



RAJIV AWAS YOJANA

SLUM FREE CITY PLAN OF ACTION

BELGAUM

DRAFT



**Regional Centre for Urban and Environmental Studies
Osmania University, Hyderabad.
Sponsored by
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Slum Free City Planning Belgaum

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ACRONYMS

- 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
- DPR – Detailed Project Report
- DU - Dwelling Unit
- DUDC – District Urban Development Cell
- EWS - Economic weaker section
- FSI - Floor Space Index
- GIS – Geographical Information System
- HHs - Households
- HRA – House Rent Allowance
- HUDCO – Housing And Urban Development Corporation Ltd
- IHSDP – Integrated Housing and Slum Development Program
- JnNURM – Jawaharlal Nehru National Urban Renewal Mission
- LDPE - Low Density Polyethylene
- LIG - Low Income Group
- MIS – Management Information System
- MoHUPA – Ministry of Housing and Urban Poverty Alleviation
- NCR – National Capital Region
- 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

The Government of India unveiled a holistic mission “Rajiv Awas Yojana” (RAY) to envision a slum free India, benefiting about 81 million urban poor with affordable housing, decent and dignified living environment and well developed basic amenities. 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 aspect 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 slum survey and updating MIS database, preparation of the city and slum level maps in GIS, integration of spatial and non-spatial data, analysis of the existing situation of slums, preparation of slum specific proposals, involve the community from the inception of the project, preparation of DPR, project monitoring and implementation to achieve Slum Free India.

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA), issued guidelines on RAY for preparation of State Slum-free Plan of Action (SFPoA), Community Mobilization, MIS and GIS. The states have to pass legislation for the assignment of property rights to the slum dwellers, and take steps to prevent new slums.

This report is “Plan of Action” for Belgaum city. The City Plan of Action which 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, recommend mode of development 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 Belgaum. The report aims to summarize, analyze the slum situation and propose a roadmap to reach slum free Belgaum.

Slum Free Belgaum

Belgaum being one of the significant Educational centres in Karnataka, India, has 51 slums with 12082 households; a housing deficit for **6902** households. From amenities view, **37%** of slums do not have access to drinking water sources and **28%** households lack connectivity to storm water drainage system. On the demographic front, BPL population forms **79%** of the total population where **27%** belongs to SCs. The plan of action provides the line estimates for 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 DPR for year wise phased slums.

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 meager 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 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, 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 submission 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 of the City

The state of Karnataka is one of the prominent states in the South western region of India with Bangalore as its capital, falling under 'A' category¹, while Belgaum is classified as 'C' category¹ city. Belgaum Municipal Corporation also called as Maha nagara palika. In 2006, the Government of Karnataka announced that Belgaum would be made the state's second capital and that the city would be a permanent venue for the annual 15-day session of the state legislature. City municipal area is divided in total 58 wards/zones and a member (the Corporator) from each ward is elected to form the Municipal Corporation. The present Mayor is **Mrs. Manda sunil** Balekundri.

The present report is the tentative Plan of Action for Slum Free City under the scheme of Rajiv Awaz Yozana (RAY) sponsored by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), Govt. of India and the city of Belgaum selected as one of the Pilot Cities for the development of both notified (38) and non-notified slums (13) as part of inclusive growth. The report is structured with prime objective of addressing the existing slums as curative step and also to ensure slum free Belgaum in future as a preventive step. The report contains 4 sections namely, *Preamble and Overview*, *Slum Rehabilitation Strategy*, *Slum Prevention Strategy and Road Map* respectively. 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. Belgaum City Profile

Belgaum is a city and a municipal corporation in Belgaum district in the state of Karnataka, India. It is the fourth largest city of the state of Karnataka, the first three being Bangalore, Mysore, Hubli - Dharwad. It is situated nearly 2,500 ft (762 m) above sea-level and is the headquarters of Belgaum district, which borders the states of Maharashtra and Goa.

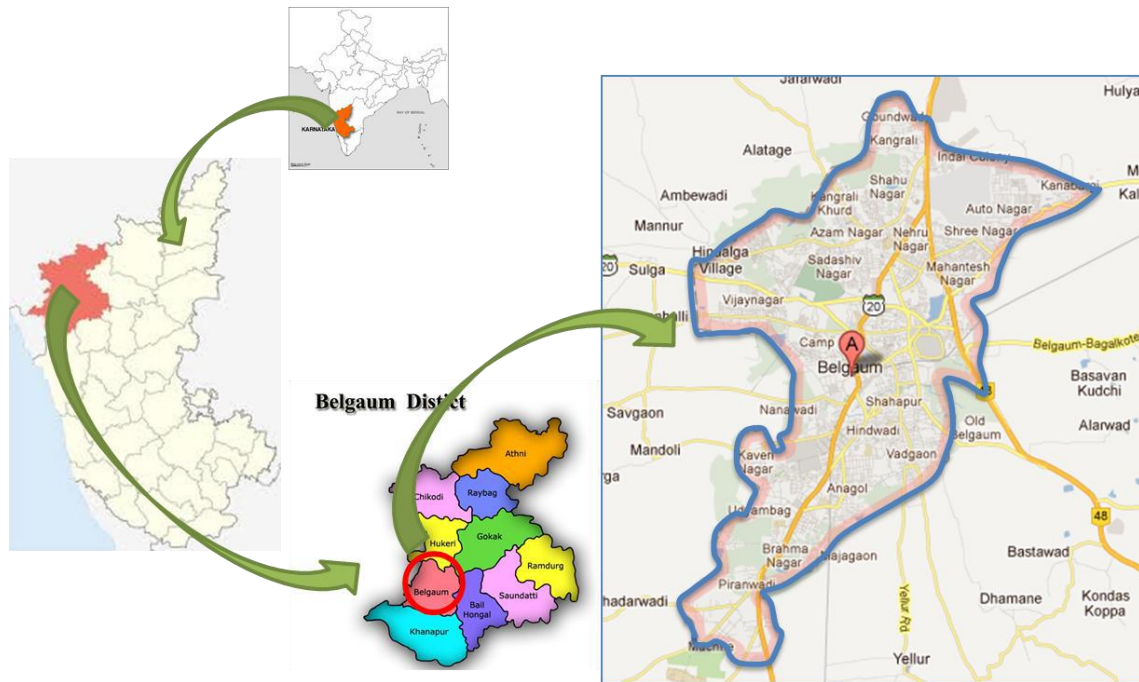


Picture 1- 1: Kitter Rani Chennamma

Belgaum is also the headquarters for the Belgaum division as it is located at a distance of 502 Kms from Bangalore.. The division comprises the districts of Bagalkot, Belgaum, Bijapur, Dharwad - Hubli, Gadag, Haveri, and Uttara Kannada. The place is almost equidistance from Mumbai and Bangalore. The city is on National Highway No. 4 and directly approachable from Bangalore by Rail as it is important station between Bangalore and Miraj. There is also an Airport at Sambra about 10 Kms. Eastern side of Belgaum.

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 BELGAUM CITY



Map 1- 1: Location Map

Road

Belgaum is connected by road via the National Highways 4 (connecting Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu) and 4A (connecting Karnataka and Goa). NWKRTC run buses to all corners of Karnataka as well as neighboring states. There are many prominent private bus servers to all major destinations in Karnataka and surrounding states.

Air

Belgaum Airport was the only airport in north Karnataka for decades (with an air force base). Belgaum is directly connected with Mumbai. The airport currently serving the city is Belgaum Airport at Sambra, located at 10 km from the city on SH20. Schedules have been erratic, as the air connectivity is primarily provided by feeder airlines. Belgaum currently has regular flights to Mumbai and Bangalore (Kingfisher Airlines).

Rail

Belgaum is on the main Indian Railways grid being part of south western division and is well connected by rail to major destinations such as Bangalore, Mysore, Mangalore, Pune, Mumbai, Hyderabad, Goa and New Delhi. Belgaum railway station is oldest in this region.

History

The name Belgaum is originated from Velugrama or Ikhsugrama. The earliest mention of this is made in the Nesari Plates of 805 AD. The archaeological inscriptions under A Sunder in the Vadgaon - Madhavapura area reveal a prosperous town of the Satavanhana times. Chalukyas and Rastrakutas administrated the territory. Later on Kadambas of Goa and Rattas ruled Belgaum. It was made the capital city under the Rattas. Afterwards Yadavas of Devagiri and Vijayanagar rulers governed the city.



Picture 1- 2 : Medical collage of Belgaum



In 1472 AD Bahamanis conquered Belgaum. The Adilshahis of Bijapur captured it in 1489. Asad khan a noble of Bijapur ruled Belgaum from 1511 to 1540. In about 1550, Sherkhan, a Bijapur coommander built the present town Shahapur, originally called shahpet. Shivaji, the Maratha ruler in 1673 invaded Belgaum.

The Mughal Emperor Aurangzeb defeated the king of Bijapur. In 1756, Belgaum was conquered by the Marathas. It was under the Maratha until it was ruled by the British in March-April 1818. The British made it, the headquarters of a Sarkar (District) with 15 paraganas (Talukas) in 1838.

Picture 1- 3 : Rani Chennamma

The British experienced the heat and chill of the 1875 Revolt in Belgaum also. Ralf Fitch(1583) calls the place " The first town between Bijapur and Goa ". Geographer Ogliby (1680) remarks as one of the four eminent castles in Konkan. Italian traveller (1695) calls it a populous city and a place of much trade with a large market.

Belgaum was one of the five military stations that were established in the Old Bombay Presidency. In 1878, it was made the headquarters of the Southern Division under the Bombay Presidency. During the national movement Belgaum hosted the 1924 annual Congress session, presided over by Mahatma Gandhi. It was the one and only congress session held in Karnataka as well as presided by Mahatma Gandhi.

Geography

Belgaum is located at 15.87°N 74.5°E. It has an average elevation of 751 metres (2463 feet). The city is situated in the northwestern parts of Karnataka and lies at the border of two states, Maharashtra and Goa on the western ghats (50 km from Goa state border). It is one of the oldest citis in the state, lying at a distance of 502 km from Bangalore; 515 km from Hyderabad and 500 km from Mumbai. Situated near the foothills of the Sahyadri mountain range (Western Ghats) at an altitude of about 779m, 100 km from the Arabian Sea with the river Markandeya flowing nearby, Belgaum exhibits swift and kaleidoscopic changes in topography, vegetation and climate.

Climate and Rainfall

The climatic conditions of Belgaum city are healthy, pleasant and characterized by a general dryness except during the rainy season. The pleasant equable climate ranges around 14.30° C in winter and 35.40° C in summer. The relative humidity of Belgaum city is about 85 percent and it is generally higher in monsoon season.

Belgaum is known for its pleasant climate all round the year. Belgaum is at its coldest in winter (November – February) temperatures dropping to 9 degrees Celsius, minimum temperature in Karnataka state is usually recorded in Belgaum, and experiences continuous monsoon during July to September. The annual average rainfall is over 200 cm, 2000 mm.

Overview of the Urban Local Body (ULB)

The civic administration in the city of Belgaum is in the jurisdiction of the Belgaum Municipal Corporation (BMC). Belgaum Development Authority is responsible for the master planning of the city. Currently the total area under Municipal Corporation of Belgaum jurisdiction is 94 sq km. Elections to the council are held once every five years, with results being decided by popular vote. A cooperator from the majority party is selected as a Mayor. The urban local bodies are governed by Commissioner, where the governance framework, spatial jurisdiction and the functional domain of the ULBs are constantly monitored. The current commissioner of the Belgaum municipal corporation is **Mr. Y.S.Patil**.

Presented below is *table 1-1*, which shows an overview of Belgaum demographic facts:

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

S.No	Indicator	City/ ULB
1.	Location (Longitude and Latitude)	15° 52' 12" N, 74° 30' 0" E
2.	Area (in Sq. Km)	94 sq. km
3.	Slum area (in Sq. Km)	1.16 sq. km
4.	Demography – Population	
	2001 census	399,653
	2011 Population (census)	4,44,371
	2021 Population (Projected)	8 lakhs
5.	No. of Municipal Wards	58
6.	No. of Slums	51
	Notified	38
	Non-notified	13
7.	Slum population	57211
8.	No of households in slums	12082
9.	Percentage Slum population covered in ULB	12.8%

Source: Census 2011, AKM data

The total population of Belgaum city for the year 2011 was 4, 44,371 where it has shown a constant increase in the population with varying rate of growth from decade to decade. The decennial growth rate of Belgaum city (2001-2011) is 25.9% with population density considered to be high at 356 persons per sq km.

The impact of this growth has considerably changed the cultural, linguistic and industrial profile of the city, due to the influx of students from across India (and even across the world), some of whom made Belgaum their home base after completion of their education there.

As seen in *table 1-1*, of 4.44 lakhs people in Belgaum, 12.8% of the population currently lives in 51 slums, covering an area of 1.16 Sq. Km spread over Government, local body and private lands (year 2011). Location wise, around 36 slums are located in the core area are characterized by closely knit clusters while in fringe areas, the settlements are found scattered all over the city.

Municipal finance

Resource mobilization and financial stability is of paramount importance for any city's health and plays a vital role in the development. The source of revenue for Belgaum Mahanagara Palika 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 revenue expenditure constitutes the establishment expenditure, operation and maintenance, interest payment and others on service provision by BCC. The *table 1-2 presents* a comparison of the receipts and expenditure of Belgaum for the years 2009-2011.

Table 1- 2: Receipts and Expenditure for the Years 2009-20011 (Rs. In lakhs)

	Particulars	2010-2011	2009-2010
INCOME			
1.	Tax Income (% of Own revenues)	910.24 49.00%	901.24 45.14%
2.	Non-Tax Income (% of Own revenues)	963.94 51.00%	1095.04 54.86%
3.	Own Source Income (1+2) (% of Total Income)	1873.94 100.00%	1996.28 100.00%
4.	Assigned Revenues from the State	0.05	0
5.	State Transfers / Grants	10299.43	5469.64
6.	Total Income (3+4+5)	12173.37	7465.92
EXPENDITURE			
7.	Salaries & Establishment	1878.01	1763.72
8.	Operations & Maintenance	5056.50	3228.87
9.	Depreciation	1600.79	945.82
10.	Others	396.19	600.49
11.	Total Revenue Expenditure (7+8+9+10)	8928.49	6538.9
12.	Revenue Surplus / (Deficit) (6-11)	3244.88	927.02

Source: Belgaum City Corporation

As per the Belgaum City Corporation report, the tax Receipts are only in the range of about 49% of the total revenue receipts. As such dependence on non- tax receipts is high. Major portion of Non-Tax receipts arises from receipts from State Finance.

b. Housing Scenario

The urban character of Belgaum City is found to be complex where each area exhibits its own characteristics. The city has retained its original traditional character, as it is religious node it is packed with overcrowded streets and weak infrastructure levels. On the other side, due to the availability of all services, cultural attractions, areas adjacent to the city core has always been under constant development pressure and with increasing congestion. The peripheral areas altogether embraced by the municipal wards do have a strikingly different development pattern with well organized development pattern and better infrastructure, thereby encouraging the population to shift from older areas to these areas for a better living and hygienic life.

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 Belgaum 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 Belgaum include migration of people for jobs, availability of cheap living options.



Picture 1- 4: Semi pucca house, Alarwad (Ashrya colony)



Picture 1- 5: Huts in Kanabargi Extention (Sagar colony)



Picture 1- 6: Katcha house at Kasai galli



Picture 1- 7: Pucca house kaliambrai matang colony

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 the slums which are characterized by poor quality of housing and poor infrastructure. The following sections provide insights into the real picture of the slums.

With the increase in population of the city, housing needs grew, which could not be met out by the formal housing market. Migrate population, which is could not avail the facilities of suitable housing and lack of monetary support were forced to satisfy their needs by occupying vacant lands and due to poor economic conditions – who can neither pay rent for proper housing nor can afford to buy a house, has resulted in formation of slums and more number of squatter settlements.

Belgaum City has a total of 51 slums, wherein 38 slums are notified and remaining 13 are non-notified slums with 62% of these built on lands under Private. Over 70% of the slums have been into existence for more than 30 years in the city. The total population of the slums is 57,211 which are about 12.8% of the total city population. Around 4% slums are located along the major road network; 8% along railway lines and 4% along the nallahs and water bodies, thereby vulnerable to disasters/ flooding. Most of the slum settlements are concentrated around a CBD or any other dominant location/land use by forming larger clusters around it (as seen in *map 1-2*).

As evident in the *map 1-2*, 71% of the slums are located in the core area of the city with remaining 29% in fringe area. The abutting land use surrounding the slums is found to be predominantly residential in nature, followed by commercial use.



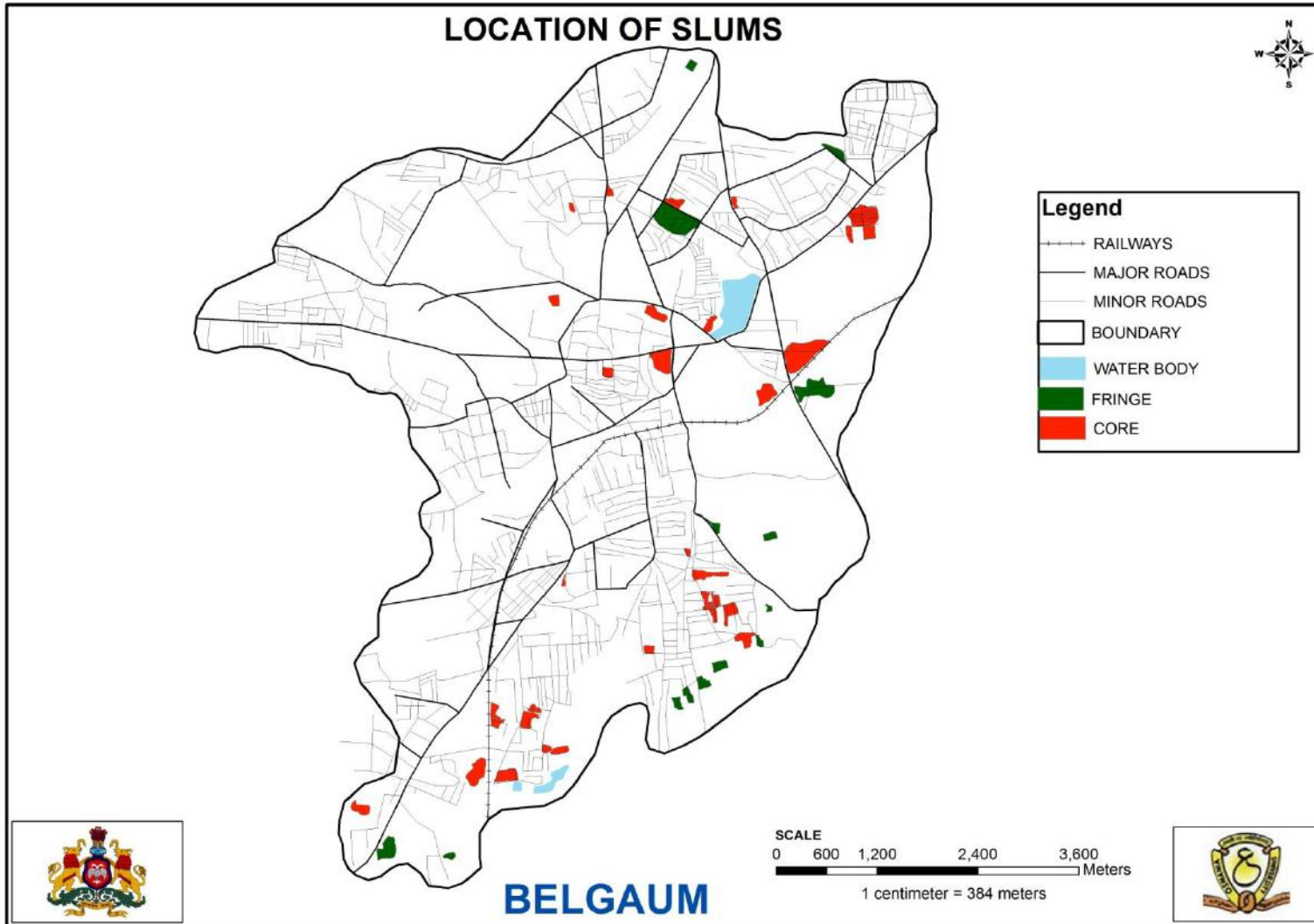
Picture 1- 8: Major transport along Vantumuri (ashraya colony)



Picture 1- 9: HT lines at Alarwad (Ashraya colony)



Picture 1- 10: Rain water logging at Rohidas nagar, 4rt railway gate



Map 1- 2: Location of slums in Belgaum city

The City wise, ward wise and slum wise descriptive details are provided in the **Annexure – 1A**.

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

For the purpose of analyzing existing situation, the following variables mentioned in RAY guidelines were studied and reported:

- 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 *table 1-3* summarizes the aspects crucial for determining the current status of Belgaum slums.

Table 1- 3 Distribution of slums according to number, status, tenability, tenure

	Status		Tenability			Tenure	
	Notified	Non-Notified	Tenable	Semi-Tenable	Non-Tenable	Secure	Insecure
No. of Slums	38	13	40	11	0	44	7
	Age of the slum						
	0-15 years	16-30 years	31-45 years	46-60	More than 60		
No. of Slums	6	9	11	20	5		
	Ownership of land						
	Local Body	State. Government		Private		Others	
No. of Slums	9	6		33		3	

Source: AKM data

Of the total slums, 33 slums have found to be emerged on lands owned by the Private and remaining slums under the Local body and state government ownership. As seen in the *table 1-3*, nearly 86% of the slums do possess a secured tenure status and an enabled pleasant living condition while 14% of the slums do not have a secured status i.e. without any access to basic amenities.

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 1-3*, 86% of the slum lands are secured and have access to basic amenities and have possession certificate while 14% of the slums are still In-secured, 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.

Distribution of Slums by Tenability Status

The land status of all listed slums/informal settlements are classified by the ULB as tenable² or untenable in order to determine whether the land is fit for human habitation and void of health hazards(RAY Guidelines).

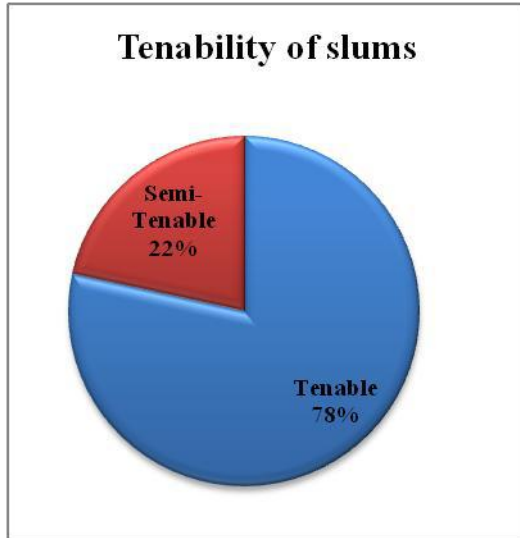


Chart 1- 1: Tenability of slums

Chart 1-1 indicates that the current tenability status for 51 slums as identified by the ULB has been presented. Over 78% of the slums are found to be tenable and the remaining 22% Semi- tenable, thus proving to be unsafe due to reason that the slum lands are either earmarked for any major public facilities or located on hazardous sites.

This is very small in number hence viable solutions can be arrived in consultation with ULB.

Distribution of slums by land Ownership

As seen in *chart-1-2*, it is observed over that 65% of the slums are built on lands are owned by Private, followed by 17% owned by Local Body and remaining 12% of the slums is built on the lands are under State Government.

Mentioned earlier, 65% 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.

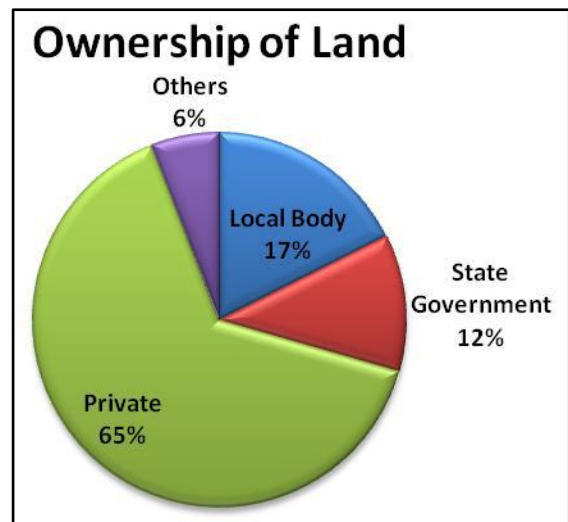


Chart 1- 2: Ownership of land

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.

Distribution of Slums by Age

Age of the slum is one of the important information to understand the condition of a slum in any city. it is found that 12% of slums have emerged recently in the past 15 years where as remaining slums have emerged more than 15 years ago (seen in *chart 1-3*).

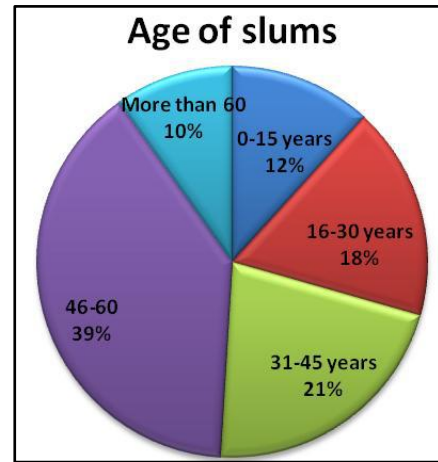


Chart 1- 3 Age of slum

Notification of Slums

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, currently 38 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.

