following provisions in terms of amendments to certain legislations, reservation of lands, as well as formulate newer laws such as:

- **Assignment of property rights**

The property rights shall not be assigned to the slum dwellers in the slum Areas notified and located on any of the following categories:

Objectionable government lands, such as tank beds, burial grounds, solid waste land fill cities etc., central government, defense , industrial units, disputed lands, protected monuments, public sector lands and other lands which are specified by government for a specific purpose and usage.

The legal title should be entitled either on the woman or jointly with the main male householder, provided it should be made on the house or the land and it must be alienable as per the transfer of title to state after a certain period.

- **Formation of Slum Redevelopment Authorities**

A slum redevelopment authority is to be created at state level with induction of members from various departments. The role of the authority would be to provide guidance in identification of slums, formulate policies and programmes for redevelopment and rehabilitation of slums, special zoning regulations and to administer the funds released by govt. of India, state govt. and other agencies. On similar lines of the slum redevelopment authority at state level, a district level authority can be formed to function as well as monitor the slum rehabilitation for each district.

- **Land Acquisition**

Just in case where no suitable government or ULB lands are available, suitable private patta lands are identified for rehabilitation of slum areas. In process, the competent authority shall take action for acquisition of lands under the provisions of land acquisition act, 1894.

- **Land pooling**

In land pooling/town planning scheme, the owner or developer undertaking the development shall reserve and earmark the land in the proportions of 5% for the economically weaker sections (EWS) and 5% of land for low income group persons for housing purpose. In case of vertical development, 20% of built up space shall be earmarked for EWS and low income groups.

Once implemented, in the long term, availability of affordable land /housing will discourage squatting by poor on public lands and create slum free cities. It will also sustainably reduce urban poverty levels by providing legal access to better services and economic opportunities.

- **Transferable Development Rights (TDR) /Incentive Zoning**

  TDR is aimed at providing to a land owner /builder additional FAR in another property/part of the city in exchange for presently occupied land so that the land could be consolidated. This method has been extensively used in other parts of India.

- **Microfinance for shelter up-gradation**

  To make cities slum free, it is necessary to build partnerships with Self Help Groups and Micro Finance Institutions both formal and informal to help poor access money to purchase land /houses. Often Financial Institutions prefer to provide loans through NGOs, who works as intermediaries, to disburse loan to beneficiaries. State/ city administration can facilitate this process by standing guarantee or by framing appropriate regulations so that benefits of these transactions reach the target group.

- **Other legislations**
  - Under the 7- Point Charter of JNNURM in order to make serviced land available for the poor for the future and to prevent slums – there is a necessity to reserve 10%--25% of the land for every new public/private housing projects.
  - Amendment to enactments to enable revision of population density norms, FAR, land use, etc. and to allow private sector participation wherever reasonably possible.
  - When growth rate of a city deviates from the expected, it is necessary to amend the legislation under which land is obtained for expansion of urban areas and to enable creation of new rental housing stock.
  - Extension of basic network services including health and education to slum settlements through national sanitation and health related programmes
  - Provision of skills and training and nonwage, self employment assistance, the self-employment component in the SJSRY
  - Changes in Master Plans that allows for slum renewal and redevelopment, legislation and building byelaws

ULB's role

The implementing agency/ULB would need to continue fiscal reforms that have already been initiated under the JNNURM and other relevant schemes. Approach to financing of the ULB contribution would need to be a combination of initiatives that ring-fence and maximize internal accruals, and developing a framework for sustainable community participation/unlocking other sources of revenues.

3.5.Capacity Building

With the launch of RAY, capacity building efforts received a significant boost in terms of scale as well as scope. It is usually focused on provision of technical assistance, training and knowledge support to enable implementation of programmes and related components. Through incremental approach and comprehensive framework, capacity building requires in selecting the appropriate mode of training and should imply the flow of ideas, systems and processes, knowledge management through the creation of networks of sector managers for sharing emerging trends, ideas and best practices towards implementing slum free cities.

At State level,

The state needs to prepare state specific capacity building strategy should map existing arrangements/requirements/gap analysis/identify specific measures for strengthening existing facilities and expertise. This framework should incentivize knowledge and skill development and provide an environment for the use of skills acquired.

At ULB level,

Given the legal implications, it is essential for ULB staff to improve levels of performance in order to reduce evasion. Hence to gain expected outcomes, it is necessary for orienting ULB personnel to the role expected out of them in the context of rising expectations from the citizens in terms of service delivery, greater transparency and accountability etc.

At NGO's level,

Implementation of projects and reforms involves increased stakeholders participation among the general public, NGOs and the private sector. There is a need to create forums where different stakeholders can articulate their demands for better service delivery and governance levels.

Slum dwellers

Slum dwellers also act as **stakeholders** in planning for slums as they understand the slums, strategies implemented in those slums and future requirements. Hence they should be trained in developing their respective slums, otherwise the aims of SJSRY staff not be fulfilled.