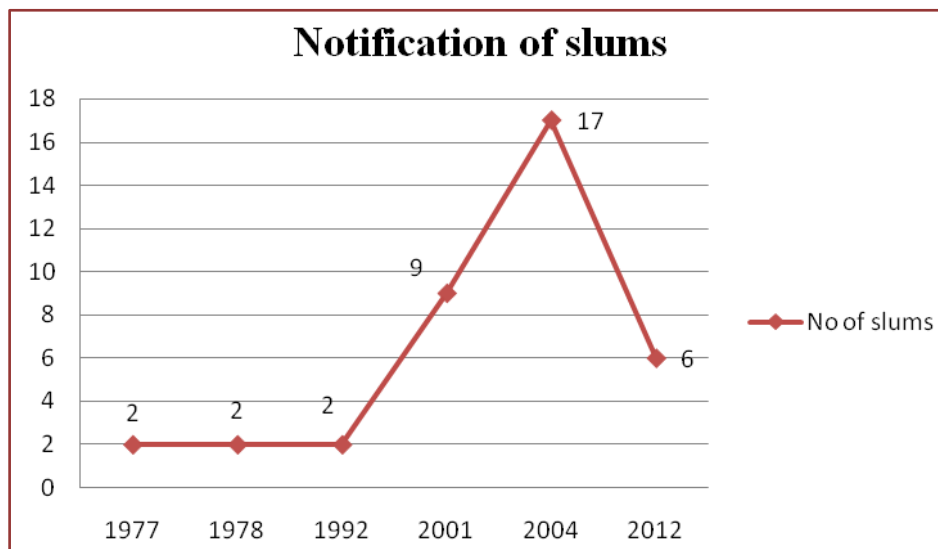
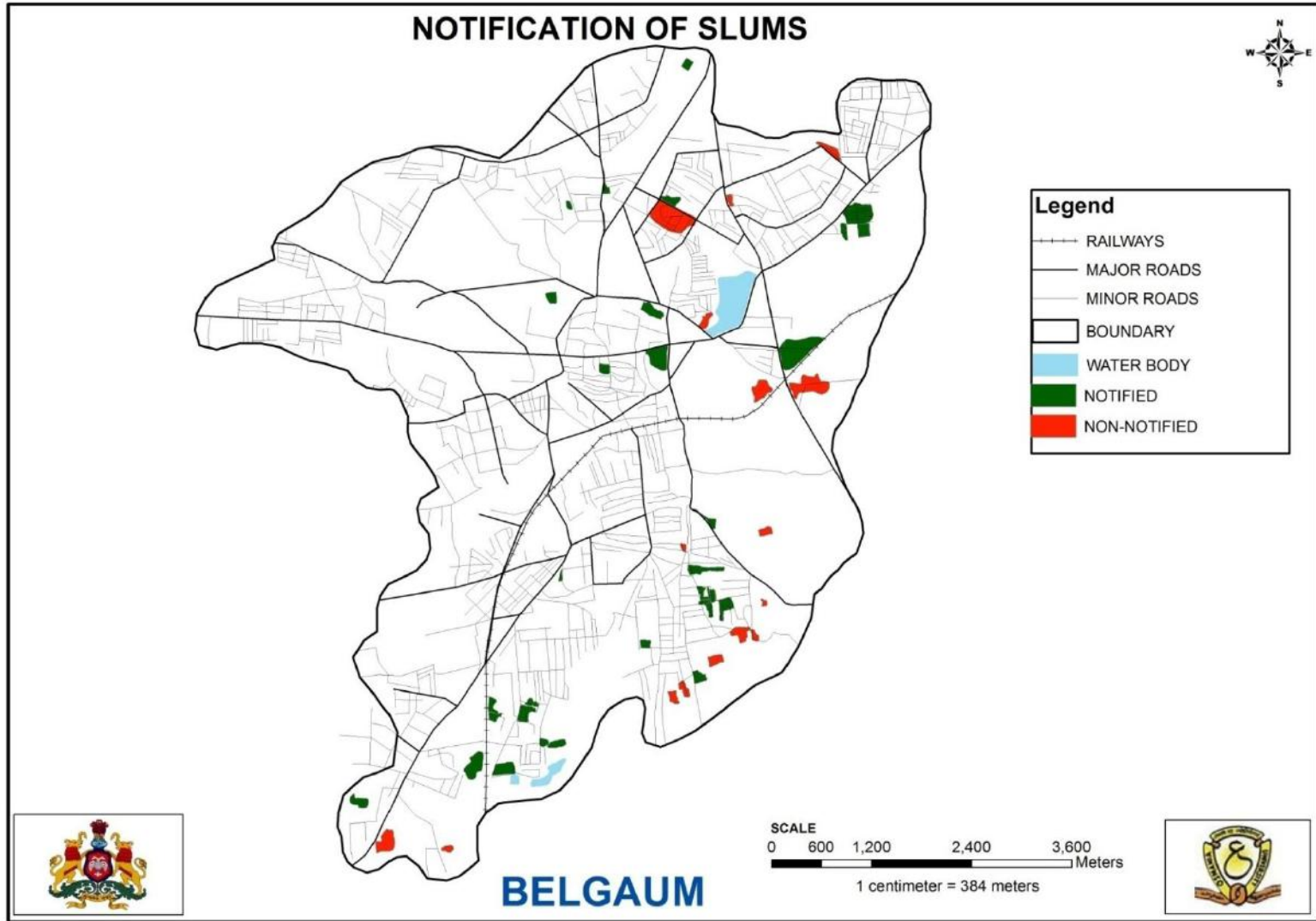


Chart 1- 4 Notification of slum

Please refer **Annexure 1-A**, for a detailed slum wise description of the variables in *table 1-3*.



Map 1- 3 Notified and Non-Notified slums

b. Physical profile

Slum and squatter settlements in Belgaum 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- 4: Summary – area, location, abutting land use & flood vulnerability

Area(Sq.mt)					
	0-20,000	20,001 to 40,000	40,001 to 60,000	60,001 to 80,000	80,001 to 10,0000
No. of Slums	33	10	3	3	2
Whether slum is Located					
	Core			Fringe	
No. of Slums	36			15	
Physical location of slum					
	Along Nallah (Major Storm water Drain)	Along Railway Line	Along Major Transport Alignment	Others (Non- Hazardous/ Non-objectionable)	
No. of Slums	2	4	2	43	
Whether the Slum is prone to flooding due to rains					
	Not prone	Up to 15 days	15-30 Days	More than a Month	
No. of Slums	40	7	2	2	
Type of Area surrounding Slum					
	Residential	Industrial	Commercial	Institutional	Other
No. of Slums	41	4	0	0	6

Source: AKM data

Distribution of Slums by Physical Location

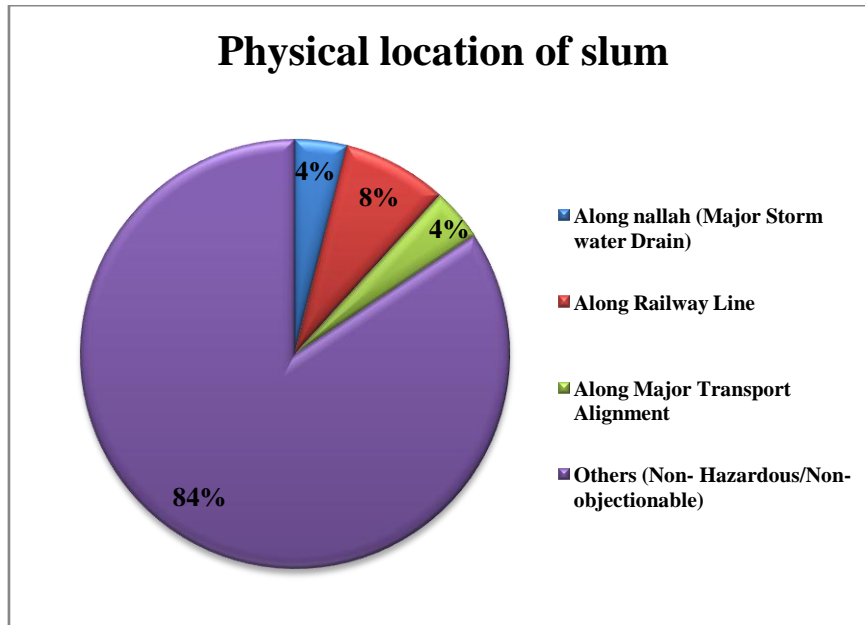


Chart 1- 5: Physical location of Slums

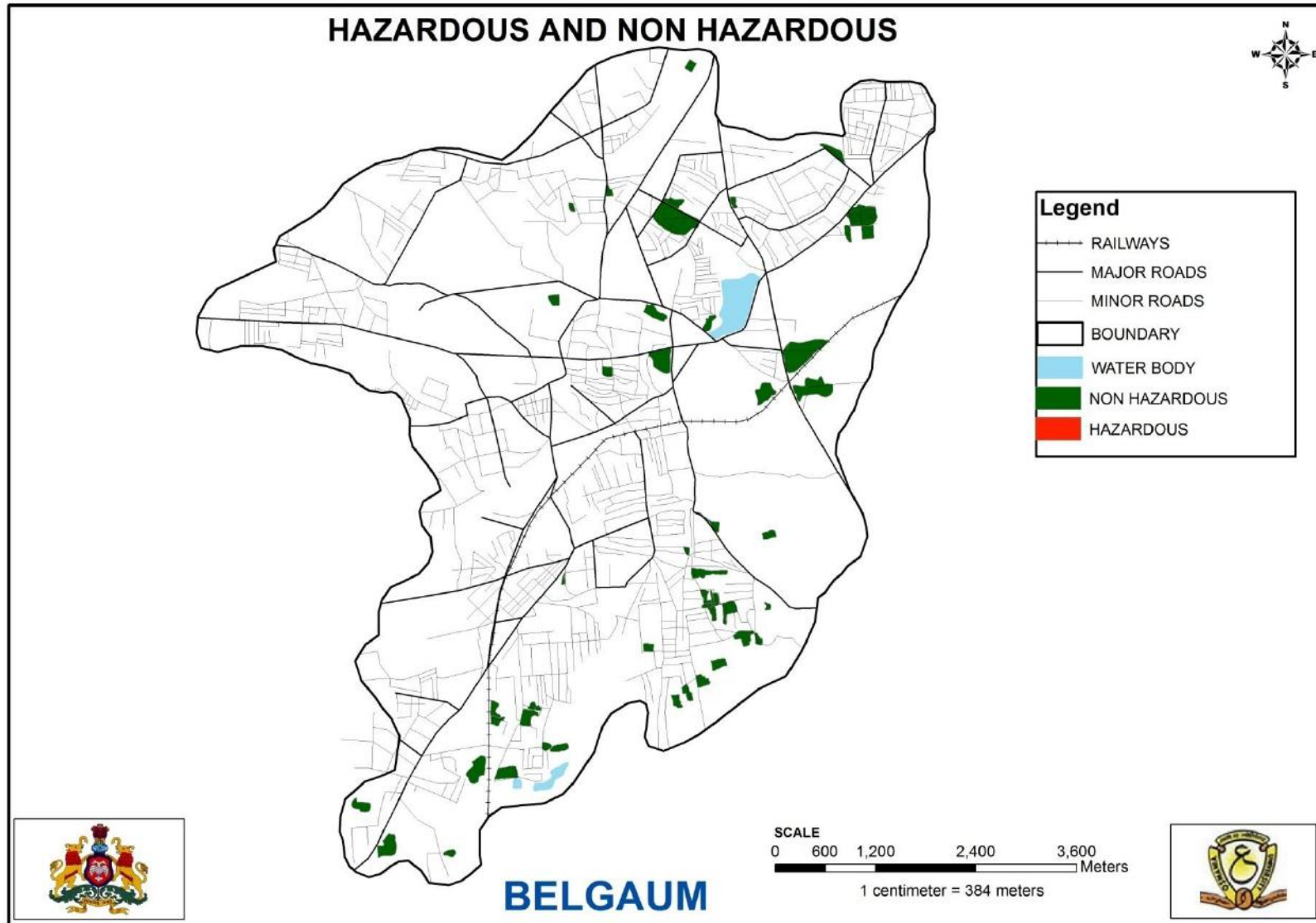
Out of 51 slums, 36 slums are found in the core area such as near CBD and remaining 15 in the urban fringe areas near agricultural lands. With respect to the physical location of the slums, around 4% are located along the major transport alignment, 4% along the open and storm water drains, 8% along the railway lines. As indicated, 84% of the slums are on the sites of non hazardous / non objectionable and remaining on the objectionable areas. Hence 16% of slums require special attention before undertaking any development, the beneficiaries cooperating and their livelihoods are of paramount importance



Picture 1-11: Slums along open drain- Laxmi nagara, Vadagaon



Picture 1-12: Location of Shivaji nagar major transport alignment



Map 1- 4: Hazardous and Non-Hazardous slums

Distribution by Slum Area

According to AKM Data, slum population constitutes 12.8% of the total city population while the total slum area (1.16 Sq. Km) is about 1.23% of the total city area. Nearly 65% of slum areas are found to be in the below of 0.02 Sq.Km. The total slum area under the ownership of ULB is 0.54 Sq.km, and the State government is 0.11 Sq.Km; 0.52 Sq.Km for Private ownership

Flood Prone Slums

As indicated in the *table 1-4*, nearly 22% of the slums are found to be vulnerable to floods for duration of 15 days or even more indicating lack of safety to the slum dwellers. Moreover, the duration of water logging is found to be more than a month in Kurbar Galli, Anagol, Kanaka Das Nagar, Vadagaon and Patil Galli, Waddar Chavani of ward no 6, 10 and 13, according to AKM sources, which are easily susceptible to floods during rainy season.



Picture 1- 14: Huts in Rukmini nagar over view



Picture 1- 13: Water stagnation in Harijankeri. Angol

Distribution of slums by abutting land use

Looking into the abutting land use, it reveals that 80% of the slums are surrounded by residential land use, followed by 20% other and industrial land uses (as seen in *table 1-4*). Of the 15 slums located in the fringe areas, 47% of the slums are bounded by residential and remaining 53% surrounded by other and Industrial land uses respectively.



Picture 1- 16: Nazari camp, Harijan wada



Picture 1- 15: Laxmi nagara, Vadagaon

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 katcha, based on the kind of roofing and wall materials used.

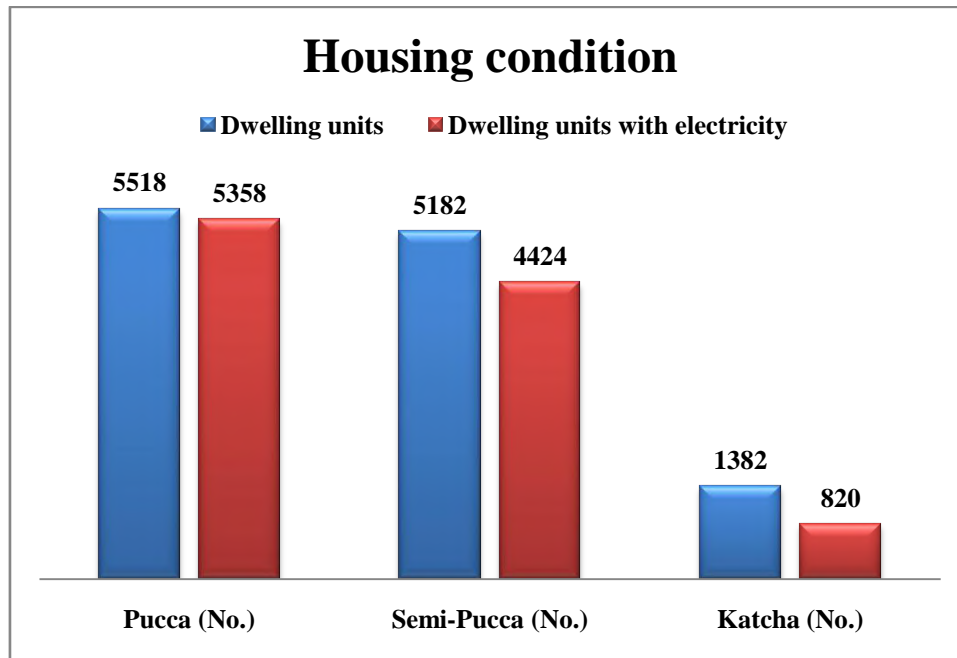


Chart 1- 6: Existing Housing condition

It is evident in *chart 1-6*, 43% of the dwelling units built is semi Pucca and 11% units are katcha in nature with remaining 46% are Pucca houses. With respect to electricity connection, nearly 88% of the dwelling units have access to the same where 97% of Pucca houses; 85% of semi Pucca and 59% of katcha houses have electricity connection. Yet there is a shortfall of 12% of the total houses that needs to be connected to electricity.

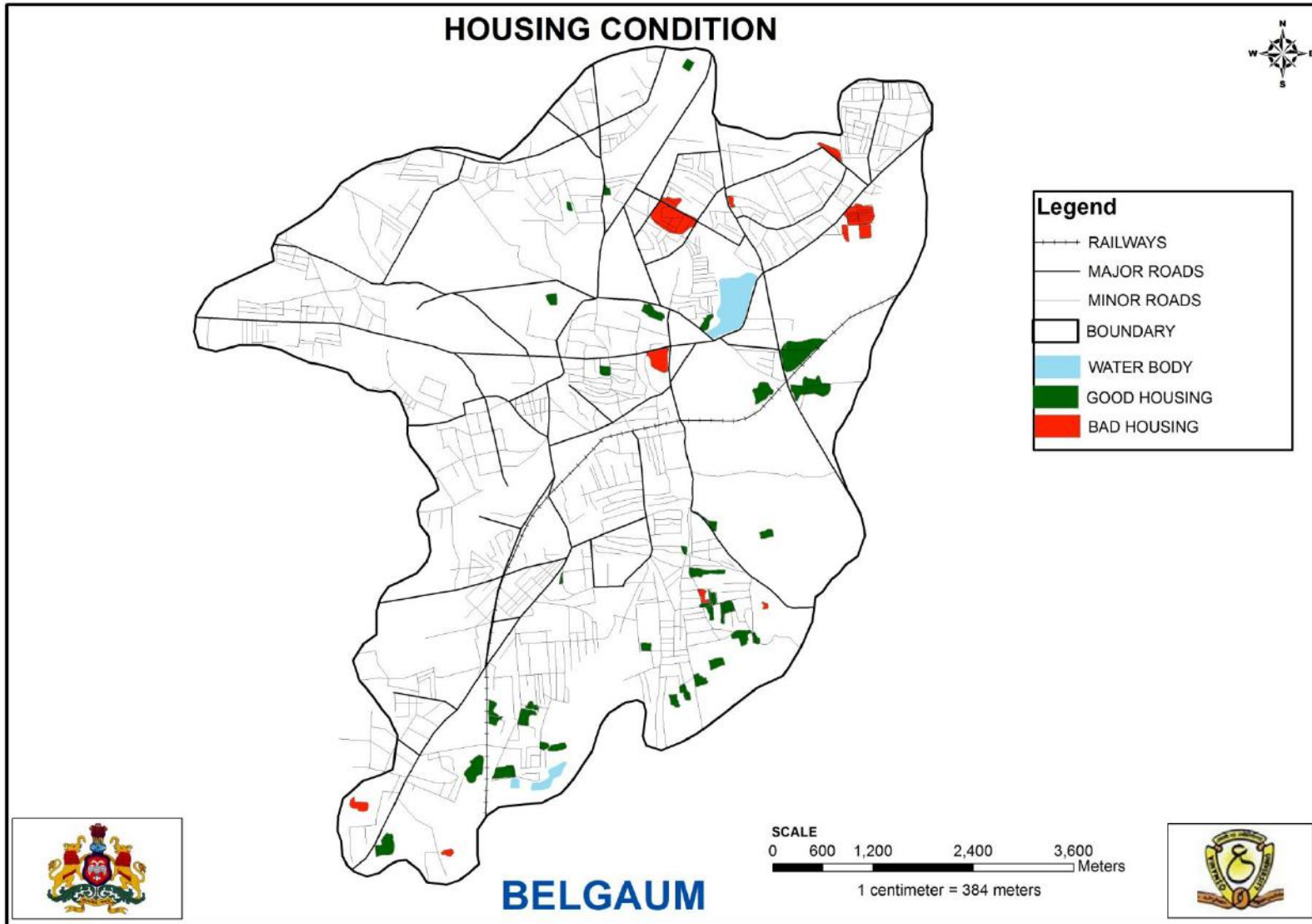


Picture 1- 17: Katcha houses in Waddar galli, Angol



Picture 1- 18 : Semi pucca houses at Teggen galli, Waddar Chavani Vadagaon

The *map 1-5* shows housing situation:



Map 1- 5: Housing condition in Belgaum Slums

The map depicts the current housing structure condition in the slums of Belgaum. 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 13 slums have semi pucca + katcha houses more than 75% while 38 slums in the latter category. Since Belgaum is main center for Educational activities and greater influx of floating population, there has been massive dependence on existing congested housing and infrastructure thus leading to poorly maintained crammed houses and unhygienic conditions in the slums.

Based on the income levels and the affordability levels of the households, the kind of housing is determined and varies accordingly. Similarly in Belgaum, 46% 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 pucca 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.

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



Picture 1- 19: Housing situation at Kasai Galli slum



Picture 1- 20: Semi pucca house in Shivaji Nagar



Picture 1- 21: Alarwad (Ashraya colony)



Picture 1- 22: Kaliambrai Matang colony

c. Social Profile

According to recent survey, the total population in 51 slums are found to be **57,211** and the total number of households estimated to be **12,082**, comprising 15% (approximately) of total city households. Of the total slum population, 79 % is below poverty line (BPL) with **9615** households.

Table 1- 5: Population & Health

Indicators	SC s	STs	OBCs	Others	Total	Minorities
Total Population in Slum	13440	3060	38088	2623	57211	21904
BPL Population in Slum	12044	2747	28549	1906	45246	17462
No. of Households in Slum	2809	683	7946	644	12082	24164
No. of BPL Households	2526	613	5998	478	9615	3456
No. of Women-headed Households	659	234	1133	148	2174	664
No of Persons older than 65 Years	158	22	537	52	769	150
No of Child Laborers	101	45	165	10	321	109
No. of Physically Challenged Persons	138	32	313	21	504	157
No. of Mentally Challenged Persons	33	12	98	9	152	59
No. of Persons with HIV-AIDs	5	0	6	0	11	4
No. of Persons with Tuberculosis	11	1	15	2	29	6
No. of Persons with Respiratory Diseases including Asthma	25	9	92	8	134	49
No. of Persons with Other Chronic Diseases	49	22	216	20	307	138

Source: AKM data

Total population

Seen in *table 1-5*, around 18% of the household population forms the women-headed households with OBC caste women being in lead. Similarly 1% of the total population in the slums belongs to Child laborers.

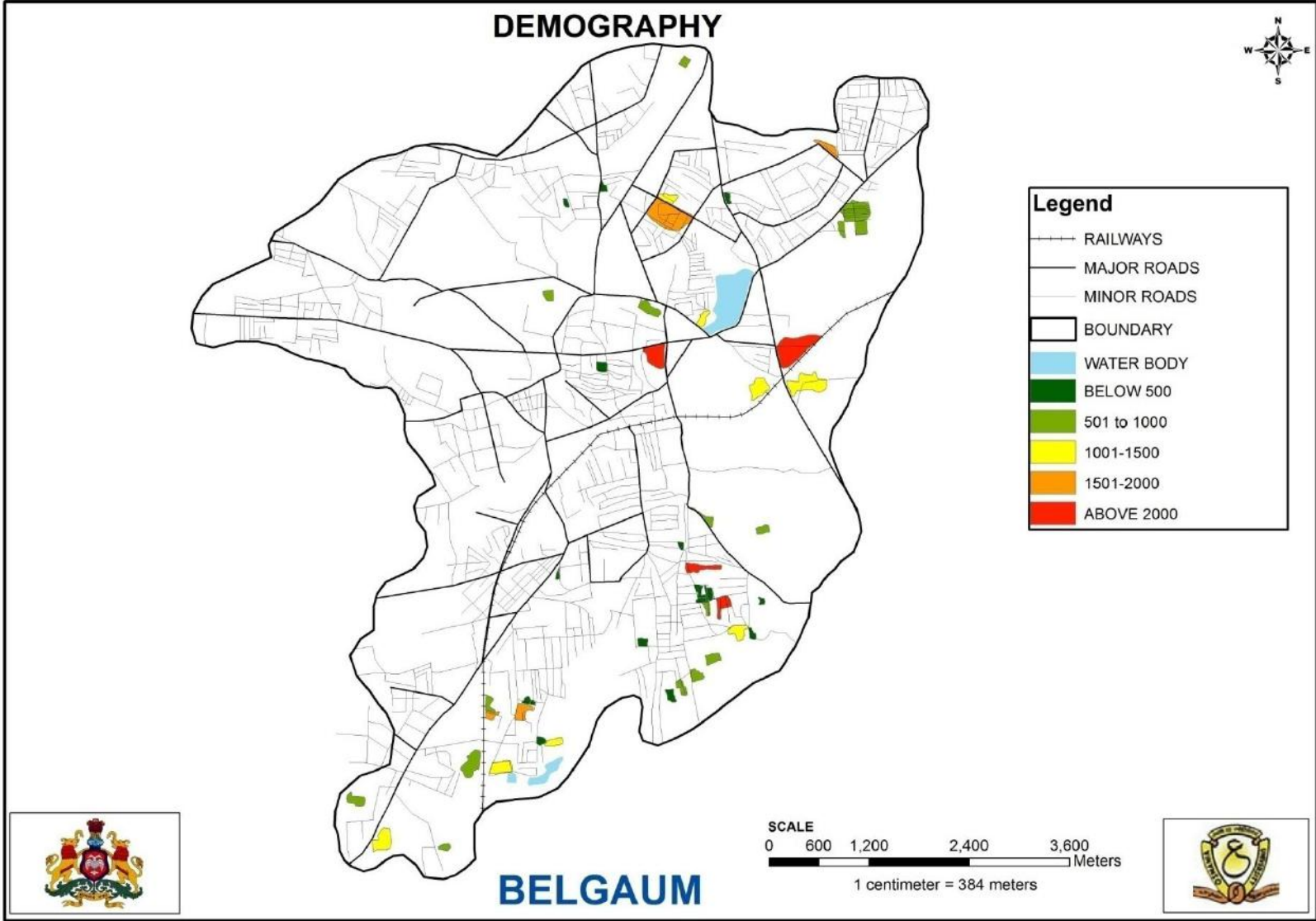
Population details Shown in *Map 1-6* Demography.



Picture 1- 23: Devang nagar, Vadagaon



Picture 1- 24: Kalmeshwar nagar, Vadagaon



Map 1- 6: Population Classification in Slums

As seen in *Map 1-6*, the slums have been classified into 5 equal class intervals where it is observed that the slums marked in red color have population more than 2000 persons and mostly located along the nallahs and Non- Hazardous/Non-objectionable. The population distribution in the slums is found to be varying as low as 143 persons to a highest value of 8173 persons.

As per AKM data, New Gandhi nagar is found to be having the highest slum population (8173) and highest BPL population. Of the total 51 slums, 5 slums have highly dense wherein the highest density is found in Laxmi Nagar, Vadagaon, Zatpat Nagar. Comparing the density results, it is observed that around 27 slums had low density and 19 slums were moderately dense.

Distribution of slum households by caste/different social groups

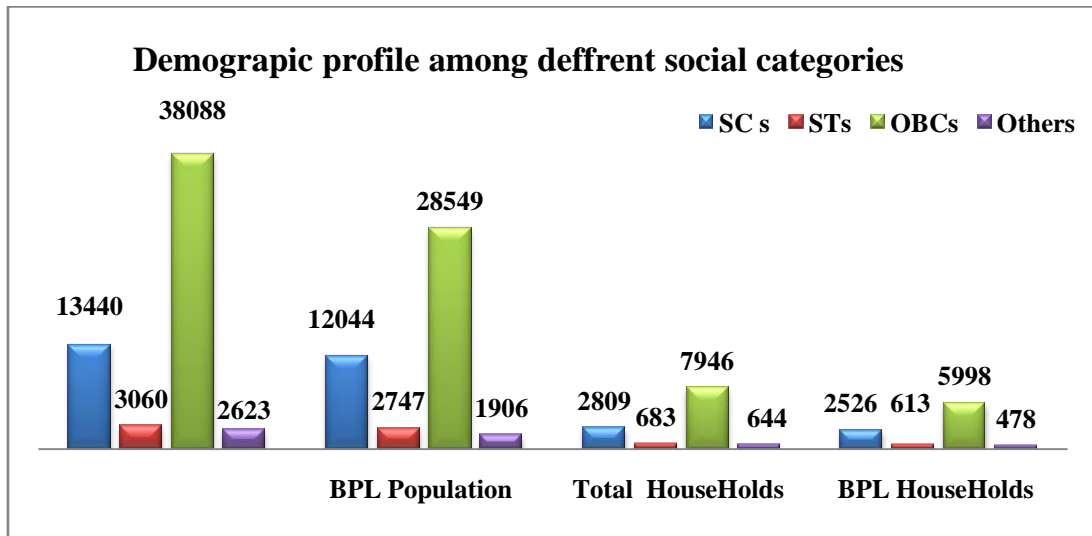


Chart 1- 7 Population Details Based on Different Social Categories

Seen in the *chart 1-7* for different social categories, SC and OBC’s are found to be in larger number comprising of 90% of the total population and 90% under BPL when compared to other groups in the 51 slums respectively (seen in *table 1-5*). According to different social categories, it is observed that 1% of SC population constitutes the Child Labor. 27% of the BPL population in slums is SCs & 63% comprises of OBCs and the remaining 6% belongs to STs and others.

Distribution of slum households by Minority groups

Of the total slum households, 38% forms the minority group with a BPL population of 45246 persons. For women headed category, 18% of the households belong to the women headed households while 0.5% of the minority population belongs to child laborers.

Literacy rate by gender

Of the total slum population, 85 % are literates and the remaining 15% are illiterates where 43% are male and 57% are females.

Under different social categories, SC population has the illiteracy rate of 36%, followed by OBC group with 51% of illiterate persons. Similarly, under BPL category, the percent of illiterates is found to be 17% of the total BPL population.

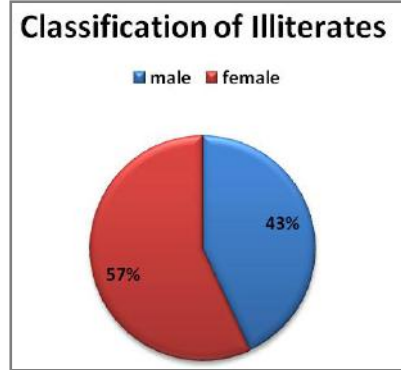
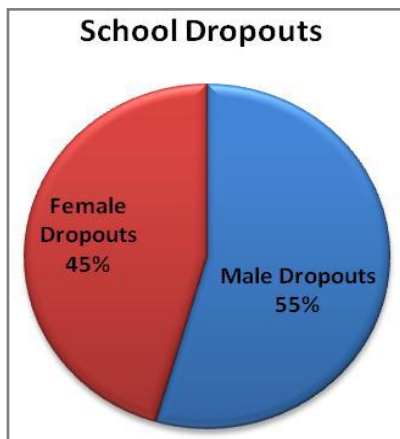


Chart 1- 8 Classification of illiterates

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 1% (506 persons) of the slum population was school dropouts with 55% of males and 45% females under it.

As mentioned above, the 1% school dropout belongs to the age groups of 6-14 years, hence can be partly attributed as one of the reasons for the child labor in the slums of Belgaum city. It is also found that child labor is prevalent in silk and carpet industry in the form of unskilled labor. Hence mitigation measures needs to be taken through implementation of education policy programmes and provision of elementary education to the deprived groups.

Chart 1- 9 Classification of School dropouts



Picture 1- 25: Images showing school dropouts-in Belgaum slums

Number of Slums by Disability Status and senior citizens

As per AKM data, the physically challenged population comprises 1 percent of the total slum population, with OBC group forming the highest under social groups. Similarly the mentally challenged persons constitute 0.3% of the total population in Belgaum slums.

In Belgaum Slums, it was found 1% of the total constitutes the senior citizens where in OBC's group accounts for 70%. 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 Belgaum slums. In addition, eligible aged persons and senior persons in BPL families that can hardly support the aged should be entitled to National Old Age Pensions 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 Belgaum 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. Due to contamination of water and outlet of effluents into the river, thus making the households be exposed to skin irritation, respiratory problems and other diseases. Indicated in Annexure –I, 0.1% of the population is suffering with Tuberculosis and 0.23% with respiratory problems.

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

d. Economic profile

Belgaum is the commercial hub and divisional headquarters of north Karnataka, standing second to Bangalore in terms of overall exports in the state (mainly automotive industry). Known as the "Bread Basket / Rice Bowl" of north Karnataka, it is an important location for vegetables, fruits, meat, poultry, fish, wood (due to heavy rainfall, rivers and water abundance), mining production, trading in north Karnataka and is mainly traded with Goa along with major cities like Pune and Bangalore.

Belgaum is a major producer of milk in the state, almost 1/3 or 30% of state's production and has the highest number of sugar factories; Belgaum, being home to Renuka Sugars and other enormous large scale sugar factories, is also known as Sugar Bowl of Karnataka.

From the early 1970s, Belgaum began developing as an important centre for the manufacture of heavy machine tools, including the manufacture of high pressure oil Hydraulics.

Belgaum is one of the major textile centres in the State with over 50,000 power looms (including unregistered units). Almost entire areas of old Belgaum at Vadagaon, Khasbagh, and Shahpur are engaged in business with power looms. Belgaum is known for what are known as "Belgaum saris" which are sold under different brand names. Over 30,000 people are directly dependent on the power looms. There are also ready-made garment units, including export oriented, besides those manufacturing Khadi cotton products.



Picture 1- 26: Welding works in Rohidas nagar 4th railway gate

Trade flourishes in Belgaum, and many areas of the city are dedicated to certain kinds of trade. For example, almost all automobile-related trade and manufacturing in the Fort Road area of the city and Udyambag. The Raviwarpeth area is known as the wholesale market which sells commodities like grains, tea, etc.

Belgaum also is a strong industrial hub for machine shops catering to automotive manufacturing, especially in Crankshafts and castings. The geographical location of the city is an advantage since it is situated right in between Bangalore and Mumbai–Pune to support the major automotive and aerospace companies.

A 300-acre (1.2 km²) Special Economic Zone is being set up along the Pune-Bangalore highway to cater to precision engineering requirements of the global aerospace, automotive and industrial verticals. About 79% of the total population in the city lives below poverty line. As evident, a significant amount of the working population from slums is employed in these economic activities, but however nearly 35% of the slum households are still un-employed.

Overall employment and unemployment table is shown in **Annexure 1E**

Livelihood profile

Two types of labour 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 technical skills. As indicated in AKM, 15% of slum population is illiterate with lack of skill and professional training, making it difficult for them to obtain skilled employment opportunities in Belgaum, hence end up doing low or moderately paid jobs on a daily basis. The composition of the work force conveys a picture of quality of life people maintain and their social and economic activities.

With respect to slums, the development plan also documents that 65% of the households are employed and remaining 35% as unemployed. The unemployment in slum dwellers can be potentially mitigated by implementing schemes such as SJSRY, STEP UP and other livelihood oriented training programmes initiated by Govt. of India.

Majority of the working population in the slums is engaged in tertiary sector which comprises of wholesale business, informal sector, scrap business, musicians, sweepers and street vendors. In addition, a certain amount of the slum working population is involved in industrial activities such as cloth making, leather goods and ancillary industries supporting foot wear. On the other hand, slums households located in urban fringe area are involved as agricultural laborers due to the presence of fewer agricultural lands in close proximity.

Distribution of slums households by Occupation Status

As per AKM data, it is inferred that 50% of the households are found to be working as casual laborers and 13% on regular wage basis as they are semi-skilled. Around 17% is found to be working on a monthly salary, 16% of the self employed indicating a secured position. Therefore, nearly 67% of the slum households do not have opportunities towards sustainable occupation and secure incomes.

As per the recent AKM data, 67% of the slum households do not have opportunities towards sustainable occupation and secure incomes. This situation of slum livelihoods need to be taken into consideration in future development programmes as there is a need for an enhanced productivity.

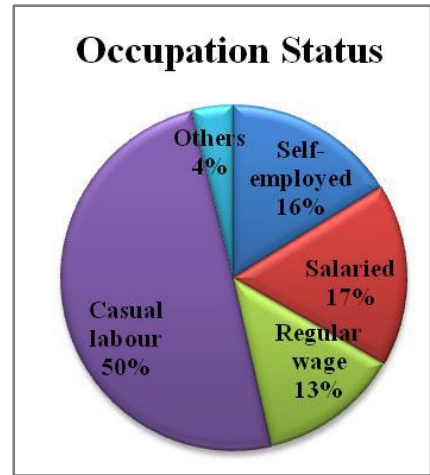


Chart 1- 10: Occupation Status of Slum Dwellers



Picture 1- 27: Milk products making in Rajaram nagar



Picture 1- 28: Push Carts -Harijankeri, Anagol



Picture 1- 29: Carpenter worker- Zatpat colony, Belgaum



Picture 1- 30: Informal sector- Kalmeshwar nagar, Vadagaon

Monthly Income by Households

The monthly income of 20 % households ranges between Rs.1500 to Rs.2000 and 30% households earn between Rs.2000 to Rs.3000 while 31% earns above Rs.3000 per month. The households that earn less than or equal to Rs.1000 is 5% while Rs.1000 to Rs. 1500 is 15%, indicating the nature of these households to be casual labor and belong to BPL class.

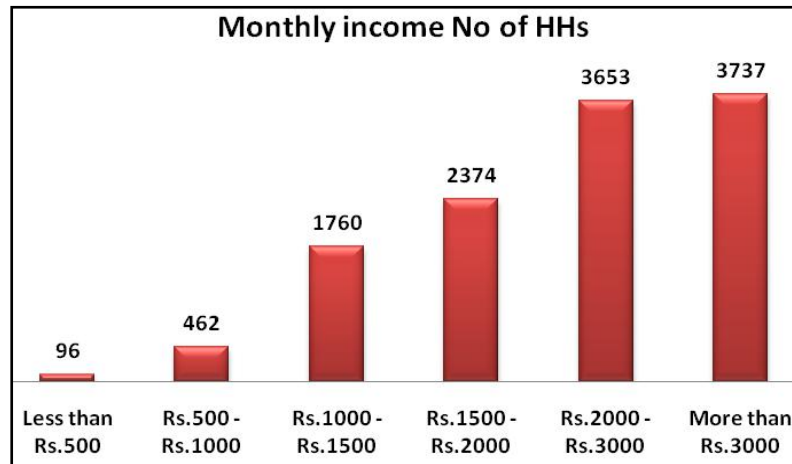


Chart 1- 11: Monthly Income Classification

Further, the livelihood pattern has become indefinite and irregular for the households, where 31% of them are earning more than Rs.3000/- per month and 15% of the households earn half or less than the salaried class. 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 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

e. Infrastructure

Sustainable growth of a city depends on its infrastructure facilities. Lack of infrastructure can lead to collapse of urban system in a city. Access to basic services is now deemed 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 found prevalent. Information on access to services in terms of Physical Infrastructure of Belgaum city has been collected and a brief analysis of the current status of the Belgaum Municipal Corporation. Water Supply, sewerage, Storm Water drainage and Solid Waste Management are taken in to consideration. The numbers indicated in *table 1-6 to 1-14* are based on an AKM data of 51 slums.

Water Supply

Table 1- 6: Current Water Supply Statistics

Connectivity to City-wide Water Supply System								
No. of slums	Fully connected		Partially connected			Not connected		
	28		16			7		
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 using	7652	2567	285	845	1	5	4	723
Existing Situation	No. of individual taps		No. of public taps		No. of tube wells / bore wells/ hand pumps			
	7377		73		45			
Duration of water supply								
less than 1 Hour daily	1-2 hrs daily	more than 2 hrs daily	once a week	twice a week	not regular	No supply		
0	2	14	1	23	5	6		

Source: AKM data

The Rakaskop reservoir was the only source of water for Belgaum city. Belgaum City Corporation has tried out an innovative method to augment the availability of water, and has succeeded in reviving open wells to supplement formal water supply. The revival of wells has led to better supply of drinking water and recharging of groundwater level.

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, 55% of it is fully connected to the city wide water supply system; 31% is partially connected. The remaining 14% 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.



Picture 1- 31: Overhead tank, Alarwada (Ashrayya colony)



Picture 1- 32: Hand pump in Kaliambrai matang colony



Picture 1- 33: Public tap in kasaigalli slum



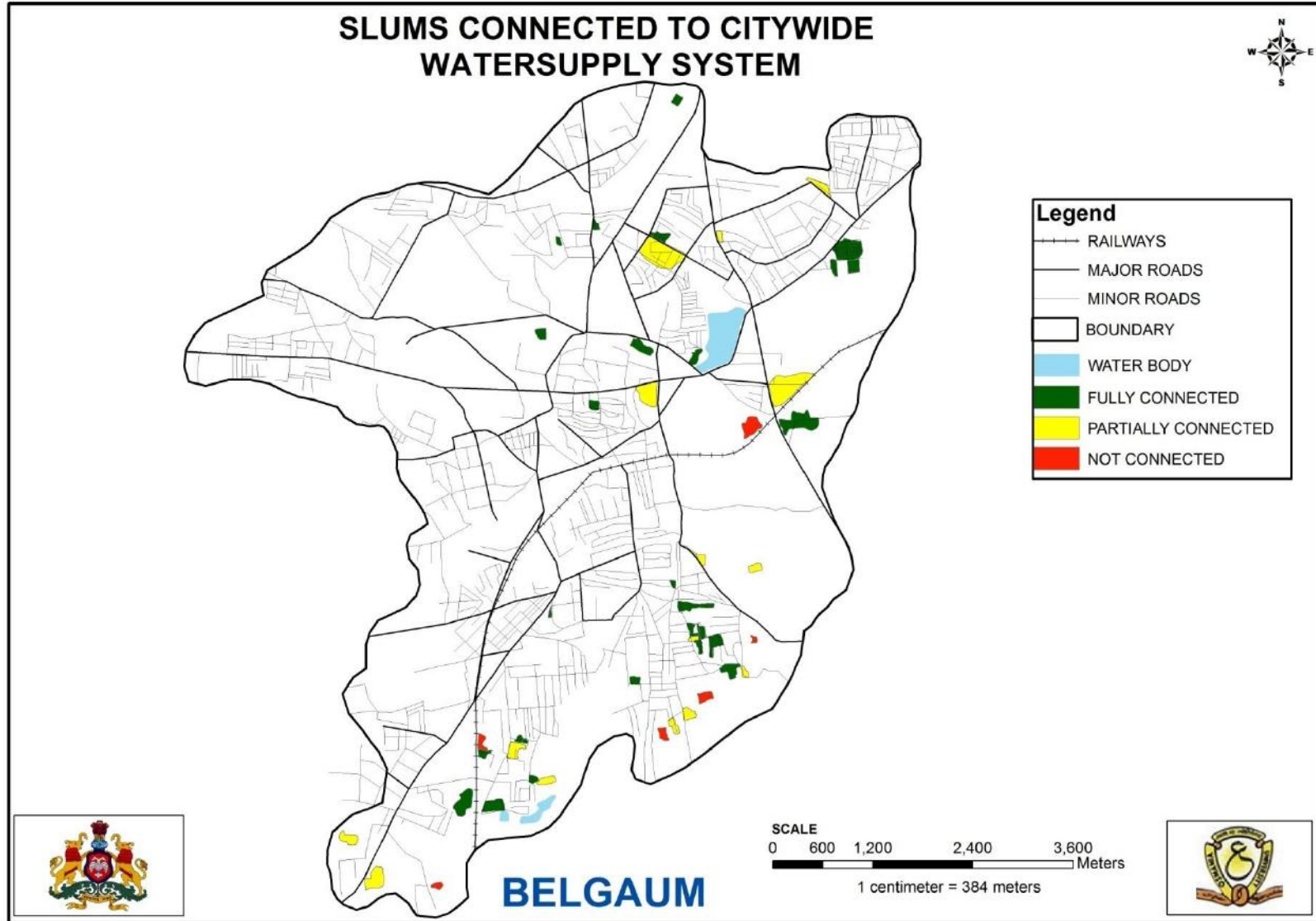
Picture 1- 34: open well in Maruthi nagar (Bijapur road)



Picture 1- 35: Quality of water at Marithi nagar (Bijapur road)



Picture 1- 36: Public tap in New Gandhi nagar



Map 1- 7: Slums Connected to City-Wide Water supply System

Existing Sources of Drinking Water

Over 63% of the households have individual water supply connections with protected drinking water is being supplied to 7377 Households by the Urban Local Body. Hence a significant percent of 37% of the households do not have access to drinking water and dependent on public water taps, tube wells, open wells, hand pumps and water tankers. It is observed that an average about 35 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 27% of the slums have access to piped water supply for more than 2 hours on a daily basis. In order to achieve 100% piped water supply it is necessary to address for 16 slums.



Picture 1- 37: Other sources of water supply - Devang nagar, Vadagaon



Picture 1- 38 Municipal water tap - Laxmi nagara, Vadagaon

Despite the connectivity to city wide water supply system, the major problem is observed to be is the poor quality of water and leakage of water pipes. This is due to the prevalent unhygienic conditions and contamination of river through garbage disposal 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- 39: Bad sanitary condition- Zatpat colony, Belgaum



Picture 1- 40: Open drain- ramnagar waddarwadi

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 1-7*

Table 1- 7: Current Sanitation Statistics

Connectivity to City-wide Storm-water Drainage System										
Fully connected			Partially connected			Not connected				
25			12			14				
Connectivity to City-wide Sewerage System										
Fully connected			Partially connected			Not connected				
23			11			17				
	Storm water Drainage			Underground Drainage/Sewer Lines			Digester		Not Connected to Sewer or Digester	
No. of HHs having access to	7127			5893			2742		3683	
Latrine Facility used by the households										
No. of Users	Public/Community			Shared Latrine			Own Latrine			Open Defecation
	Septic tank/ flush	Service latrine	Pit	Septic tank/ flush	Service latrine	Pit	Septic tank/ flush	Service latrine	Pit	
	1286	0	1	665	0	7	7641	0	2	

Source: AKM Data

Connectivity to City wide Trunk Sewerage System

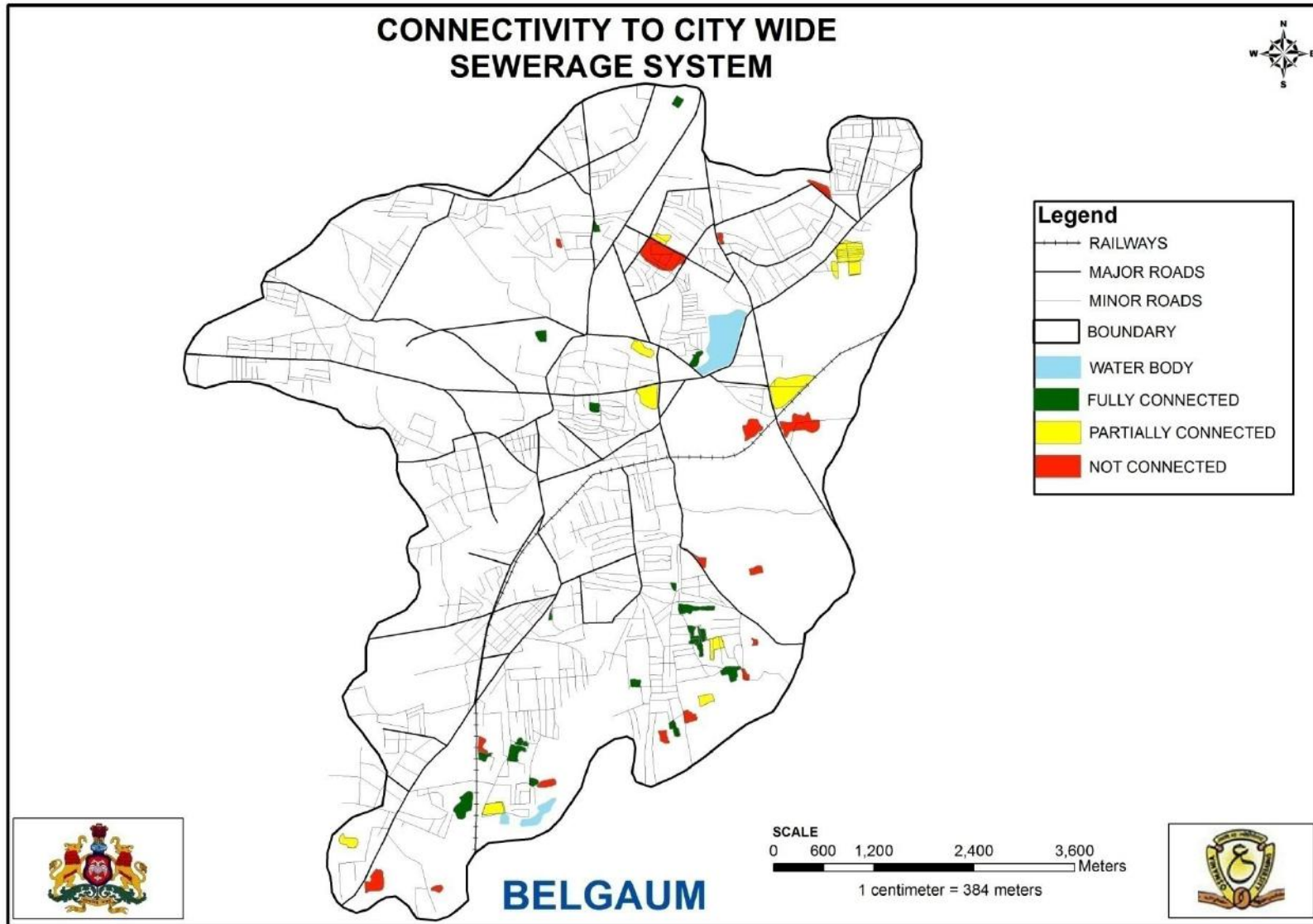
23 slums are fully connected to the city wide trunk sewerage system. Even though 45 % of slums are connected to city wide sewerage system still 55 % needs to be upgraded. The *map 1-8* presents the status of the slums that connected to city wide sewerage system.