An amount up to 5% of the total annual allocation of RAY scheme will be set aside for capacity building activities, of which 1% would be utilized by the Centre, 4% by the States/UTs. In addition, up to 5% of the total scheme allocation will be earmarked for preparatory activities regarding development of Slum-Free City Plans including pilot projects, preparation of DPRs, community mobilization, IEC, planning and administrative expenses for both the Centre and the States/UTs and creation of institutional space and capacities.

Section – IV –Road Map

Chapter 4 – Road Map

4.1.Touchstone Principles

As per the report, the money for slum improvement has been mainly spent under four schemes namely,

- Slum Improvement Scheme;
- Swaran Jayanti Shahri Rozgar Yojana;
- National Slum Development Program; and
- Valmiki Awas Yojna.

Since RAY is embarked as path breaking scheme towards Slum free India, there is a need to integrate with other established national as well as state level programmes and Govt. organizations such as HUDCO in terms of harnessing technical as well as financial support through moderation in credit Availability for the Urban Poor for Housing.

a. Institutional Framework

A number of agencies are responsible for various activities pertaining to housing for urban poor. Although it is primarily the responsibility of the ULB, other departments/ agencies such as the Urban Development Department, Town Planning Department, Slum Redevelopment Board, Housing Board and NGOs, all have a role to play in provision of housing and infrastructure services to the urban poor.

The following institutional methodology has been adopted for the state.

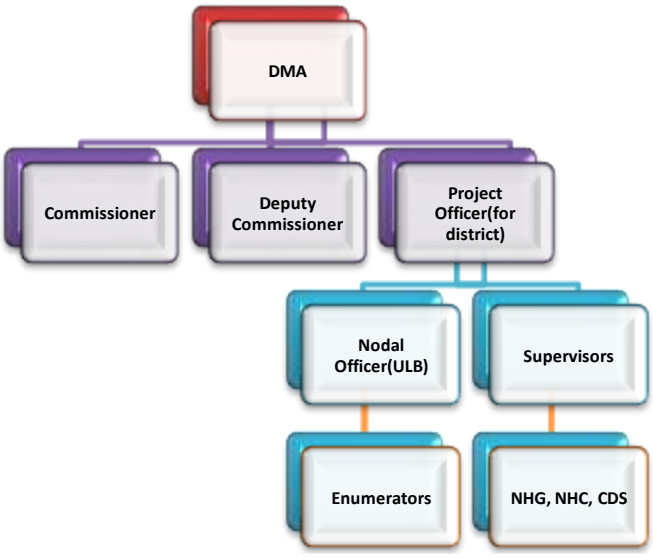


Chart 4- 1 Institutional setup for Slum free cities

The institutional responsibility for slum improvement vests with the **Directorate of Municipal Administration** (DMA), the apex policy making and monitoring agency for urban areas in the state. It executes various government schemes for urban renewal like – Balmiki Ambedkar Awas Yojana, Integrated Urban Slum Sewerage Plan, National Slum Development Program, and Golden Jubilee Urban Employment Scheme etc. DMA executes all its programs using beneficiaries for prioritization of needs and execution of schemes.

In case of Rajiv Awas Yojana, DMA is the nodal agency at state level to implement surveys for the scheme. Initially the survey was taken up under USHA programme, which had similar survey format of RAY. Various meetings were conducted by calling different para-statal agencies to discuss the required methodology for conducting surveys and initiate the steps for survey. Several discussions were held at length and depth about the conduction of surveys and to finalize a methodology. **DMA** as State level authority has been the Nodal agency to monitor the quantity and quality of surveys performed by individual cities. DMA is headed by Commissioner who is in charge for one city, a nodal officer for a ULB and number of supervisors for quality and quantity check upon the enumerators who have completed the surveys.

b. Assessment of Implementation Options

The assessment for implementing a mode of development for any slum in Davangere city would be based on the prevailing land value. The implementation could be both public and private depending on the public and stakeholders consensus with due approval of the city with respect to its land ownership and project implementation.

4.2.Financing Plan

a. Summary of Investments

Table 4- 1 Summary of Investments for (2012-2017)

Sector	Total Project Cost for existing slums
Housing	26935.87
Water Supply	549.97
Sanitation	2075.46
Solid waste management	37.06
Roads	1343.60
Street Lighting	183.58
Education	0.00
Health	0.00
Social development	11.55
Recreation and Opens paces	126.62
Others	4646.28
Total	**35909.99**

To make slum free city Davangere overall cost estimated tentatively is **359.10 C**rores.

For slum wise line estimates please refer Annexure -2E

b. Financing Structure

Implementing slum free cities requires the concerned authorities to develop a legal framework based policy for internal earmarking of funds, ensuring the preparation of separate budget for urban poor, creating BSUP Fund etc.

Chart 4- 2 Financing Structure

Central Share

Speaking of the Govt. of India share in RAY project funding, 50% of the cost for provision of basic civic and social infrastructure and housing, including rental housing,- and transit housing for in-situ redevelopment -in slums would be borne by the Centre, including O&M of assets created under RAY scheme. The remaining half required the states or ULBs to use PPP models innovatively to generate resources for slum housing through land use concessions, etc to the private industry partners, and use of the central share as viability gap funding. States which demonstrate an innovative use of PPP models resulting in utilization of less than the specified central share of 50% in any project shall be incentivized by allowing them to use this saving in other projects in the city.