The *Map1-8* shows condition of storm water drainage system

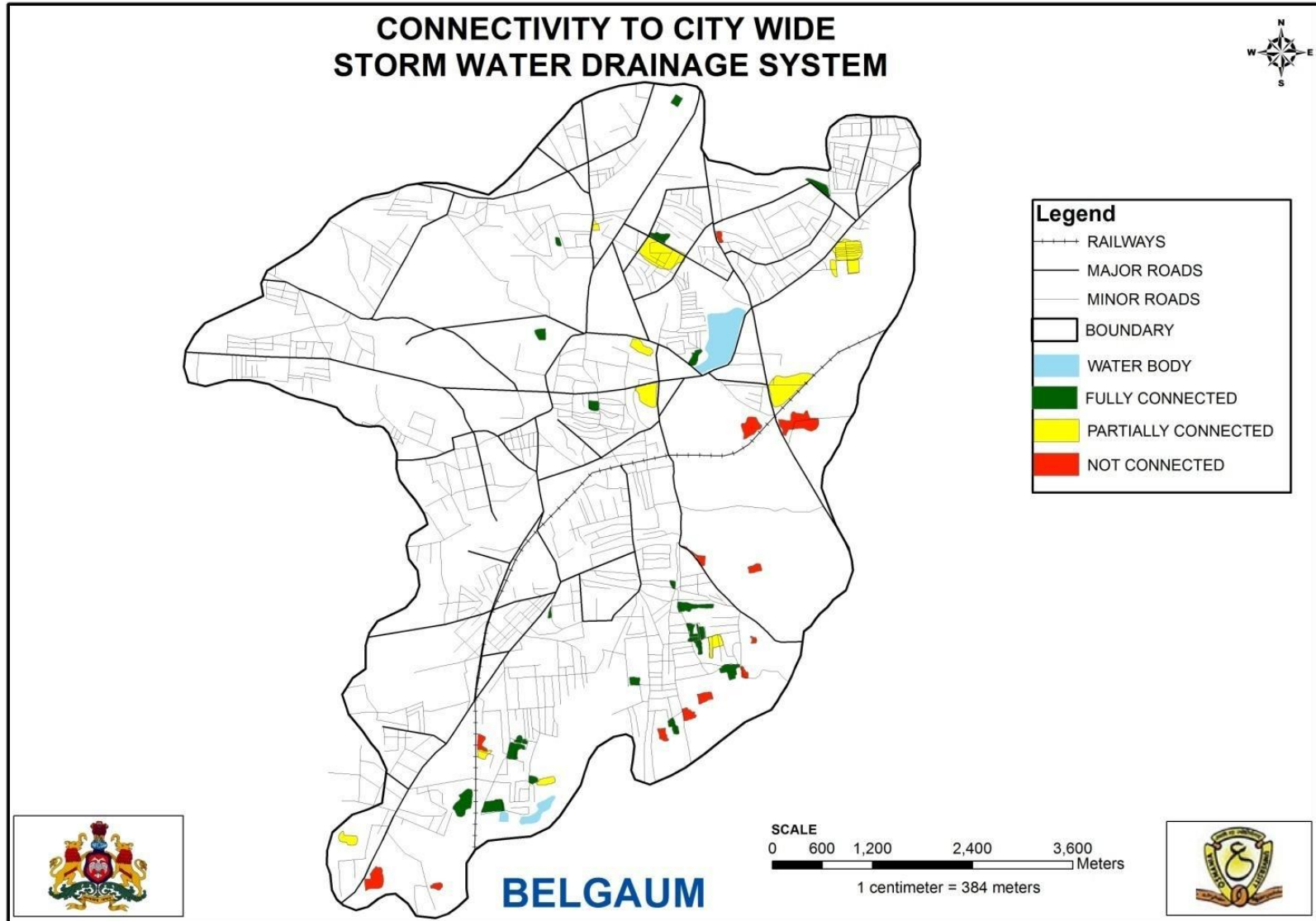
Connectivity to city wide Storm water drainage

Similarly 40% of the slums are fully connected to the storm water drainage system, but 60% 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 storm water drainage

Drainage and Sewerage facility

As per AKM data, it was found that 59% of households have access to storm water drainage while 49% has access to underground sewer lines with 23% of the Households linked to digester. However 30% of the households do not have any sewerage facility. 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 (Seen in pictures 1-35, 36 &37).



Picture 1- 41:Open drain in Rohidas nagar,4th railway gate



Picture 1- 42:Drainage facility in Kasai galli



Picture 1- 43:Drain at maruthi nagar(bijapur road)

The pictures shows the condition of storm water drainage system

Distribution of Households by use of different type of Toilet facilities

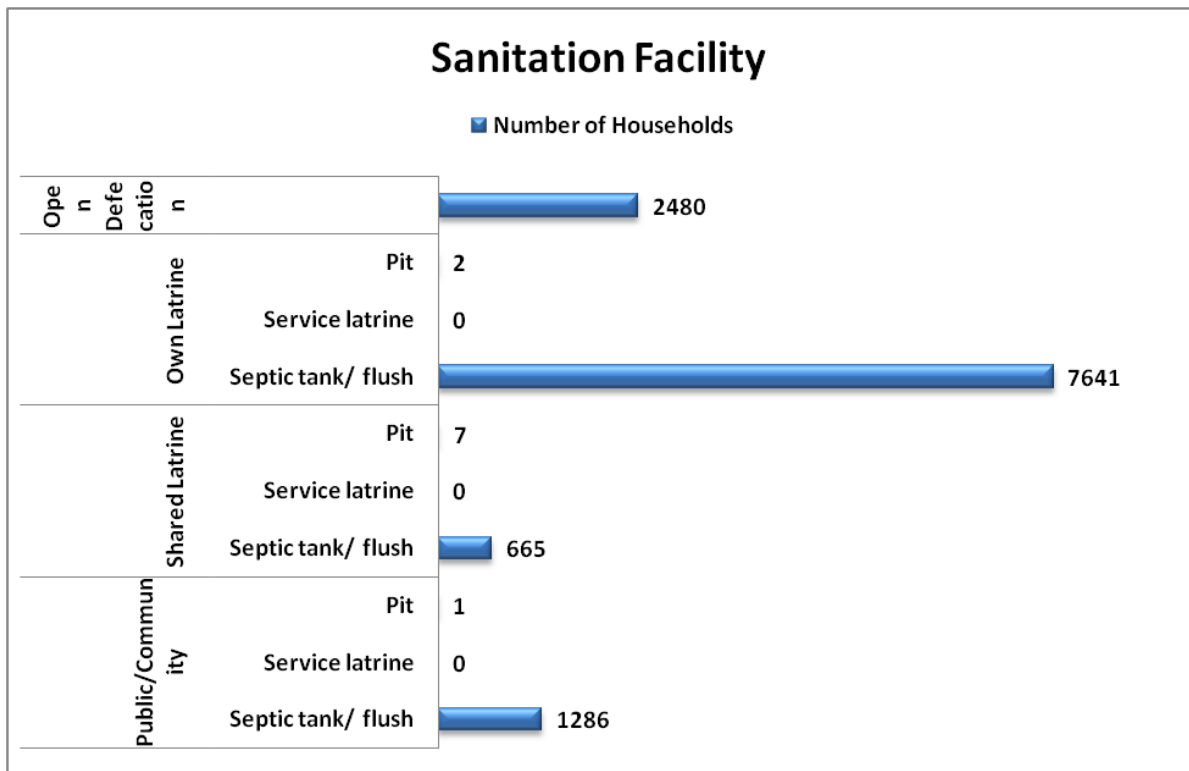


Chart 1- 12: Type of Sanitation facility



Picture 1- 44:
Individual toilet in
Bramhadev nagar



Picture 1- 45: sharing toilet in
Bramhadev nagar



Picture 1- 46: Public toilet at Patil galli, Waddar
Chavani Belgaum

In Belgaum, 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 1-12*, 63% use own latrine pit/service/flush system. About 21% of the households do not have any kind of toilet facility, hence opt for open defecation on river banks, thus polluting surface water.

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 management.

Table 1- 8: Solid waste management (Existing situation)

	No. of slums
Frequency of garbage disposal	
Daily	13
Once in 2 days	16
Once in a week	5
Once in 15 days	1
No collection	16
Arrangement for garbage disposal	
Municipal staff	17
Municipal contractor	17
Residents themselves	0
Others	4
No arrangement	14
Frequency of clearance of open drains	
Daily	1
Once in 2 days	17
Once in a week	14
Once in 15 days	7
No clearance	12

Source: AKM Data

Frequency of Solid waste disposal

The *table 1-8* gives an overall picture of the current situation of solid waste management where 26% of the slum have daily clearance of garbage, 31% have once in 2 days , 10% have it cleared once in a week, 2% of slums once in 15days due to which unhygienic conditions. Due to inadequate collection of solid waste, 31% of slums found to be affected insanitary conditions, requires immediate attention from concerned authority.

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



Picture 1- 47: kaliambrai matang colony



Picture 1- 48: Maruthi nagar(Bijapur road)



Picture 1- 49: New Gandhi nagar



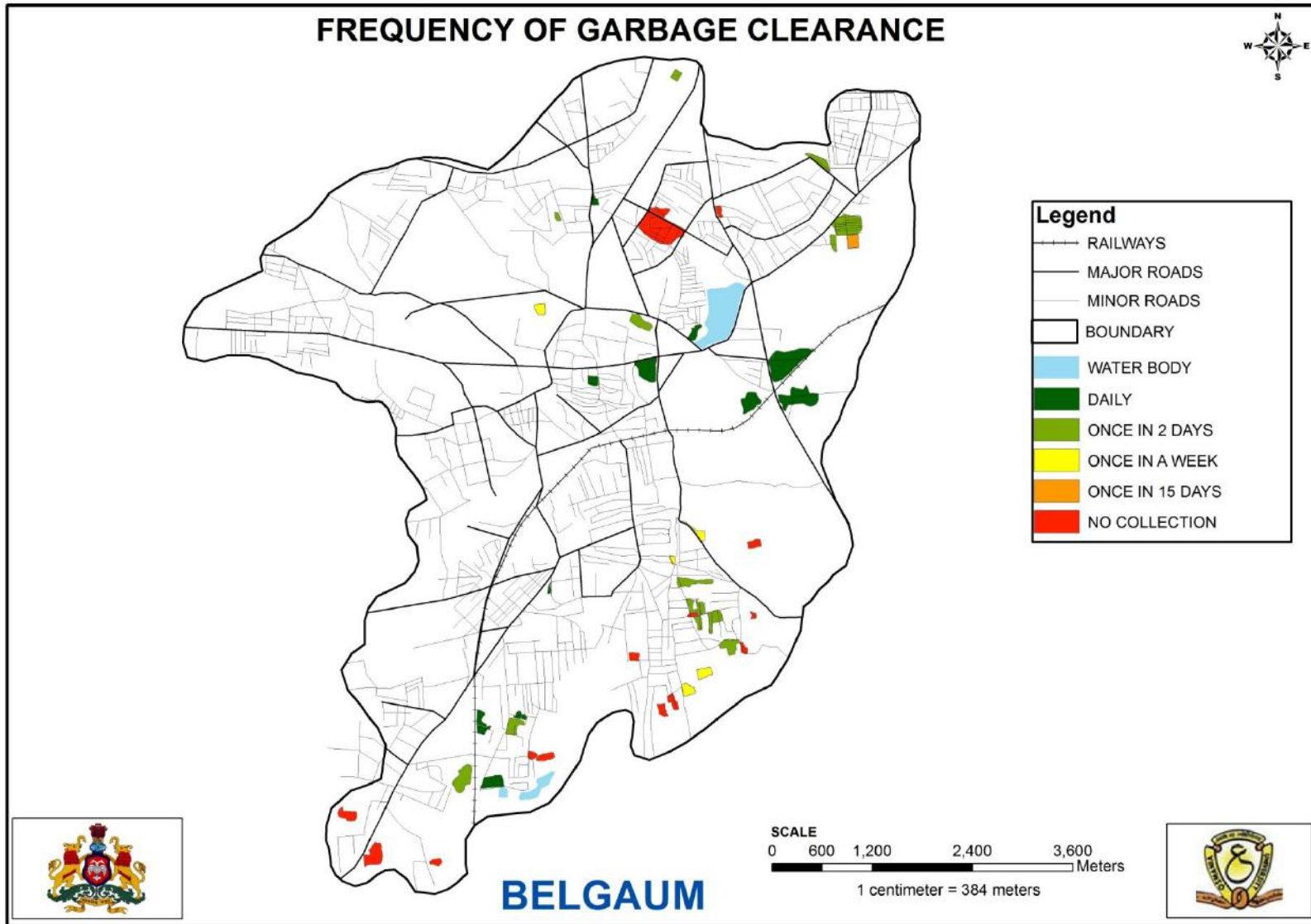
Picture 1- 50: Open dumping, Laxmi nagara, Vadagaon



Picture 1- 51: Open dumping, Indra nagar, Belgaum



Picture 1- 52: Dust bin situation, Kasaigalli



Map 1- 10 Frequency of Garbage Clearance

Arrangement of Garbage Disposal

As seen in the *table 1-8* it is found that 45% of the solid waste disposal is handled by the municipal staff and 28% of the disposal arrangement is through respective municipal contractors. Around 27% of slums have inadequate and untimely collection of solid waste, which reflects the necessity for increased staff and regular clearance to avoid any further unsanitary conditions.

According to the data collected from the Corporation and cantonment board, the generation of solid waste in Belgaum city and Cantonment is 1, 40,000 Kg per day. The city corporation and cantonment are able to left 1,10,000 kg per day leaving 30,000 kg left behind which creates unhealthy condition of the city. Per capital generation of solid waste in Belgaum city is 0.20 to 0.50 kg per day. The outgrowth however a small portion of the waste to the total.



Picture 1- 53: waste disposal in new gandhi nagar



Picture 1- 54: Bin at Devang nagar, Vadagaon



Picture 1- 55: Open dumping at rajaram nagar

Frequency of Clearance of Open drains

It is found from the survey results that 2% of the slums have daily clearance of the open drain, 33% of slums have it cleared once in 2 days and 41% once in a week and 2 weeks. It is analyzed that 24% 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.

For slum wise details, please refer **Annexure-1E** on Physical Infrastructure Profile.



Picture 1- 56: Open dumping in Bramhadev nagar slum



Picture 1- 57: Open dumping, Harijankeri, Anugol

Roads and Street lights

The road network within Belgaum is not developed enough to cater the requirements of Educational and already existing population. In fact the road network of the city offers poor level of service affecting safety, efficiency and economy of traffic operation within the city. Most of the roads in Belgaum city in Karnataka are in a bad shape. The 1st main road in Sadashiv Nagar is no exception. This road is in a pathetic condition since 2006. The residents of Sadashiv Nagar have been facing a lot of problem due to such a condition of the road. There are lots of big and small potholes on the road. The road was repaired many times but to no satisfaction. Driving on such a road is time consuming, dangerous and accident-prone. Accidents have occurred on the same road many a times. It connects the Nehru Nagar and Camp areas. It is even more difficult to drive in the rainy season, as one cannot judge the depth of potholes. The picture below, taken in the 3rd week of Feb. 2008 gives a glimpse of the pathetic condition in which the road exists.

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 – 9* as extracted from AKM presents the existing condition of road network.

Table 1-9 Current Statistics of Roads and Street Lights

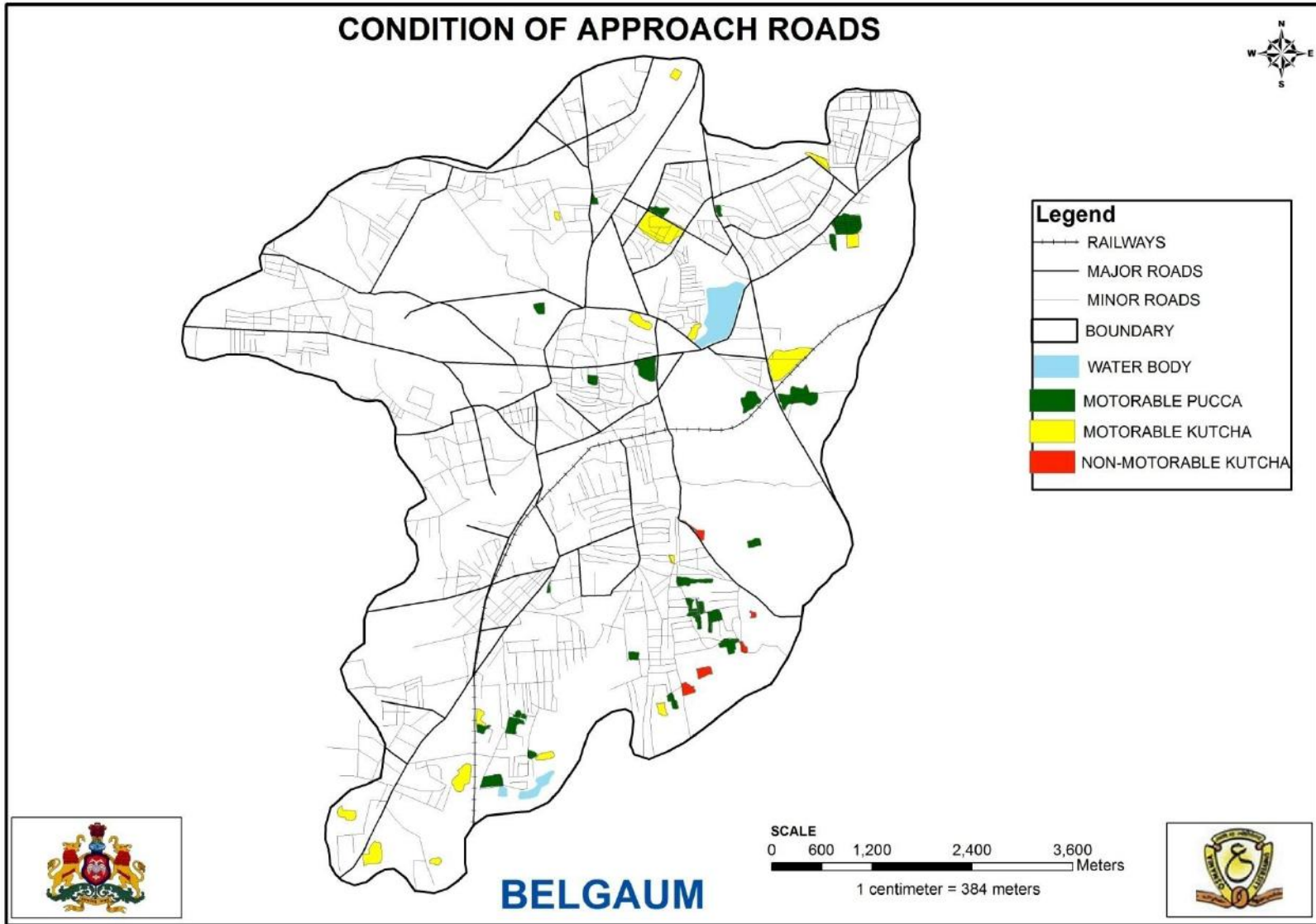
	No. of Slums
Approach Road/Lane/Constructed Path to the Slum	
Motorable Pucca	29
Motorable katcha	17
Non-Motorable Pucca	0
Non-Motorable katcha	5
Distance from the nearest Motorable Road	
Less than 0.5 KM	34
0.5 to 1.0 km	15
1.0 km to 2.0 km	1
2.0 km to 5.0 km	1
more than 5.0 km	0
Internal Road	
Motorable pucca	24
Motorable katcha	21
Non-Motorable pucca	1
Non-Motorable katcha	5
Whether Street light facility is available in the Slum	
Yes	43
No	8

Source: AKM Data

Nature of Approach Road

By and large, 57% of slums are provided with Motorable pucca roads and 33% actually are katcha in nature. On the other side, 0% of the slums have non Motorable Pucca road, 10% of the slums have a non- Motorable katcha not useful for any kind of transportation access difficult, there is need to upgrade this roads need to make it more efficiently.

The *map 1-12* shows the type of approach road provided to the slums.



Map 1- 11 : Condition of Approach road



Picture 1- 58: Internal road in Devang nagar, Vadagaon



Picture 1- 59: Harijan wada Khasbagh

The picture shows the condition of internal roads of slums

Distance from nearest Motorable road

As seen in the *table 1-9*, around 67% of the slums have access to the nearest Motorable road within 0.5 Km and 29% between 0.5 Km to 1 Km. Kanabargi Extension (Sagar colony) has nearest approach road at a distance of 1 to 2 Km (2%). Alarwad (Ashrya colony) has nearest approach road at a distance more than 2 to 5 Km (2%).

Type of Internal road

47% of the slums have Motorable Pucca internal roads while 41% have katcha internal roads. Around 12% of the slums lack in proper internal roads with BT surface.

Street Lighting Facility

According to the survey results, 84% of the slums have street lighting facilities, not all of which are in working condition and found to be insufficient. For the 16% of the slums do not have street lighting facilities, hence it is essential to increase no street light to prevent accidents and other inconvenience.

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

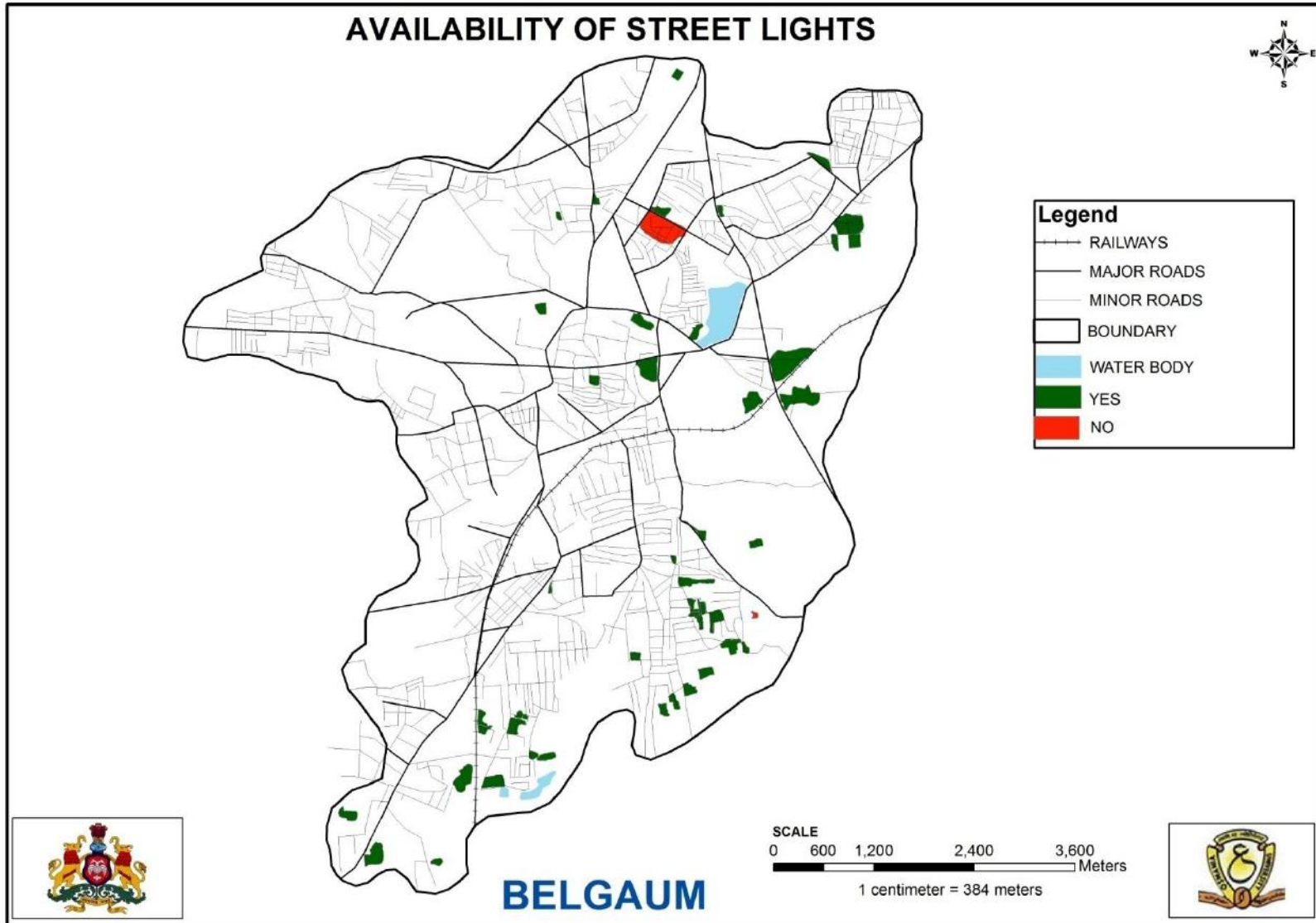


Picture 1- 60 Transformer at Ganesh nagara, Vadagaon



Picture 1- 61 Condition of street lights, Devang nagar, Vadagaon

The *map 1-12* shows the availability of street lights in slums



Map 1-12 Availability of Street Lights

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- 10: Distance from nearest Pre-Primary Schools

Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	2.0 - 5.0 KM	More than 5 KM
Pre- Primary Schools (Anganwadis)						
No of slums	44	2	2	1	0	2
Pre- Primary Schools (Municipal)						
No of slums	51	0	0	0	0	0
Pre- Primary Schools (Private)						
No of slums	2	8	3	31	3	4

Source: AKM Data

As indicated in *table 1-10*, for slum households, the nearest distance to pre-primary (Anganwadi) schools run by different agencies are located maximum 86% within the slum and within the 0.5 KM away from the slums. Around 2 slums do not have access to pre-primary schools (Anganwadi) when the distance is more than 5 Km. Seen in *map-13*, the areas marked in red color show that 4 slums do not have access to state run primary schools (private) when the distance is more than 5 Km



Picture 1- 62: Education facilities

Table 1- 11: Distance from nearest Primary Schools

	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	2.0 - 5.0 KM	More than 5 KM
Primary Schools (State Government)						
No of slums	51	0	0	0	0	0
Primary Schools (Municipal)						
No of slums	4	13	7	24	3	0
Primary Schools (Private)						
No of slums	1	7	4	31	4	4

Source: AKM Data

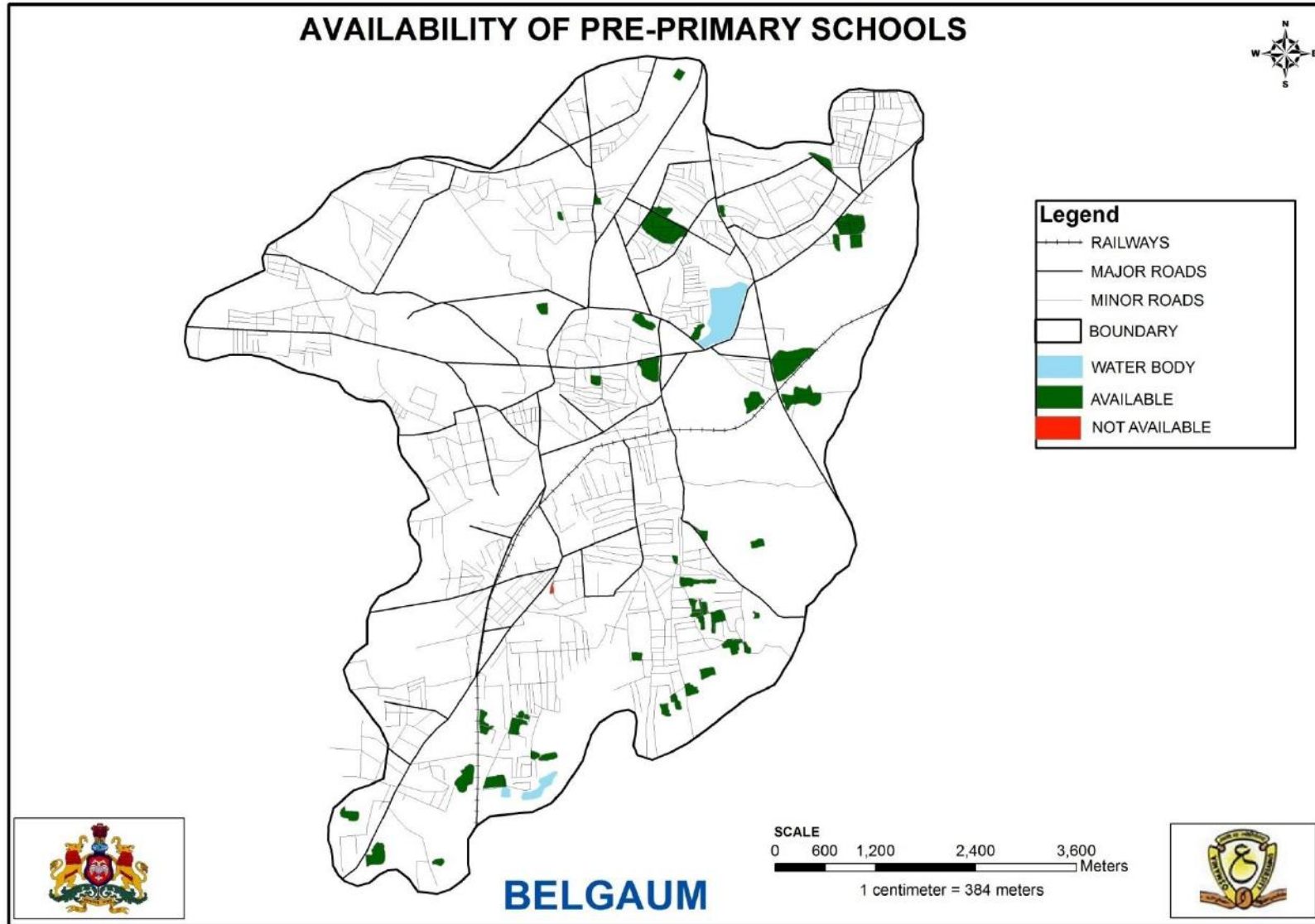
As indicated in *table 1-11*, for slum households, the nearest distance to primary schools run by different agencies are located maximum within the slums and 0.5 KM away from the slums. About 11 slums have primary schools run by different agencies are located between distances of 0.5 km to 1.0 km away from the slums.

Table 1- 12: Distance from nearest High Schools

	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	2.0 - 5.0 KM	More than 5 KM
High Schools (State Government)						
No of slums	51	0	0	0	0	0
High Schools (Municipal)						
No of slums	0	6	3	26	6	10
High Schools (Private)						
No of slums	0	4	4	31	6	6

Source: AKM Data

As indicated in *table 1-12*, 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. About 7 slums have high schools run by different agencies within a distance of 0.5 km to 1.0 km from the slums. Around 16 slums do not have access to state run high schools when the distance is more than 5 Km.



Map 1-13 Availability of Pre- 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 subsidized ration or availability of poor quality to ration makes the slum dwellers prone to large number of infections and lack of education or information, further aggravates the situation.

As per AKM data, in this slums do not have primary health facilities within the slums. Of the 4% of slums that have health facilities in the distance of <0.5 KM, 96% constitute private clinics, 18% forms registered practitioner and 67% have primary health centers. Nearly 24% of the slums have access to Government Hospital and 8% comprises urban health post facilities. 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 *table 1-13*.

Table 1- 13 Distance from nearest Health facilities

Distance	Within the slum area	< 0.5K M	0.5 to 1.0 KM	1.0-2.0 KM	2.0 - 5.0 KM	No facility
Urban Health post						
No. of Slums	0	2	1	1	0	47
Primary Health Centre						
No. of Slums	0	11	9	6	8	17
Government Hospital						
No. of Slums	0	0	3	4	5	39
Maternity Centre						
No. of Slums	0	4	7	8	9	23
Private Clinic						
No. of Slums	4	20	14	7	4	2
Registered Medical Practitioner (RMP)						
No. of Slums	1	5	1	2	0	42
Ayurvedic Doctor/Vaidhya						
No. of Slums	0	7	8	6	2	28

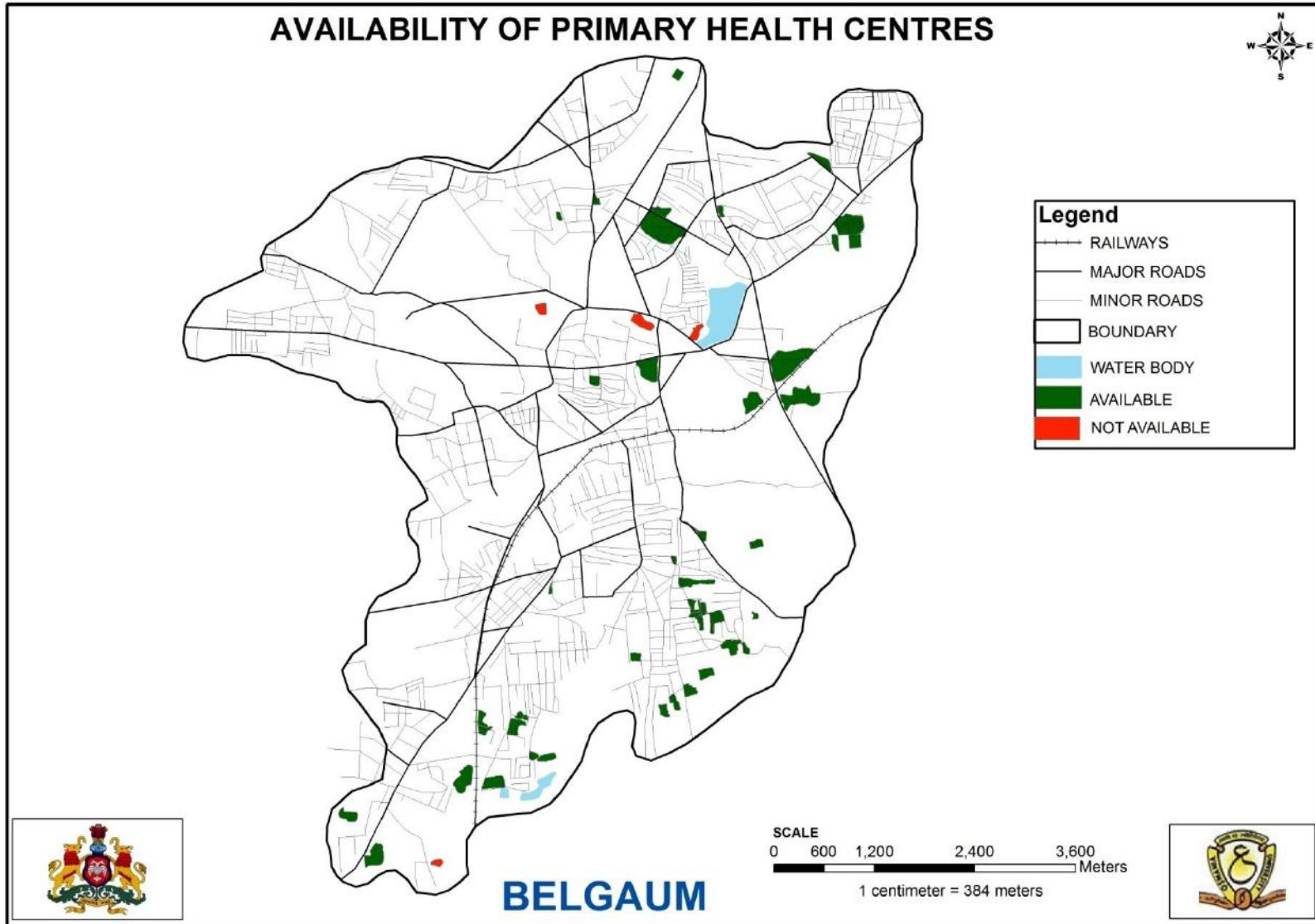
Source: AKM Data

As indicated in *table 1-13*, for slum households, the nearest distance to primary health care centers is located maximum within the slums and 0.5 KM away from the slums. While for Government Hospitals, approximately 4 slums have access to the hospital within 1.0-2.0 KM.

The *map 1-14* shows the availability of primary health centre's in slums



Picture 1- 63: Health facilities



Map 1- 14: Availability of Primary Health Centers

Social welfare facilities

Similar to the above sections in social infrastructure, the *table 1-14* presents available social welfare facilities in 51 slums:

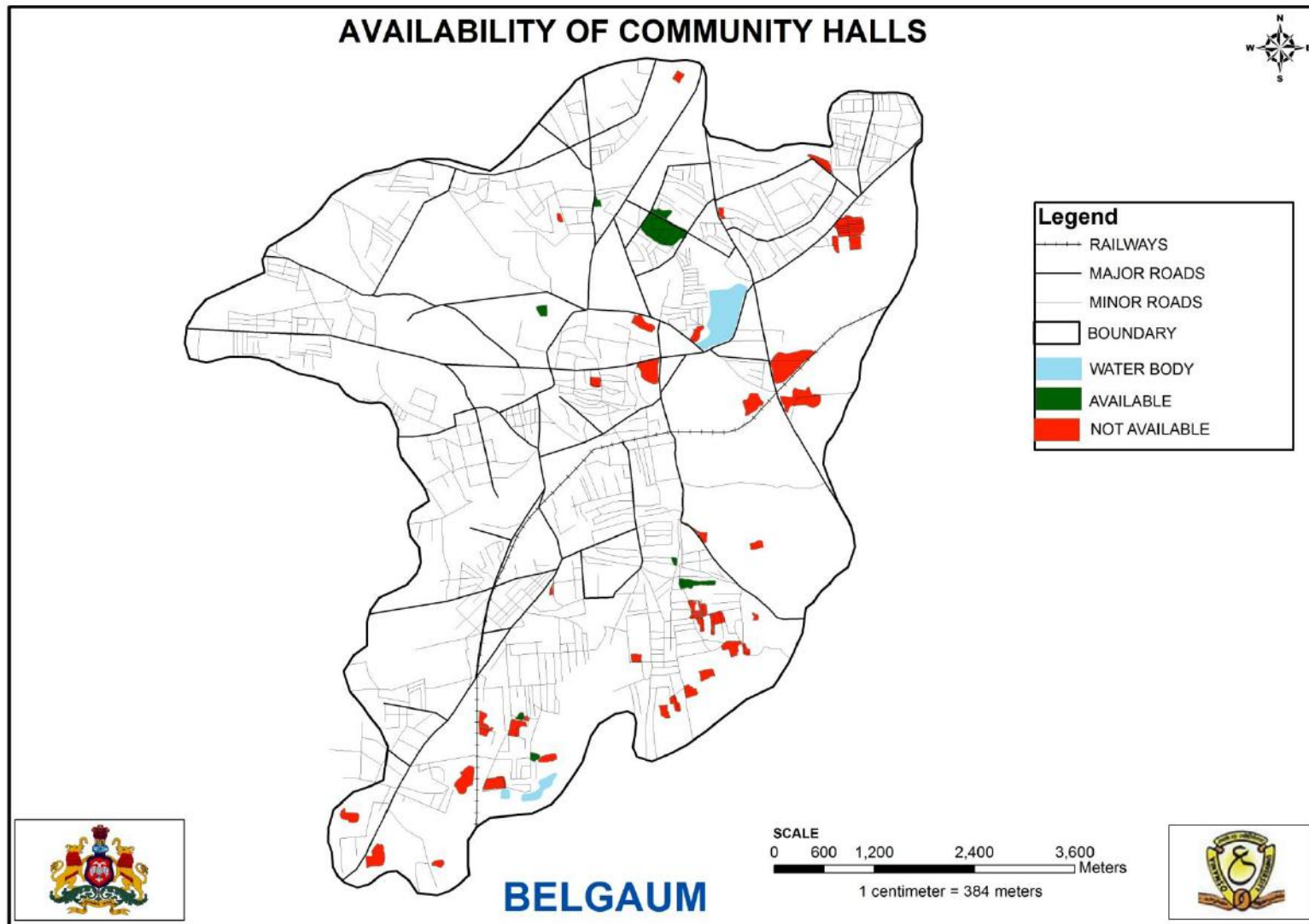
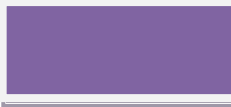
Table 1- 14 Social welfare facilities available in slums

Availability of Facilities within Slum	No. of slums Having accessibility
Community Hall	7
Livelihood/Production Centre	0
Vocational training/Training-cum-production Centre	0
Street Children Rehabilitation Centre	0
Night Shelter	0
Old Age Home	1
Social Welfare facilities	No. of Holders
Old Age Pensions	24
Widow Pensions	790
Disabled Pensions	303
General Insurance	1267
Health Insurance	179
Availability of Facilities	No. of facilities available
Self Help Groups	138
Thrift and Credit Societies in Slum	56
Slum-dwellers Association	No. of slums
Yes	8
No	43
Youth Associations	40
Women's Associations/ Mahila Samithis	8

Source: AKM Data

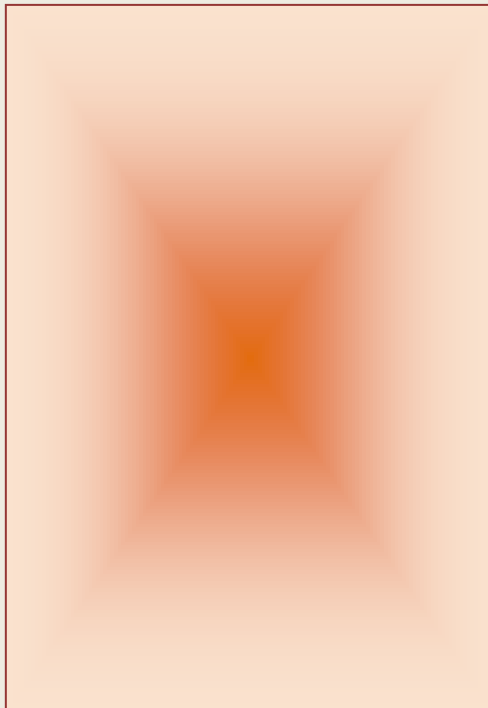
7 slums out of 51 have facility of community halls; 84% of the slums do not have slum dwellers association however 17% of the slums have women's associations to empower women with home based employment. In addition, the slums do have self groups as well as credit societies.

The *map 1-15* shows the availability of community halls in slums



Map 1- 15: Availability of Community halls

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



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 community. 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 Belgaum 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 flowchart details the rehabilitation proposed for Slum free Belgaum.

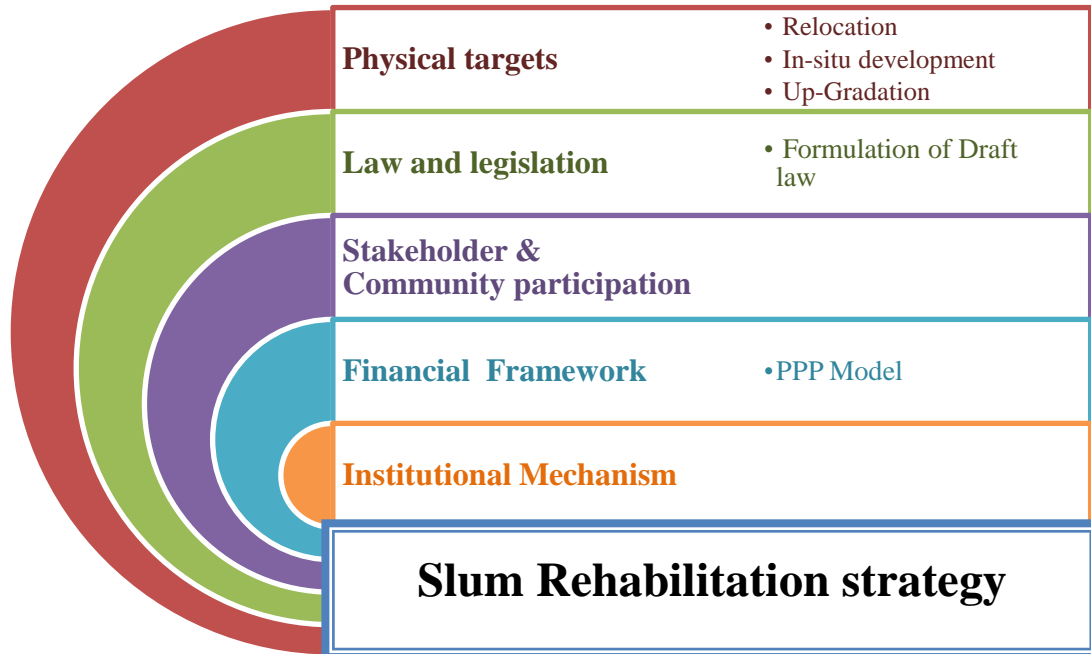


Chart 2-1 Slum Rehabilitation Strategy

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 redevelopment 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 chart presents the recommended mode of development for 5 years in order to make Belgaum a slum free city.

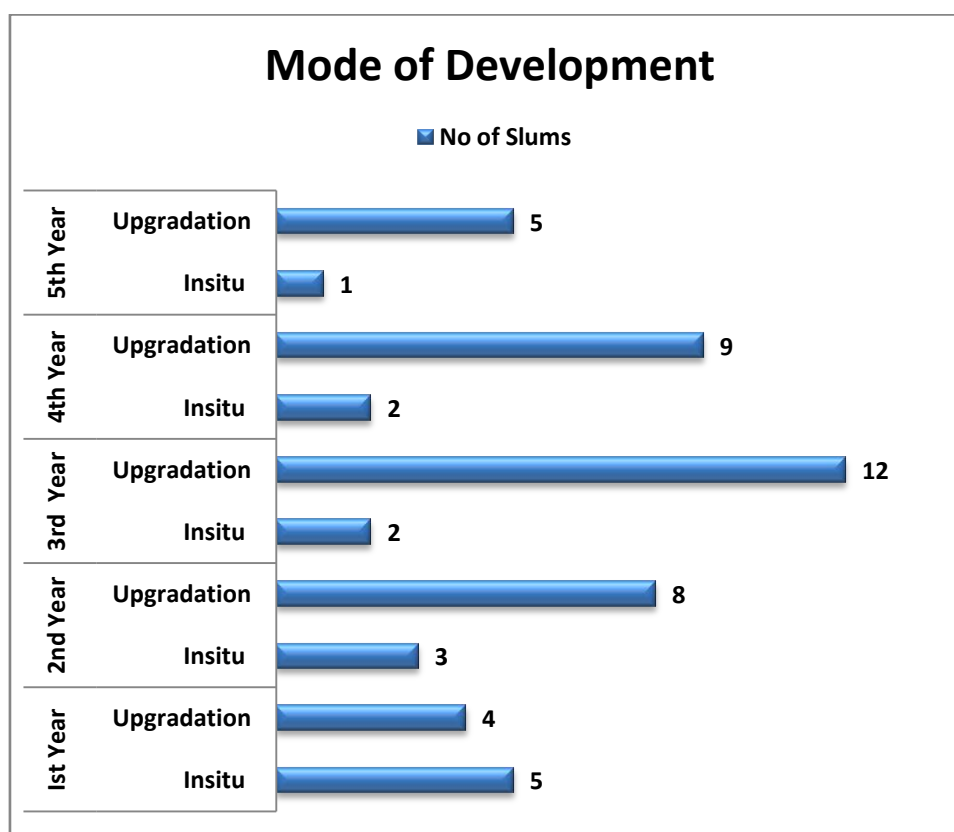


Chart 2- 2: Prioritization and Mode of Development

b. Law and legislation

An appropriate legislation is a necessity to achieve and implement the development strategies formulated for Slum Free Belgaum. 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 Government 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 Belgaum. 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 Belgaum slums to identify the level of urban services. The matrix details the deficiency in the overall 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.