An amount of nearly 5% of the total annual allocation would be set aside for capacity building activities, of which 1% would be utilized by the Centre, 4% by the States/UTs. In addition, up to 5% of the total scheme allocation will be earmarked for, preparatory activities regarding development of Slum-Free City Plans including pilot projects, preparation of DPRs, Community mobilization, IEC, planning and administrative expenses.

Beneficiary Contribution

In order to ensure the communities interest and active participation, financial contribution by the beneficiaries is considered to be critical. As specified, the share of beneficiary contribution in the housing sector is anticipated to be a minimum of 12% of total cost and 10% in case of different social groups and other weaker sections. Options such as aggregation of loans to a community of beneficiaries wherever feasible, will be encouraged. Adequate security and credit enabling structures for such participation including mortgage insurance would need to be structured and made available to the beneficiaries. The option of linking to the Mortgage Risk Guarantee Fund (MRGF) to which the State has to contribute could be explored.

There are various initiatives that can be undertaken by the States/ ULBs to facilitate beneficiary contribution and to make finances available during the 5 year span of the RAY scheme. These include the following:

- Facilitating long-term concessional interest rate/differential interest rates to the beneficiaries

- Access to microfinance and alternate funding options
- Rajiv Awas Shelter Fund, to be used:
- To keep the slum/urban poor beneficiary from turning defaulter due to unemployment, death or other genuine distress and thereby risk forfeiture of dwelling unit and foreclosure on loan
- To share the lender's costs of servicing the loan.

c. Strategy for Sustenance

Local bodies need to explore options for raising finance through other avenues such as PPP, shared mortgage and pooled financing mechanisms. For sustenance, it is essential for a ULB to prioritize in a way that the maximum benefit is derived for the investments proposed to be made for implementing development works and service delivery for slums. This can be achieved only through beneficiary participation and consensus.

d. ULB Finances

To undertake financing for slum rehabilitation, ULBs need to adopt a different approach or a well designed strategy for financing by:

- Internal earmarking of funds for RAY in the municipal budgets., allocation of available surplus for slum rehabilitation under RAY
- Earmarking of property taxes, trade license fee, hawker-license fees, SWM cess etc.,
- Share of other devolutions, whenever applicable
- Proceeds from PPP projects
- Unlocking alternate revenues, using land based instruments such as FSI, TDR, land banking etc.

The reforms/other initiatives that ULBs would need to evaluate include the following:

- Setting up of a revolving fund for continued O & M of the infrastructure & housing
- Evaluate and converge with other existing schemes, as applicable.

e. Earmarking for Slum Rehabilitation & Prevention Strategy

For all new housing projects developed by public or private agencies, it would be mandatory to construct houses for LIG/EWS groups. Suitable amendment may be made to State/local enactments for this purpose. The percentage of housing units to be earmarked for LIG/EWS in apartments or group housing projects in large and small cities will be between 20-25% as prescribed under RAY. In case of vertical development, 20% of built up space shall be earmarked for economically weaker sections and low income groups of persons.

f. Community Participation

Community participation is critical for a successful slum rehabilitation and development. ULBs need to ensure that appropriate community processes and organization of community structures for planning and implementation of housing and upgrading projects. In addition, the local bodies need to facilitate Area and Ward Committees with representation of slum

communities, in accordance with the Community Participation Law for participatory area and ward level planning and monitoring.

4.3.Monitoring & Review

RAY would be monitored at three levels: City, State and Government of India. The following agencies and departments would be monitoring at their respective levels:

- Ministry of Housing and Urban Poverty Alleviation will periodically monitor the scheme.
- State Nodal Agency would send Quarterly Progress Report (on-line) to the Ministry of Housing and Urban Poverty Alleviation. Upon completion of a project, the State Nodal Agency, through the State Government, would submit completion report to the Central Government.
- Central Sanctioning-cum-Monitoring Committee will meet as often as required to sanction and review/monitor the progress of projects sanctioned under the Mission.
- Monitoring of quality of projects executed by the implementing agencies in the States/Cities will be facilitated through independent quality control/ assurance/ third party teams at various levels that may be outsourced to specialized/technical agencies.
- Monitoring of projects by States/Urban Local Bodies by conducting Social Audit in conformity with guidelines to be prescribed, right from the stage of project preparation.
- The processes of implementation will be monitored by undertaking concurrent evaluation through reputed independent institutions to ensure that corrections to distortions, oversights or shortcomings can be made in time.

4.4.Reforms

A draft slum free act has been already in place in state of Karnataka. ULB/State Govt. agencies need to suggest the sequencing of steps and timelines to be adopted during implementation of slum redevelopment programmes for a period of five years.

LIST OF ANNEXURES

SLUM PROFILE

(DATA ANALYSIS AND PROPOSALS)

ANNEXURE – 1A *to* 1F

ANNEXURE – 2A *to* 2E