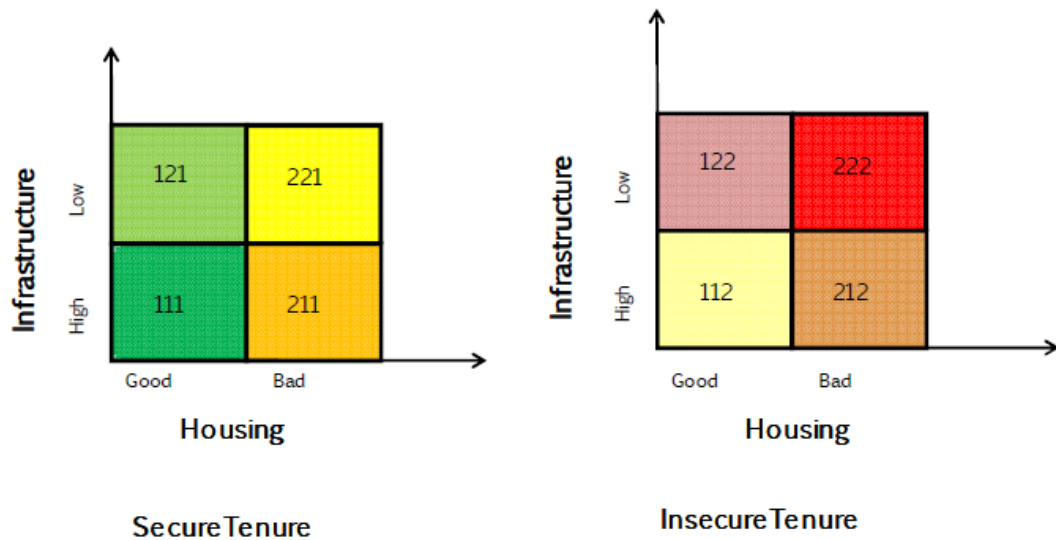


Chart 2- 3: Deficiency Matrix for Development Mode

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 and
 - 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 39 slums were found to be having better infrastructure levels while 12 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

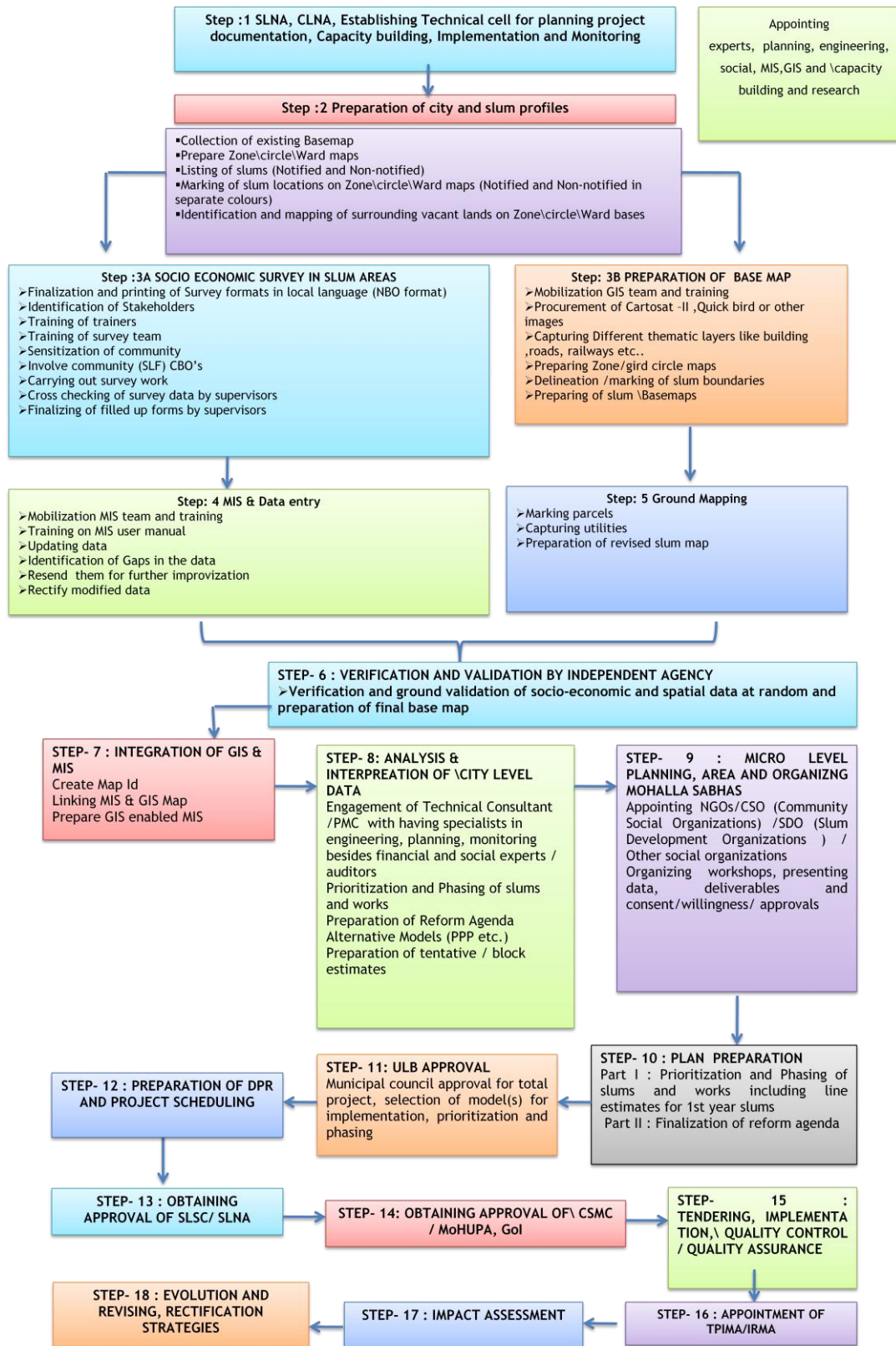


Chart 2- 4: Detail Methodology

With respect to Belgaum, 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.
- **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 (annexure)

Directorate of Municipal Administration (DMA) is the nodal agency to implement 'Rajiv Awas 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.

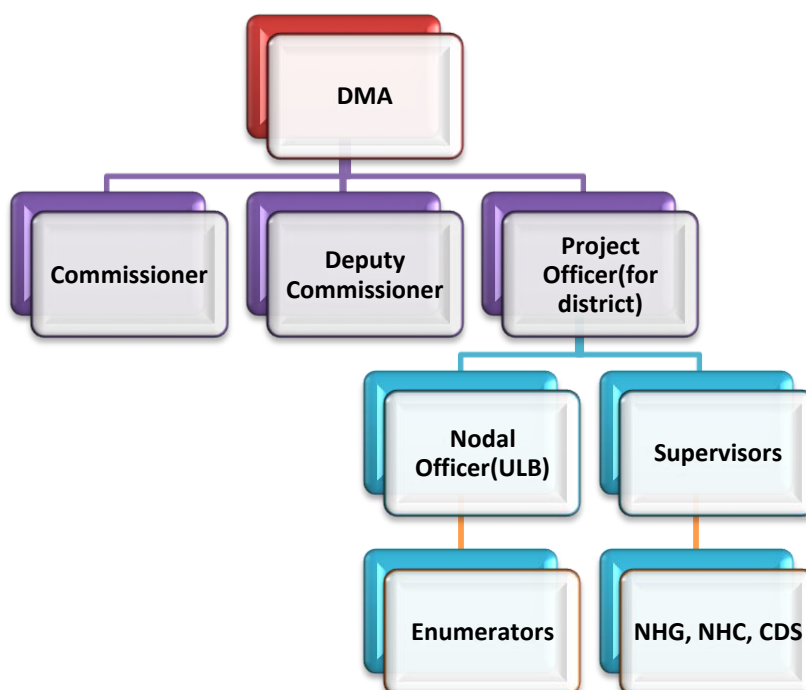


Chart 2- 5: Agencies & Stakeholders involved

Agencies (including procurement process) & Stakeholders involved

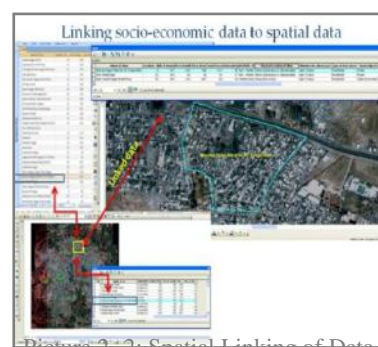


Picture 2- 1: Enumerators collecting information from community officers

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 Shree 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 (KRSRAC) 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. KRSRAC is the only stakeholder involved in preparation of

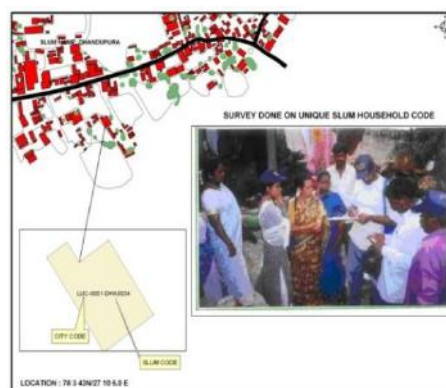


Picture 2- 2: Spatial Linking of Data

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 Kirana 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, and 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.



Picture 2- 3: Stakeholder consultation

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.



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 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.

Table 2 - 1: Tenability of slums

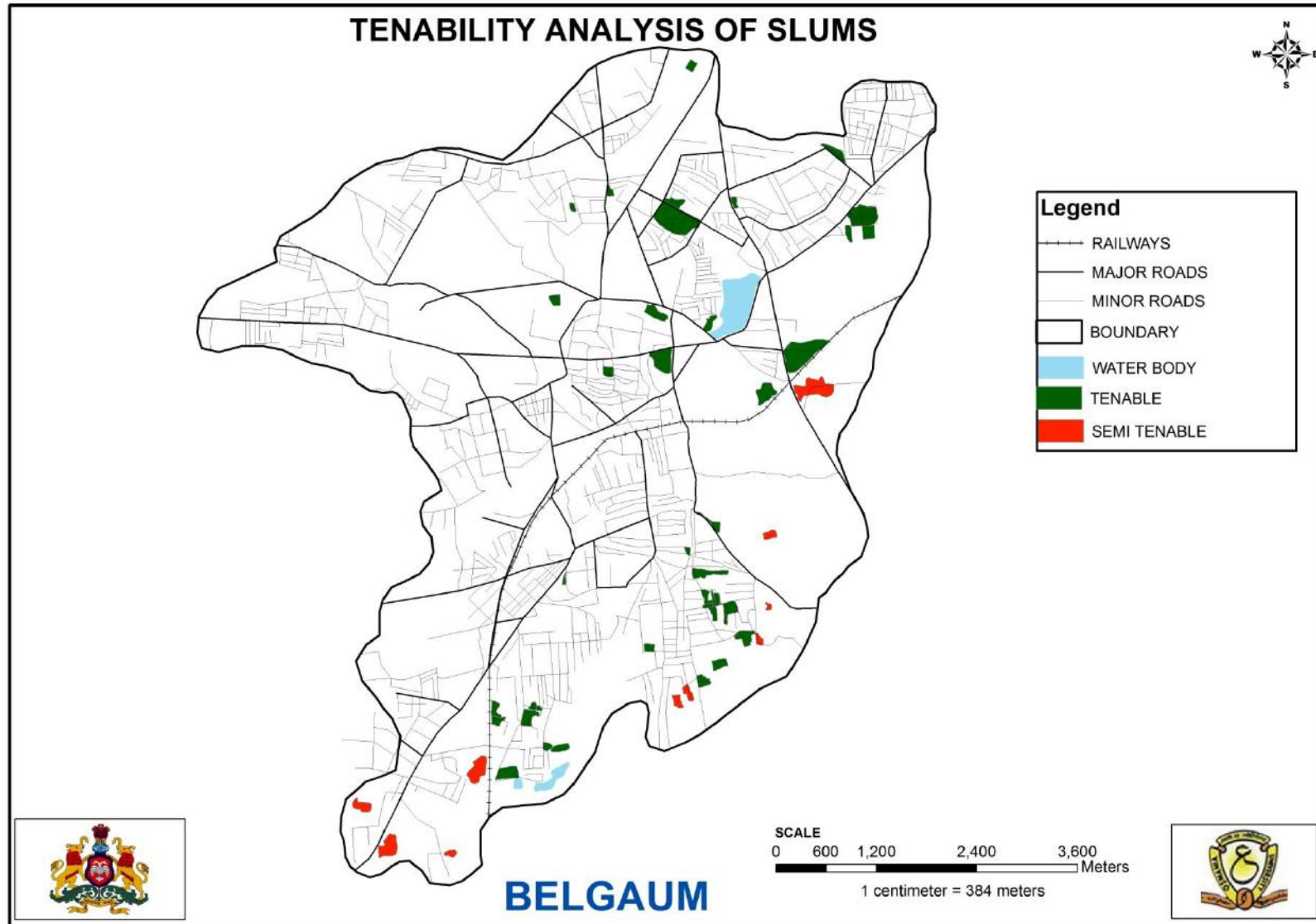
	Tenable	Semi - Tenable	Un- Tenable
No of Slums	40	11	0

Source: Guide lines for preparation slum free city of action 2011

Of 51 slums identified, 40 slums are found to be tenable and 11 slums are semi-tenable³ 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 detail slum wise Tenability status refer **Annexure -1A**.

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 of slums/land use

Notification 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	32	8502	9	2389	80%	90.14%
Commercial	0	0	0	0	0%	0.00%
Industrial	3	387	1	261	9%	5.36%
Others	3	202	3	341	11%	4.49%
Total	38	9091	13	2991	100%	100%

Source: Guide lines for preparation slum free city of action 2011

From the *table 2-2*, it is established that 90.14% of the households are surrounded by the residential use, followed by 5.36% industrial, remaining slums 4.49% comes under others. 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 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 *table 2-3 to 2-6* classifies the legal status of the slum households based on the ownership and land tenure status

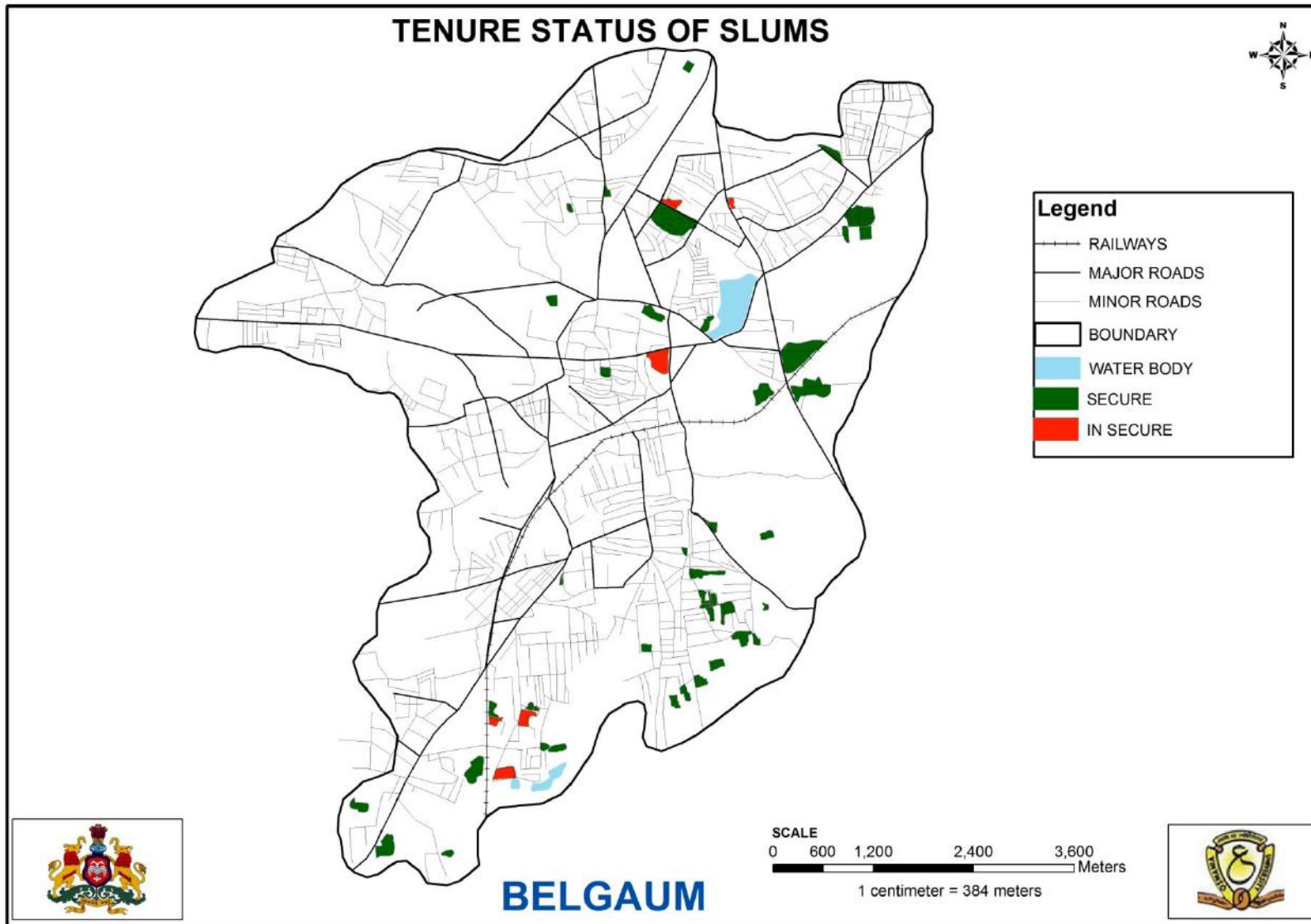
Table 2-3 Land tenure Status

Land tenure status (No. of HHs)						
With Patta	Possession Certificate / Occupancy Right	Encroached - private Land	Encroached - Public Land	On rent	Other	Total
6200	1175	49	720	3866	72	12082

Source: AKM data

As seen in the *table 2-3*, 51% of the slum households have with pattas while 10% are registered and have Possession Certificate for their respective lands. On the contrary, 39% of the households are not registered and hence live on encroached lands of private as well as public owned and on rent.

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 *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	Central government	Private	TOTAL
Registered	Pattas (No of HH's)	2050	513	0	3637	6200
	Possession certificate (No of HH's)	506	9	0	660	1175
Un Registered	Encroached (No of HH's)	741	1	0	27	769
	On Rent (No of HH's)	1448	327	0	2091	3866
	Others (No of HH's)	56	3	0	13	72

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

The table 2 - 4 indicates that 61% of total households have registered and the remaining 39% are not registered with any agency. Under the ownership of ULB, 48% of the households are registered and 52% are unregistered. Similarly 64% are registered and 36% households are unregistered, belong to the private ownership of the land. Overall under the state Govt. owned lands, 61% belong to registered and remaining unregistered. Speaking of ownership, Private ownership is termed to be the highest with 68% of the households and 22% of households are under ULB ownership. 39% of the households need a secured status in order to avail better infrastructure.

Table 2-5 Ownership of Land / notification Status

Land Ownership / Notification Status	ULB	State government	Central government	Railways/ Airport	Defense	Private	Others
Notified Slums	8	6	0	0	0	24	38
Non - Notified Slums	6	0	0	0	0	7	13

Source: AKM data

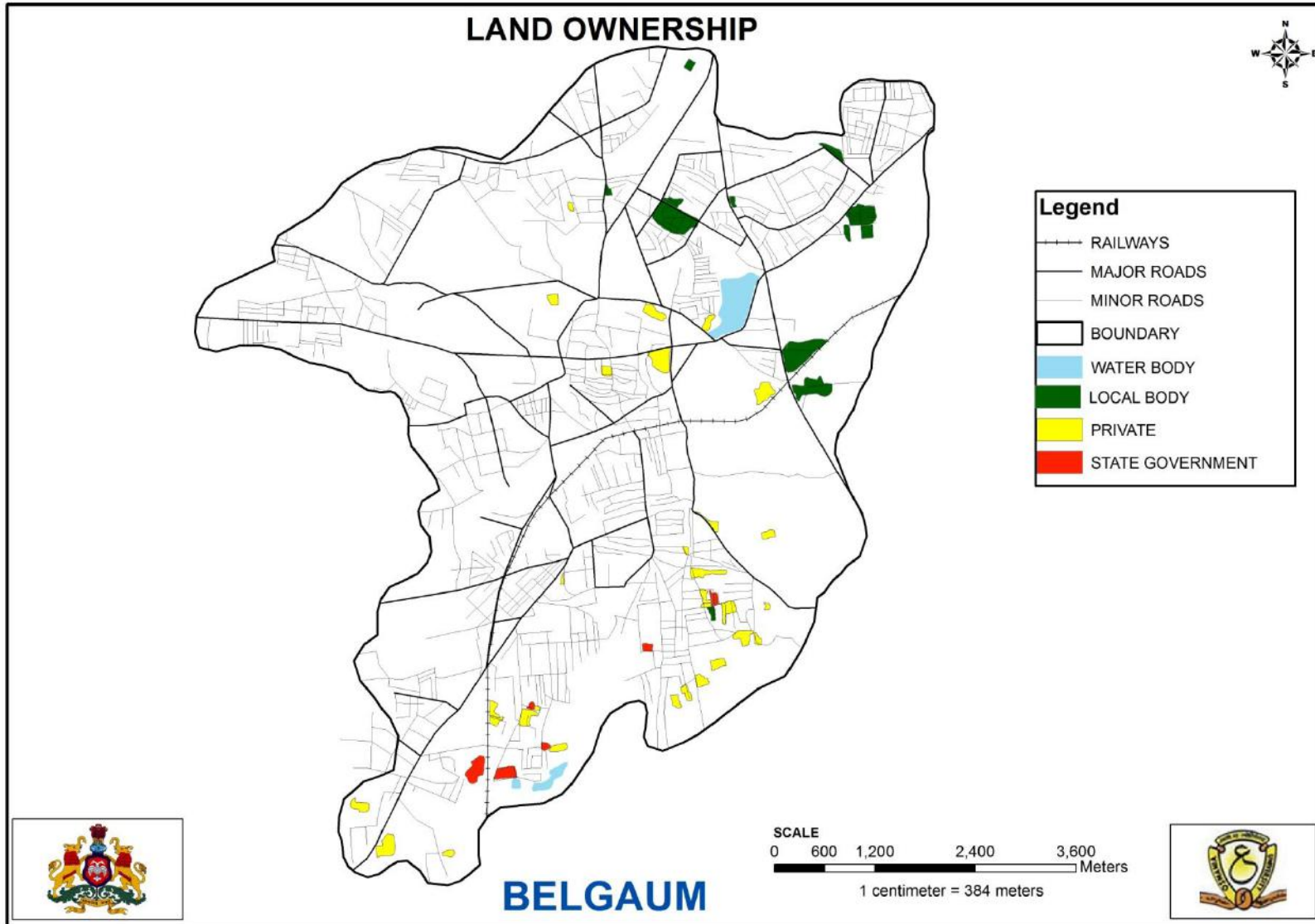
As seen in the *table 2-5*, 27% of the notified slums are under the ownership of ULB & State govt.; 47% built on lands owned by private, thus making it the largest owner. Among the non notified slums, 47% of the slums are owned by the ULB and remaining 53% are owned by the private.

Table 2-6 Land Ownership / Area

Land Ownership / Area	ULB	State government	Railways	Private
Area	32%	6%	0%	62%

Source: AKM data

As far as land covered by respective agencies, it is found that Private holds the highest percent (62%) owning the lands under slums. For visual illustration of land ownership of slums, please refer *map 2-3*.



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 Dwelling units per hectare
- **Medium** where density ranges from 120- 250 Dwelling units per hectare
- **High** where density is greater than 250 Dwelling units per hectare

The *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 ⁴ / Mode of Development (No of Slums)	Low Density	Medium Density	High Density
In - Situ	9	4	0
Up gradation	18	15	5
Total	27	19	5

Source: Guide lines for preparation slum free city of action 2011

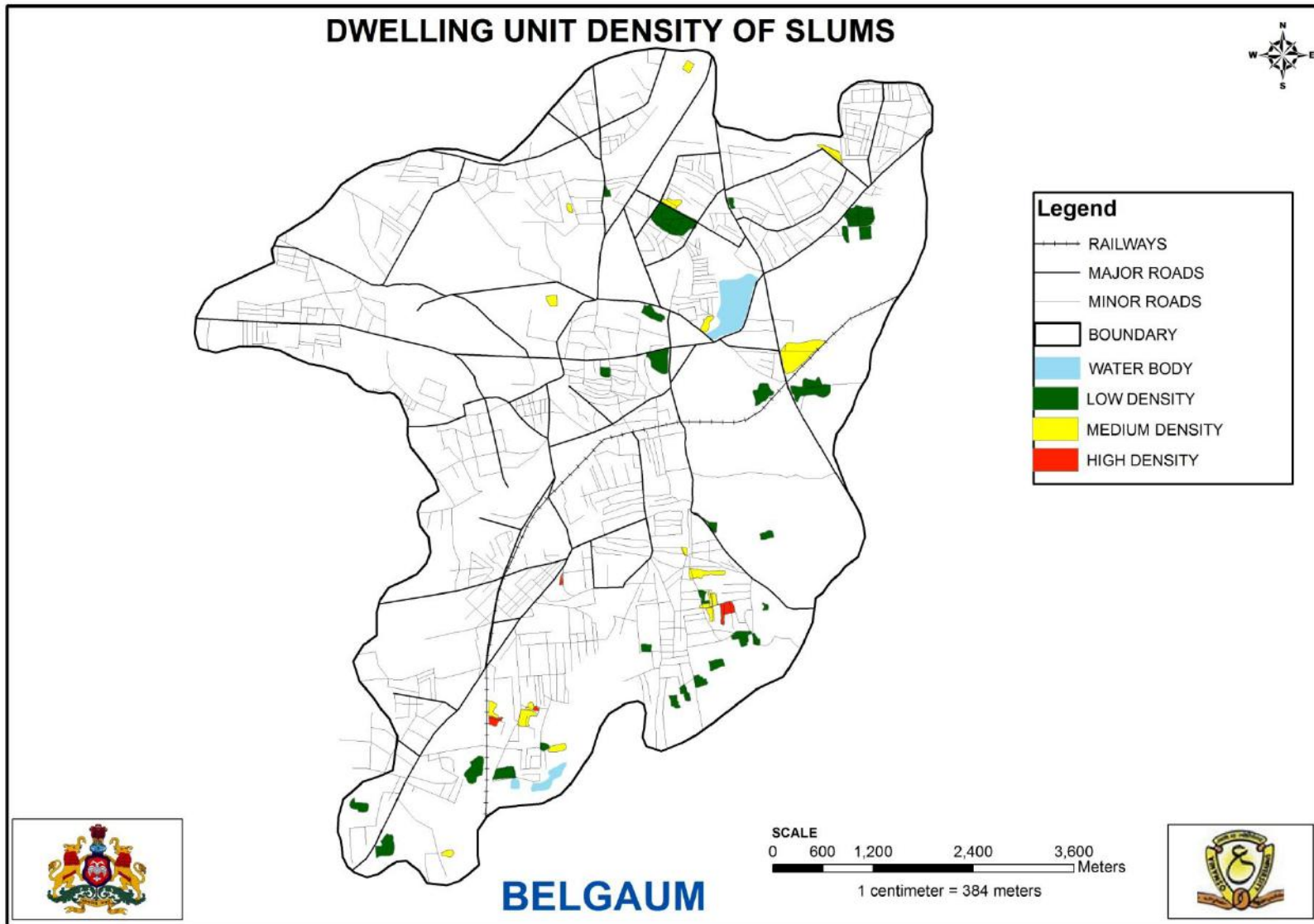
In the order of classification, it was found that 5 slums have high density while 19 slums are moderately dense and the remaining 27 pretty low. Under the category of low density, 9 slums have been chosen for in situ redevelopment and 18 for up-gradation. At the same time, 4 slums which are moderately dense have selected for in situ and remaining 15 for Up-gradation mode. On other side, 5 of the highly dense slums have selected for up-gradation.

f. Land value

For Belgaum 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**

⁴ The classification of slums is done based on densities calculated using the variables of population and slum areas as given by the local NGOs. In consensus with the local body, the densities are subjective to change.



Map 2- 4 Density of Dwelling Unit in Slum

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 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, while land Tenure defines the legal status of land ownership.

In this section, the following infrastructure variables 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

- 88% of the slums have been into existence for more than 20 years in the city with outdated infrastructure
- Around 22% of slums are flood prone with rain water remnant for up to 15 days or even more indicating lack of safety to the slum dwellers.
- Even though 46% of the total houses are Pucca in nature, but most of them are found to be in dilapidated condition. 54% of the houses are found to be semi –pucca & Katcha in nature indicating poor housing condition in Belgaum slums
- As far as electricity connection is concerned, nearly 15% of the total households does not have electricity connection.

Demography & Employment

- 33% of the BPL population in slums is SCs & STs, 67% comprises of OBCs and others
- With respect to the slums 65% of the households are employed in various sectors such as informal sectors, street hawkers and contributing revenue however 35 % are still unemployed
- 50 % of households are working as casual laborers and 13% on regular wage basis together forming unskilled labor in Belgaum slums. Therefore, nearly 67% of the poor households do not have access to a dependable occupation and secure incomes
- The percentage of households that earn more than Rs. 3000 is 31%, indicating that 69% of the households belong to casual labor and belong to BPL class.

Water Supply

Table 2-8 Water Supply Details

Water Supply							
	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	24	5119	4	853	28	5972	49%
Partially	10	3468	6	1744	16	5212	43%
Not Connected	4	504	3	394	7	898	8%
Total	38	9091	13	2991	51	12082	100%
Duration of Water Supply							
Daily Less than 1 hr	0	0	0	0	0	0	0%
Daily 1-2 hrs	2	164	0	0	2	164	1%
Daily more than 2 hrs	13	2986	1	75	14	3061	25%
Once a week	1	146	0	0	1	146	1%
Twice a week	15	4913	8	2230	23	7143	59%
Not regular	2	254	3	645	5	899	7%
No Supply	5	628	1	41	6	669	7%
Total	38	9091	13	2991	51	12082	100%
Source of Drinking Water							
Individual tap	36	6077	10	1575	46	7652	63%
Public tap	25	1426	10	1141	35	2567	21%
Tube wells/Bore well/hand pump	20	243	5	42	25	285	2%
Open well	22	748	6	97	28	845	7%
Tank/pond	1	1	0	0	1	1	0%
River/canal/lake/spring	1	5	0	0	1	5	0.06%
Others	24	587	12	136	36	723	6%
Water tanker	1	4	0	0	1	4	0.04%
Total	130	9091	43	2991	173	12082	100%

Source: AKM data

49% of the total households are fully connected to city wide water supply system. With respect to drinking water sources 63% of the households have individual taps as primary source & 37% dependent on public water taps, tube wells, open wells, hand pump, water tanker and other sources. Hence 37% households need to be addressed for provision of individual taps.

Sanitation

Table 2 -9 Sanitation Details

Sanitation								
	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 wide Sewerage system								
Fully Connected	18	3002	5	892	23	3894	32%	
Partially Connected	11	4797		0	11	4797	40%	
Not Connected	9	1292	8	2099	17	3391	28%	
Total	38	9091	13	2991	51	12082	100%	
Connectivity to Storm water drainage								
Fully Connected	19	3196	6	1255	25	4451	37%	
Partially Connected	11	4822	1	392	12	5214	43%	
Not Connected	8	1073	6	1344	14	2417	20%	
Total	38	9091	13	2991	51	12082	100%	
Drainage and Sewerage Facility								
Access to storm water drainage	32	5087	11	2040	43	7127	37%	
Access to underground drainage/ sewer line	34	4969	11	924	45	5893	30%	
Access to digester	28	2318	9	424	37	2742	14%	
Not connected to sewer or digester	30	2840	13	843	43	3683	19%	
Latrine Facilities								
Type of sanitation facility	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		
Public/Community latrine	Septic tank/flush	22	1240	4	46	26	1286	11%
	Service latrine	0	0	0	0	0	0	0%
	Pit	1	1	0	0	1	1	0%
Shared latrine	Septic tank/flush	22	634	10	26	32	660	5%
	Service latrine	0	0	0	0	0	0	0%
	Pit	3	7	0	0	3	7	0%
Own latrine	Septic tank/flush	38	6274	11	1367	49	7641	63%
	Service latrine	0	0	0	0	0	0	0%
	Pit	1	2	0	0	1	2	0%
Open Defecation	24	933	13	1552	37	2485	21%	
Total	111	9129	38	2991	149	12082	100%	

Source: AKM data

- Of 51 slums, 32% of slums are fully connected and 68% slums do not have connectivity to city wide sewerage system.
- With regards to storm water drainage, 37% of slums are connected to the city wide storm water system 68% slums not connected to city wide storm water system.
- For drainage and sewerage facility 30% of the households have underground drainage/sewer lines. Hence there is a deficiency of underground sewer lines for 70% of the households, which needs to be upgraded to a more complete as well as sustainable underground drainage system.
- 21% of slum households do not have proper individual toilet facility. Hence resulting open defecation.

Solid waste management

Table 2-10 Solid Waste Management 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	
Arrangement of Garbage Disposal							
Municipal Staff	18	5738	5	1133	23	6871	57%
Municipal Contractor	11	1962	3	1097	14	3059	25%
Residents themselves	0	0	0	0	0	0	0%
Others	0	0	0	0	0	0	0%
No Arrangements	9	1391	5	761	14	2152	18%
Total	38	9104	13	2991	51	12082	100%
Frequency of Garbage Collection							
Daily	10	3274	3	722	13	3996	33%
Once in 2 days	13	3498	3	1251	16	4749	39%
Once in a week	3	523	2	257	5	780	6%
Once in 15 days	1	200	0	0	1	200	2%
Not Collected	11	1596	5	761	16	2357	20%
Total	38	9091	13	2991	51	12082	100%
Frequency of clearance of open drains							
Daily	0	0	1	239	1	239	2%
Once in 2 days	14	3571	3	759	17	4330	36%
Once in a week	11	3365	3	871	14	4236	35%
Once in 15 days	6	1196	1	222	7	1418	12%
Not clearance	7	959	5	900	12	1859	15%
Total	38	9091	13	2991	51	12082	100%

Source: AKM data

- 18% of slum households are not adequately covered with solid waste disposal.
- On other side, 22% of households lack in arrangement for regular garbage collection. which needs to be addressed immediately
- 27% of the slum households lack in frequent clearance of the open drains, further deterioration of environmental conditions and contaminating the ground water quality.

Roads and street lighting

Table 2-11 Road and Street Lights Details

Road & Street Lights				
	Notified Slums	Non Notified Slums	Total	% slums of total slums
	No of slums	No of slums	No of slums	
Approach Road/Lane/Constructed Path to the slum				
Motorable Pucca	21	8	29	57%
Motorable Katcha	13	4	17	33%
Non Motorable Pucca	0	0	0	0%
Non Motorable Katcha	4	1	5	10%
Total	38	13	51	100%
Internal Road				
Motorable Pucca	20	4	24	47%
Motorable Katcha	15	6	21	41%
Non Motorable Pucca	1	0	1	2%
Non Motorable Katcha	2	3	5	10%
Total	38	13	51	100%
Distance from Nearest Motorable Road				
Less than 0.5 Km	25	9	34	67%
0.5-1 Km	13	2	15	29%
1-2 Km	0	1	1	2%
2-5Km	0	1	1	2%
>5 Km	0	0	0	0%
Total	38	13	51	100%
Availability of Street Light				
Yes	33	10	43	84%
No	5	3	8	16%
Total	38	13	51	100%

Source: AKM data

- 57% of slums are having Motorable pucca roads and 33% of slums have Motorable Katcha roads and 10% for non Motorable Katcha approach roads, which needs to be upgraded.
- 47% of the slums are having Motorable pucca roads and 41% of slums have Motorable katcha road; 12% of slums are lack in proper internal roads with BT surface.
- In case of street lighting, 84% of slums have street lights and 16% lack in street lighting facility, hence essential to prevent any kind of accidents and other inconveniences.

Slums deficiency matrix and development option

With reference to process for generating deficiency matrix in Chapter -2 and based on the data analysis, 51 slums in Belgaum 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/Up gradation. In addition, settlements with bad housing & infrastructure should also be the 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.

- **Water supply**
 - Score 1- 60% or more of household have individual connection and
 - Score 2- Less than 60% of households having individual connections.
- **Drainage⁵**
 - 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
- **Road⁶**
 - 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 39 slums were found to be having better infrastructure levels while 12 slums had lower levels of infrastructure, needing further improvement.

Similarly for housing, it is assessed by following variables:

- **Structural condition**
 - *Score 1:* semi pucca + katcha houses < 75%
 - *Score 2:* semi pucca + katcha houses > 75%

⁵ Running length of existing sewer lines are not available

⁶ Since data for current width of roads are not available condition of roads is taken into account

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

Table 2-12 Slum Deficiency & Vulnerability Matrix

% of Security	Secure Tenure		Non - Secure
	86%		14%
	Status of tenure		No of slums
Secure tenure	Good housing	Good infrastructure	11
	Good housing	Bad infrastructure	5
	Bad housing	Good infrastructure	22
	Bad housing	Bad infrastructure	6
Non - Secure tenure	Good housing	Good infrastructure	1
	Good housing	Bad infrastructure	1
	Bad housing	Good infrastructure	5
	Bad housing	Bad infrastructure	0

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

As seen above, 86% of the slums are secured and the remaining is not secured. Under the good housing & good infrastructure, 92% of the secured slums while remaining 8 % are in-secured. On the other hand, 12% of the slums 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 value has been considered to evaluate development options for each slum. Based on data findings, it is observed that for 11 slums the current land tenure status is secured with good housing and infrastructure however the ground reality depicts that these slums still requires Up-gradation of existing housing and infrastructure.

For more details, Please refer Annexure-2D for slum wise evaluation index and choice of development modes.

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%

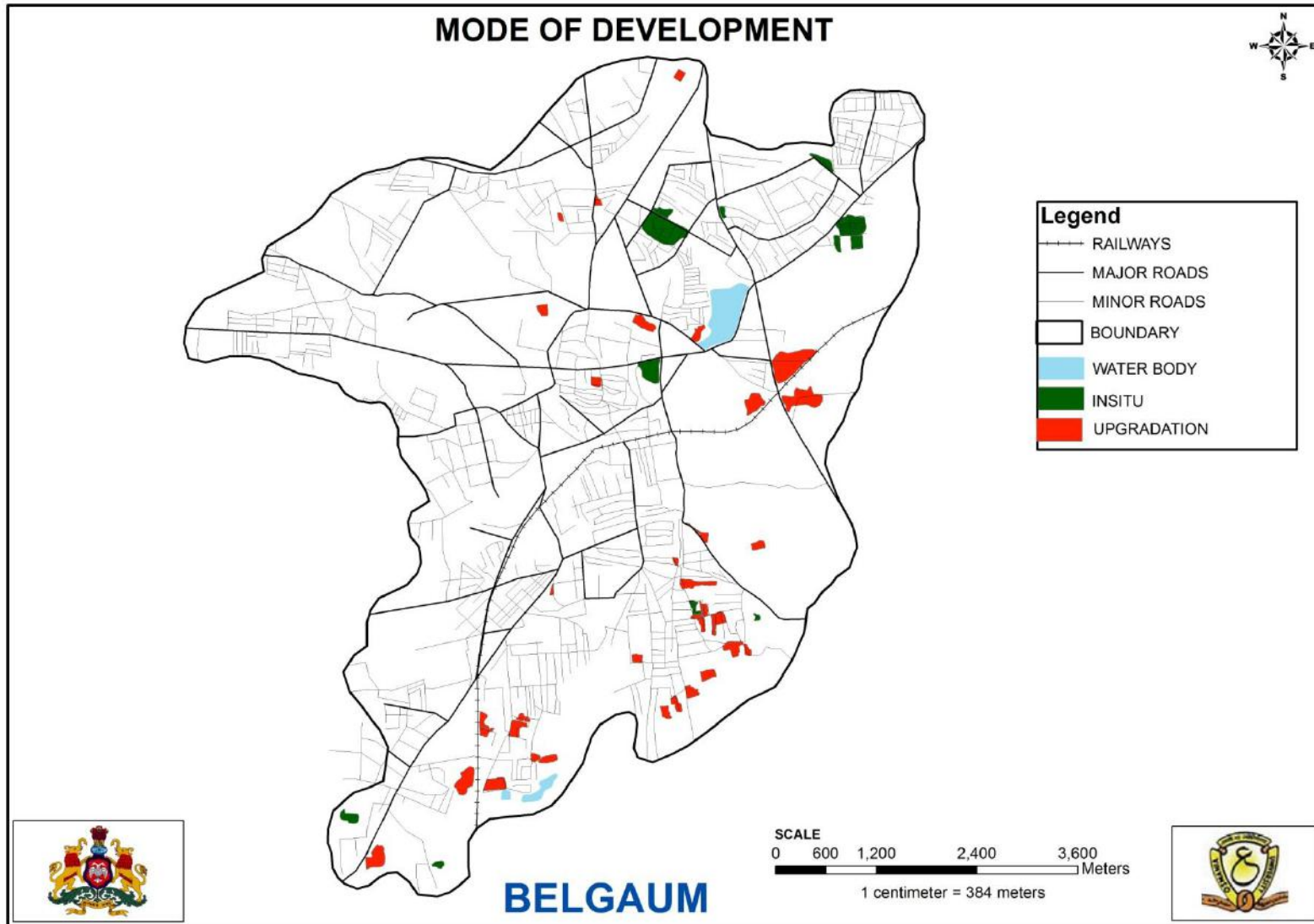
Up-gradation of slums

- 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	0	13	38
No. Households	0	2886	4016
Housing Deficit		6902	

Viewed in *table 2-13*, it was identified that there is a housing deficit of **6902** households in 51 slums. From development point of view, 13 slums are found to be having semi pucca and katcha houses greater than 75%, hence considered for In-Situ development while 38 slums with semi pucca and katcha houses less than 75% are considered for slum up gradation.



Map 2- 5 Mode of Development

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)
- 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 litres

Sanitation

- Additional length of underground sewer lines and Storm water drainage line=80% of the total road length
- Proposed individual toilets = total households – existing toilets (Upgradation)

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

Table 2-14 Physical Infrastructure Requirements

Sl. No	Sector	Unit	Requirement for existing slums
1	Water Supply System	Running length of sub line (KM)	37.72
		Raising Main (KM)	17.81
		No. of individual taps	4705
		Overhead Water tanks	17
2	Sanitation	Length of Underground Drainage/Sewer Lines (KM)	30.90
		Length of storm water Drainage Lines (KM)	26.34
		No. of individual toilets	2215
3	Solid waste management	No. of Bins	367
4	Roads	Total length of Approach roads in Kms	0.64
		Total length of Internal roads in Kms	29.78
5	Street Lighting	No. street lights	894

Table 2 - 15 Social Infrastructure Requirements

Sl. No	Sector	Unit	Requirement for existing slums
6	Education facilities	Anganwadi/Pre-primary	0
		Primary schools	1
		High schools	0
7	Health Facilities	Primary Health Centre	0
8	Social & Welfare development	Comm. rooms	5
9	Recreation & Open spaces (Sq.kms)		0.0447

As per UDPFI Guidelines, for every 7500 population, a secondary school is required; additionally for every 2500 population a pre-primary school and a primary school for 5000 persons have been recommended. Similarly for every 5000 population, a community room has been proposed. In addition to social infrastructure, recreation and open space has recommended with an area of 0.0447 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 is been taken to prioritize slums year-wise for a period of 5 years.

All the slums in ULB are proposed to be covered under RAY in the phased manner indicated in *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 and provided before relocation

In situ

- 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 *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 from 2012-2017

Year of Development	Period	No of the Slums	Mode of Development
I	2012-13	0	Relocation
		5	In - Situ Development
		4	Up gradation
Sub Total		9	
II	2013-14	0	Relocation
		3	In - Situ Development
		8	Up gradation
Sub Total		11	
III	2014-15	0	Relocation
		2	In - Situ Development
		12	Up gradation
Sub Total		14	
IV	2015-16	0	Relocation
		2	In - Situ Development
		9	Up gradation
Sub Total		11	
V	2016-17	0	Relocation
		1	In - Situ Development
		5	Up gradation
Sub Total		6	
Grand Total - 5 Years		51	

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

Under Private

- In situ redevelopment + Incentive FSI or TDR
- In-situ improvement/Up gradation 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
- In situ redevelopment by public agency and credit support /TDR
- In situ redevelopment by public agency/PPP
- Redevelopment by group housing with densification including remunerative use of land

Proposed housing

To make Belgaum a slum free city, there is a need to redevelop housing for 6902 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.

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 8 nos. houses has been kept on each floor to minimize the common area. The proposed structure would consist of ground +1, with 15% ground coverage and a proposed density of 100 dwelling units per acre.

The table and plan provides a brief specification of a single unit:

Item	Dimension
Living room	11.63 Sq.m
Bed room	7.68 Sq. m
Kitchen	3.4 Sq.m
Bath	1.85 Sq.m
W.C	0.9 Sq.m
Passage in front of Bath & W.C	0.68 Sq.m
Total area	26.14 Sq. m

DWELLING UNIT

Bed Room 83 sqft

Balcony

Toilet 30 sqft

Living 156 sqft

Kitchen 38 sqft

→N

Infrastructure

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

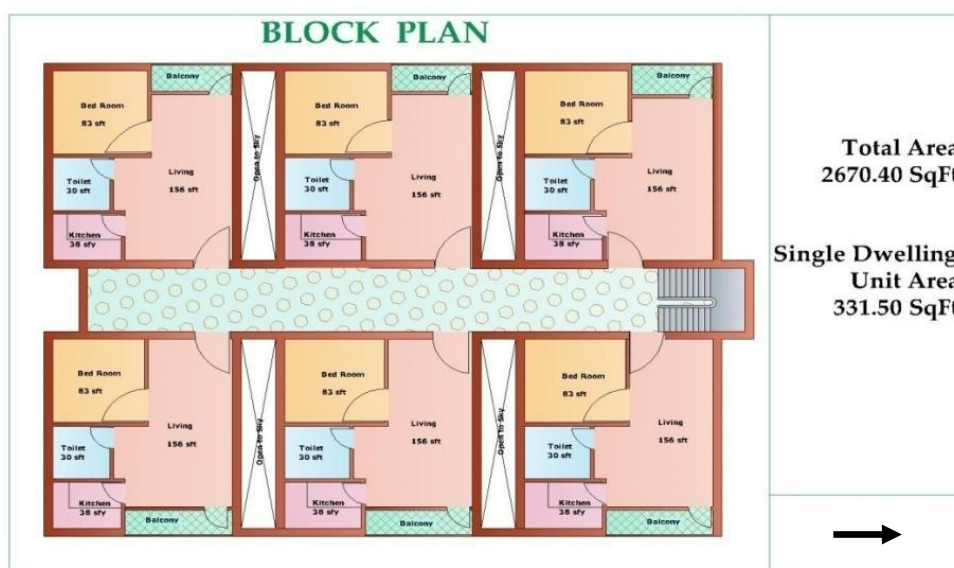
Construction

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.

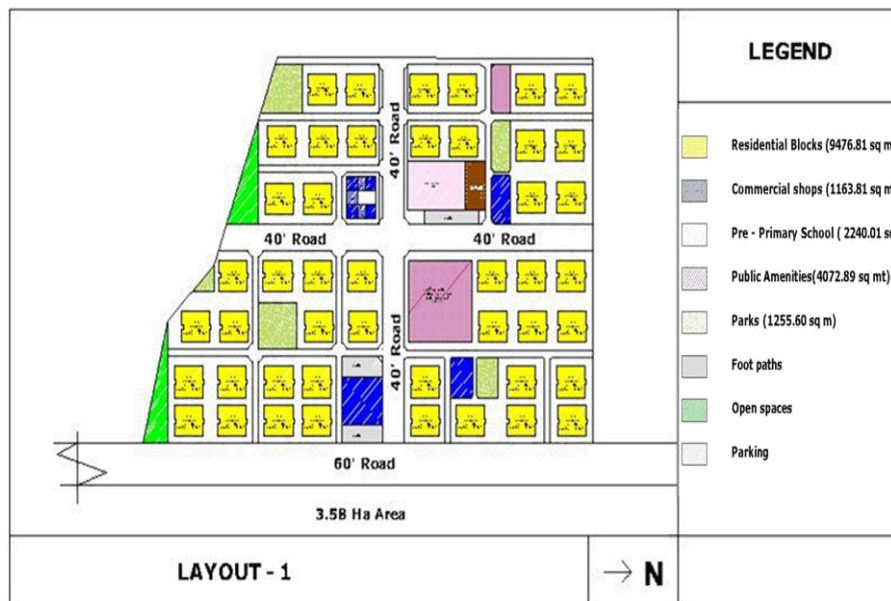
Structure wise, a permanent housing unit with a plinth area of 330.60 Square feet will be constructed. The walls shall be built with solid concrete blocks and slabs shall be RCC. Ready mixed concrete shall be used in all RCC elements of the building for quality assurance and providing a smooth finish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

The specifications of plan of single block are as follows:

Description	Unit
Area of Block	2670.40 sq. ft.
No.of Dwelling Units per block	6
Corridor width	7 Ft
Stair case	45 Sq.Ft
Area of layout	3.5 Ha
No of Blocks	46
No of Dwelling units	(46*18) = 828



Picture 2- 4 : Proposed Block diagram



Map 2- 6: Model layout for slum development

e.Modalities / Approach

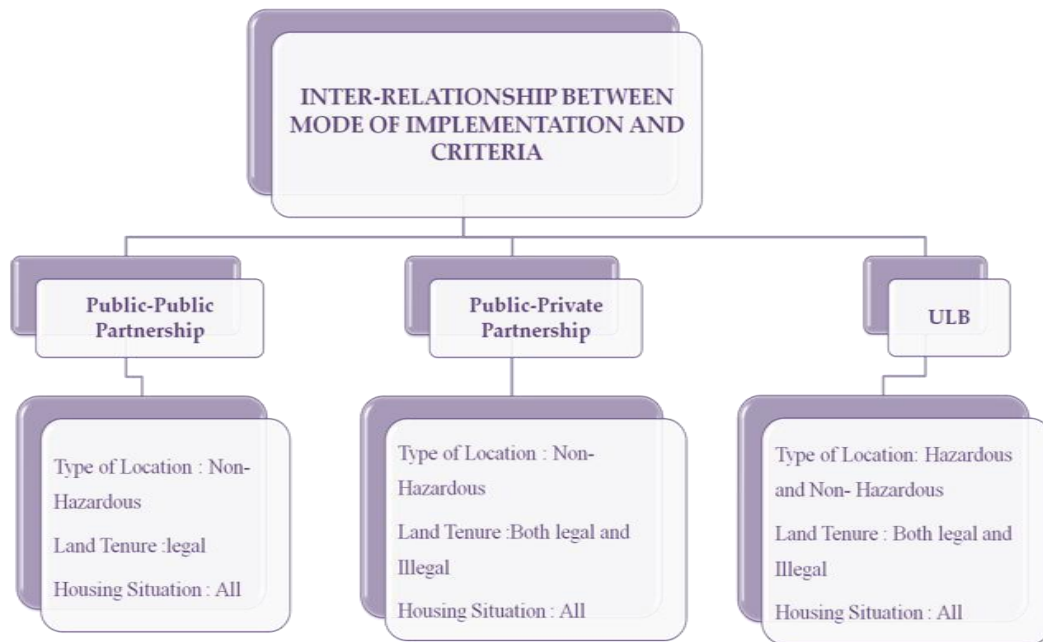


Chart 2- 6: Modalities & Approach

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

With spatial analysis and situation assessment done as above, a participative process will need to be undertaken with slum communities with assistance from NGOs/CBOs active in the area of slum housing/ Redevelopment to identify the possible development options. The *table 2-16* 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

Based on the mode of development, the slums with respect to housing condition, infrastructure and physical location, has been categorized accordingly. The *table 2-17* presents the required cost for each type of development for the identified slums.

Table 2-17 Investment Requirements for Housing (in INR/Lakhs.)

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	0	13	38
No. Households	0	2886	4016
Housing Deficit	6902		
Cost(Lakhs)	0	8909.94	7447.88
Total Cost(lakhs)	16357.81		

As illustrated in *table 2-17*, 55% of the total estimated costs is allocated for In-situ mode of development while 45% for slum up-gradation in Belgaum City. For calculation purpose, costing per unit @ 2.9 lakh per house for katcha houses and @ 1.45 lakhs 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 5% in the costs has been assumed with due consideration to changing market rate.

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 as shown in *table 2-18*.

Table 2-18 Investment Requirements for Infrastructure (in INR/Lakhs.)

S. No	Sector	Sector / Unit	Cost for 2012-17 (Rs. in Lakhs)
Physical Infrastructure			
1	Water Supply System	Running length of sub line (KM)	150.8
		Raising Main (KM)	33.92
		No. of individual taps	0
		Overhead water tanks	283.18
		Sub Total	467.9
2	Sanitation	Length of Underground Sewer Line (KM)	497.71
		Length of storm water Drainage Lines (KM)	420.16
		No. of individual toilets	274.08
		Sub Total	1191.95
3	Solid waste management	No. of Bins	32.57
		Sub Total	32.57
4	Roads	Length of main roads in Kms (Proposed)	32.22
		Length of sub roads in Kms (Proposed)	742.56
		Sub Total	774.78
5	Street Lighting	No. street lights	108.7
		Sub Total	108.7
		Total Physical Infrastructure	2575.90
Social Infrastructure			
6	Education facilities	Anganwadi/Pre-primary schools, Primary school, High school	2.82
7	Health Facilities	Primary Health Centre	0
8	Social & Welfare development	Comm. Halls	27.23
		Recreation-Park (sq km)	128.42
		Sub Total	155.65
Total Social Infrastructure			158.47
Grand total Cost (Physical + Social) INFRASTRUCTURE			2734.37

From the *table 2-18*, it is observed that total cost estimates for physical and social infrastructure is Rs. **27.34** Crores where physical infrastructure is estimated for Rs. **25.75** Crores and for social infrastructure it is around Rs. **1.58** 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 (in INR/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	3464.05	3832.13	2864.74	5393.2	803.69	16357.81
Water Supply	59.13	72.01	105.66	197.03	34.07	467.90
Sanitation	147.77	156.74	225.38	526.45	135.61	1191.95
Solid waste management	4	5.04	8.38	12.04	3.11	32.57
Roads	82.28	102.45	78.04	394.62	117.38	774.77
Street Lighting	17.83	18.36	14.07	53.1	5.34	108.70
Education	0	0	0	2.82	0	2.82
Health	0	0	0	0	0	0
Social & welfare development	18.03	22.99	41.86	54.32	18.45	155.65
Others (O & M)	565.67	627.69	495.98	982.63	164.51	2836.48
Grand Total (lakhs)	4358.76	4837.41	3834.11	7616.21	1282.16	21928.65

As seen above, the total cost projected for 5 years is Rs.**219.29** crores, as 46% of dwelling units are found to be in good condition hence only 74% of total cost is allocated for housing. Since 26% of slums lack in good infrastructure facility, 12% of total cost is estimated for Infrastructure. Among physical infrastructure elements, due priority is given for sanitation and roads for the next 5 years, next covered by water supply.

In the first year of development, 5 slums (1104 housing deficit) have been tentatively proposed for in-situ development with estimated total costs of Rs. 3.20 crores and 4 slums (158 housing deficit) proposed for Up gradation with estimated cost 2.62 crores on the lands belonging to the State Government, Local body and Private construction of 1262 houses with needed infrastructure.

b. Operation & Maintenance

In general, operation and maintenance costs form a sizable share of a slum redevelopment budget. In case of Belgaum 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 cost)
- 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 Operation & Maintenance Cost (in INR/ Lakhs)

Year Wise	Temporary accommodation	Acquired & operation expenses	O & M	DPR Prep., IEC etc.	Project preparation	Capacity building	Offset costing	Pre cost construction	Annual Estimated O&M (In INR /Lakhs)
1st Year	189.65	94.82	94.82	37.93	37.93	37.93	37.93	34.64	565.65
2nd Year	210.49	105.24	105.24	42.10	42.10	42.10	42.10	38.32	627.69
3rd Year	166.9	83.45	83.45	33.38	33.38	33.38	33.38	28.65	495.97
4th Year	331.68	165.84	165.84	66.34	66.34	66.34	66.34	53.93	982.65
5th Year	55.88	27.94	27.94	11.18	11.18	11.18	11.18	8.04	164.52
Grand Total (lakhs)	954.6	477.29	477.29	190.93	190.93	190.93	190.930	163.58	2836.48

Depending upon the mode of development, the operation and maintenance costs will vary for the slums. Seen in table 2-20, the O&M cost catering to the housing and infrastructure investment requirements as set out earlier includes 8 sectors where **28.36 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 and 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

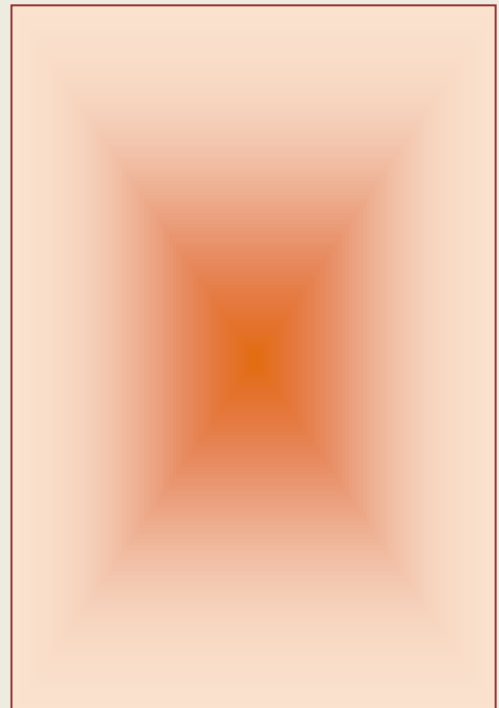
CO's, CBO's and community volunteers are the **Intermediary stakeholders** to train the trainer's. Capacity building for them is convincing & managing the slum association to accept proposals. Training and adequate guidance to the CBO's and the community volunteers can be organized by the concerned cells/agencies/lead 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 Centre's (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. 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 future slums in Belgaum 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

- Availability of public owned vacant lands
- Incentives provided to private sector
- Availability of housing finance to be ensured for low income groups through public agencies 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 Belgaum being a tourist attraction and one of the oldest inhabited cities, an increase of 1% per year is expected to forecast the population from 2012-2017.

Table 3- 1 Projected Population for 5 Years

Population Projection		
Year	Projected Increase	Projected Population
2012-2013	572	57,783
2013-2014	578	58,361
2014-2015	584	58,945
2015-2016	589	59,534
2016-2017	595	60,129
Total	2,918	----

At the end of five years, a total population of **60129** is estimated for **51** slums in Belgaum.

b. Household requirements

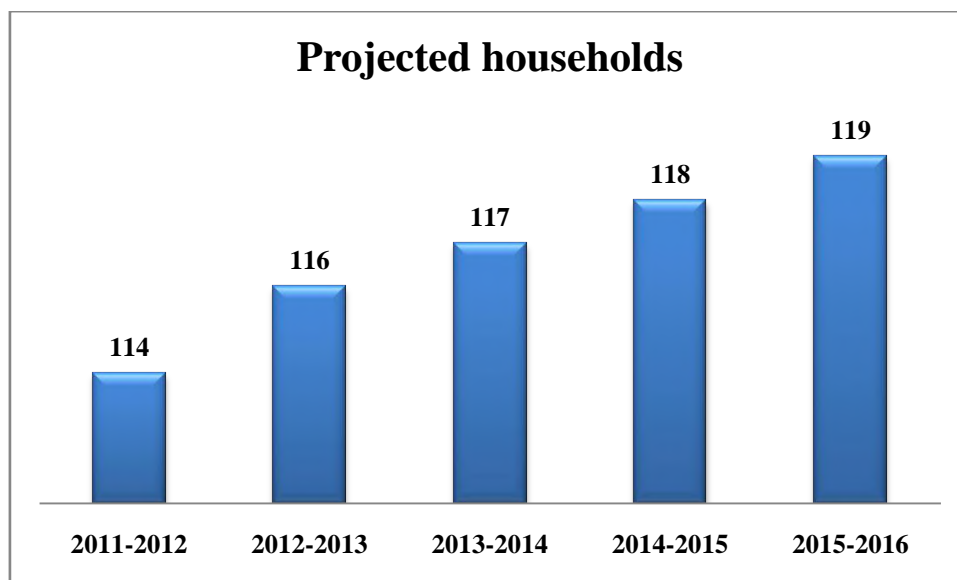


Chart 3- 1: Projected Households (2012-17)

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 **584** 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 **584** which indicate **1 model layouts** are required for future demand. Hence the infrastructure requirement is indicated in the *table 3-2*:

Table 3-2 Infrastructure Requirement for Slum Prevention from 2012-2017

S. No	Sector	Unit	Requirement for slum prevention
Physical Infrastructure			
1	Water Supply System	Running length of sub line (KM)	12.29
		Raising Main (KM)	2
		No. of individual taps	584
		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	19
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
		Maternity Centre	0
8	Social and Welfare Facilities	Community rooms	1
		Comm. Halls	0
		Recreation & Open spaces (Sq. KM)	0.00328

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 (PPP)

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 BCC & get community consensus from the residents. The layouts are subjected to change with respect to the inputs / insights provided by BCC & Stakeholders. The following illustrates three different slums chosen for PPP model wherein the housing type with infrastructure has been proposed.

Option 1: PPP model (Housing Layout)

KONCHI KORAWAR GALLI (RUKMINI NAGAR)

Konchi Korawar Galli (Rukmini Nagar) is one among the 36 slums located in the Core area of Belgaum City. It has a total population of 904 with 200 households and an area of 19553.14 Sq.m. Under the ownership of Belgaum City Corporation, Konchi Korawar Galli (Rukmini Nagar) slum is located in the Core area and surrounded by residential use. Of the 200 houses, 100% are semi pucca and 100% are katcha in nature. As far as water supply is concerned, 74% 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 Coffee Board Behind 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 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 Dwelling unit	331.50 (sq.ft)

Specifications for Doors & Windows in a single Dwelling unit:

Description	Dimensions (Feet)
Doors D 1	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 construction specifications:

S.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 Belgaum 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 table presents the proposed land use for Konchi Korawar Galli (Rukmini Nagar) Slum:

Description	Area (Sq.ft)
Slum Area	4.83 Acres
Proposed Slum Area	96208.00
Residential area	34034.00
Commercial	38866.00
Parking	2538.00
Park	11309.00
Roads	36265.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 34034.00 Sq.ft of land for regular residential and 38866.00 Sq.ft of land is allocated for Commercial space and 17% for roads has been reserved. Under this model, potential business opportunities can be created as well as better access to improved infrastructure, thus fostering Konchi Korawar Galli (Rukmini 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 Konchi Korawar Galli (Rukmini Nagar) slum:



Map 3- 1: Proposed Layout for korawar galli rukmini nagar

BHANJI TRI GALLI

Bhajantri Galli is one among the 36 slums located in the core area of Belgaum City. It has a total population of 430 with 106 households and an area of 6347.12 Sq.m. Under the ownership of Belgaum City Corporation, Bhajantri Galli slum is located in the Core area and surrounded by residential use. Of the 106 houses, 89% are Semi pucca and 4% are katcha. Due to lack of well built housing structures and inadequate physical infrastructure, there is a need to improve the living conditions in Bhajantri Galli 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, 108 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 D 1	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 6 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 construction specifications:

S.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 Belgaum 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 table presents the proposed land use Bhajantri Galli Slum:

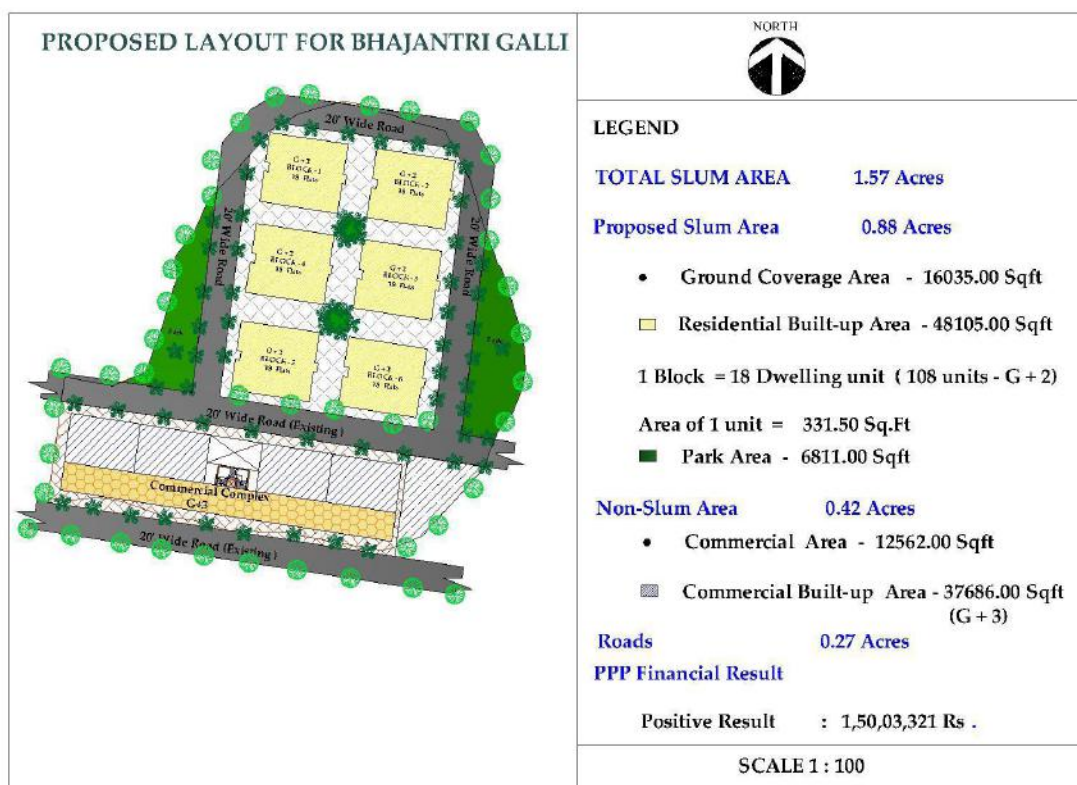
Description	Area (Sq.ft)
Slum Area	1.57 Acres
Proposed Slum Area	48105.00
Commercial use	37686.00
parking	2040.00
Park	6811.00
Roads	13771.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 37686.00 Sq.ft of land is allocated for commercial space and 20% for roads has been reserved .Under this model, potential business opportunities can be created as well as better access to improved infrastructure, thus fostering Bhajantri Galli 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 Bhajantri Galli slum:



Map 3- 2: Proposed Layout for Bhajantri galli

HARIJANKERI, ANAGOL

Harijankeri,Anagol is one among the 36 slums located in the Core area of Belgaum City. It has a total population of 426 with 94 households and an area of 8072.69 Sq.m. Under the ownership of Belgaum City Corporation, Harijankeri, Anagol slum is located in the Core area and surrounded by residential use. Of the 94 houses, 81% are semi pucca and 4% are katcha in nature. Due to lack of well built housing structures and inadequate physical infrastructure, there is a need to improve the living conditions in Harijankeri, Anagol 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, 108 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 D 1	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 9 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

Dwelling Unit construction specification:

S.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	Roof top 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 Belgaum 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 table presents the proposed land use for Harijankeri, Anagol Slum:

Description	Area (Sq.ft)
Slum Area	1.99 Acres
Proposed Slum Area	48104.0
Residential use	25527.00
Park and recreation	8656.00
Roads	13027.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 25527.00 Sq.ft of land is allocated for Residential 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 Harijankeri, Anagol 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 Harijankeri, Anagol Slum:



Map 3- 3: Proposed Layout for Harijankeri , Anagol

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:

- Rental housing by employers/industries/SEZ - Employees housing for high paid employees
- Rental housing by employers/industries/SEZ - Employees housing for low paid employees
- Dormitory housing
- Subsidy housing / FAR incentive
- Other – Group housing

b. Targets & Timelines

Table 3- 3: Targets and Timelines

Year of Development	Period	No of the Slums	Mode of Development
I	2012-13	0	Relocation
		5	In - Situ Development
		4	Up gradation
Total		9	
II	2013-14	0	Relocation
		3	In - Situ Development
		8	Up gradation
Total		11	
III	2014-15	0	Relocation
		2	In - Situ Development
		12	Up gradation
Total		14	
IV	2015-16	0	Relocation
		2	In - Situ Development
		9	Up gradation
Total		11	
V	2016-17	0	Relocation
		1	In - Situ Development
		5	Up gradation
Total		6	
Total 5 Years		51	

As seen in the table, for 51 slums in Belgaum city, 13 slums has been targeted for in-situ mode of development and 38 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.

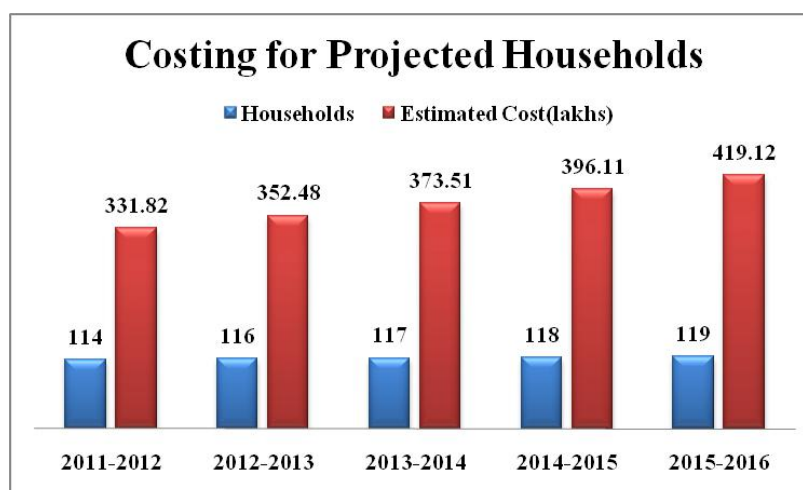
3.3. Investment requirements

a. Housing

The following table and chart shows the finance for projected households for 5 years (2012-2017).

Table 3- 4 Costing for Projected Households (in INR /Lakhs)

Costing for projected households		
Year	Households	Estimated cost (In INR/Lakhs)
2012-2013	114	331.82
2013-2014	116	352.48
2014-2015	117	373.51
2015-2016	118	396.11
2016-2017	119	419.12
Total	584	1873.04



As seen table 3-4, an increase of **584** households is expected, for which the estimated costs for 5 years is Rs. **1873.04** INR/Lakhs with an increase of 5% (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 (off site)
- For roads, costs was calculated for non Motorable Pucca and katcha roads at the new formation costs, while for Motorable katcha the costs was calculated at re-carpeting and repair rates.
- For Up gradation it is equivalent to renovation costs.

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

Table 3- 5 Estimated Infrastructure Cost for Projected Households (in INR /Lakhs)

S. No	Sector	Unit	Estimated Cost for 2012-17 (Rs. in INR/Lakhs)
Physical Infrastructure			
1	Water Supply System	Running length of sub line (KM)	44.24
		Raising Main (KM)	3.48
		No. of individual taps	0.00
		Overhead water tanks	15.00
2	Sanitation	Length of Underground Drainage/Sewer Lines (KM)	147.46
		Length of storm water Drainage Lines (KM)	147.46
		No. of individual toilets	0.00
3	Solid waste management	NO. of Bins	1.56
4	Roads	Total length of Approach roads (4.5 meters wide)	2.75
		Total length of Internal roads (3.0 meters wide)	100.32
5	Street Lighting	No. street lights	46.90
Physical Infrastructure			509.16
Social Infrastructure			
6	Education facilities	Pre-primary schools	3.41
		Primary school	1.42
		Secondary school	0.00
7	Health Facilities	Primary Health Centers	0.00
		Maternity Centre	0.00
8	Social & Welfare development	Community rooms	2.77
		Recreation and open spaces (Sq. KM)	0.0085
Social infrastructure			7.61
Grand total (Physical infrastructure + Social Infrastructure)			516.77

c. Operation & Maintenance

The *table 3-6* shows the estimated costs for additional components and operation and maintenance for Belgaum slums for a period of 5 years (2012-2017):

Table 3- 6 Estimated O & M Cost for Projected Households (in INR/ Lakhs)

Operation & Maintenance Estimated cost (In Lakhs)							
Year	Pre cost Housing (1% of Housing)	A& OE (2.5%)	O&M (2.5%)	DPR (1%)	Project Implementation (1%)	Offsite costing (1%)	Total Cost
2011-2012	11.95	11.95	4.78	4.78	4.78	4.75	42.99
2012-2013	11.95	11.95	4.78	4.78	4.78	5.04	43.28
2013-2014	11.95	11.95	4.78	4.78	4.78	5.35	43.58
2014-2015	11.95	11.95	4.78	4.78	4.78	5.67	43.91
2015-2016	11.95	11.95	4.78	4.78	4.78	6.00	44.24
Grand Total	59.75	59.75	23.90	23.90	23.90	26.81	217.99

The total of **217.99** lakhs has been estimated for the additional costs that are going to be incurred during and after the implementation of the project.

$$\begin{aligned} \text{Housing + Infrastructure + Operation and Maintenance} &= 1873.04 + 516.77 + 217.99 \\ &= \underline{\underline{\text{₹ 2607.80 Lakhs}}} \end{aligned}$$

The total of **2607.80** lakhs has been estimated tentatively for 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.
- 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.

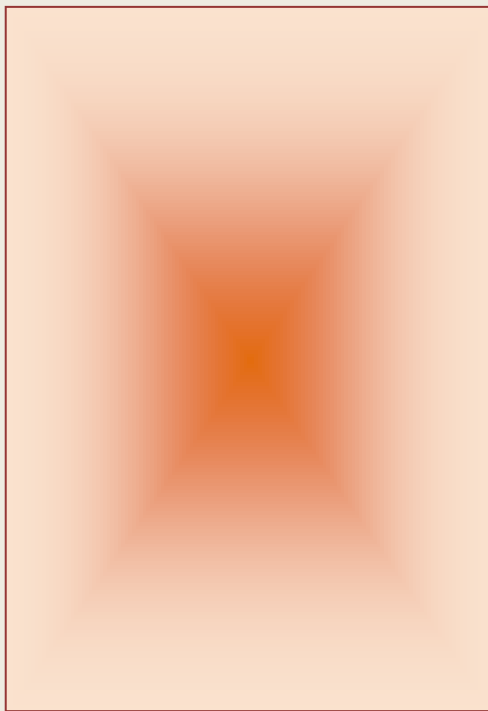
At NGO's level,

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

Ongoing polices for urban poor

- **SJSRY** – urban self employment and urban wage programme
- National Slum Development Plan -(Rastriya Malin Basti Sudhar Yojana- the qualitative improvement of the slum dwellers and improvement of slum
- Maharishi Valmiki Ambedkar Slum Housing Plan – slum dwellers with adequate shelters through subsidy
- Nirmal Bharat Abhiyan – A Sub-component of VAMBAY – integration of sanitation and 100% coverage

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.

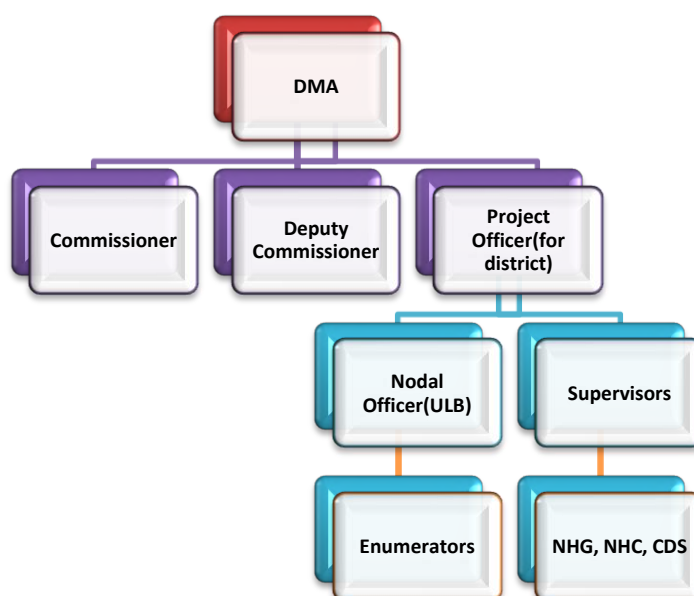


Chart 4- 1: Institutional setup for Slum free cities

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 Belgaum 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	16357.81
Water Supply	467.90
Sanitation	1191.95
Solid waste management	32.57
Roads	774.77
Street Lighting	108.70
Education	2.82
Health	0.00
Social development	155.65
Others	2836.48
Total	21928.67

To make slum free city Belgaum the overall cost is estimated tentatively at a value of **219.29** Crores.

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

Annexure 1B

Annexure 1C

Annexure 1D

Annexure 1E

Annexure 1F

Annexure 2A

Annexure 2B

Annexure 2C

Annexure 2D

Annexure 2E