State Urban Development Authority
Government of Uttar Pradesh

RAJIV AWAS YOJANA

SLUM FREE CITY PLAN OF ACTION

MUZZAFFARNAGAR

Regional Centre for Urban and Environmental Studies
Osmania University, Hyderabad.
Sponsored by
Ministry of Urban Development, Govt.of India.

Slum Free City Plan of Action - Muzaffarnagar

Regional Centre for Urban and Environmental Studies
(Sponsored by Ministry of Urban Development, Govt. of India)
Osmania University, Hyderabad - 500007

CONTENTS

LIST OF TABLES

LIST OF CHARTS

LIST OF FIGURES

LIST OF MAPS

LIST OF PICTURES

ACRONYMS

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

DUDA – District Urban Development Authority

EWS - Economic weaker section

FSI - Floor Space Index

GIS – Geographical Information System

HHs - Households

HRA – Housing Rent Allowance

HUDCO – Housing And Urban Development Corporation Ltd

IHSDP – Integrated Housing and Slum Development Program

JnNURM – Jawaharlal Nehru National Urban Renewal Mission

MDA – Muzaffarnagar Development Authority

LDPE - Low Density Polyethylene

LIG - Low Income Group

MNP – Muzaffarnagar Nagar Parishad

MIS – Management Information System

MoHUPA – Ministry of Housing and Urban Poverty Alleviation

NGO's – Non-Governmental Organizations

NHC - Neighborhood Communities

NHG - Neighborhood Groups

NNRC – National Network Resource Centre

NOAPS –National Old Age Pension Scheme

O&M – Operation & Maintenance

PO - Planning Officer

POA - Plan Of Action

PPP - Public Private Partnership

RAY – Rajiv Awas Yojana

RCUES - Regional Centre for Urban and Environmental Studies

RCV - Resident Community Volunteers

SFCPoA – Slum Free City 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

SUDA – State Urban Development Authority

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

UPHDB – Uttar Pradesh housing and Development Board

UPJN – Uttar Pradesh Jal Nigam

USHA - Urban Statistics for Human Resource & Assessments

UWESP - Urban Women Employment & Self help Programme

UNITS

1 Crore (Cr)	:	100 Lakhs
1 Hectare (Ha)	:	10,000 Square Meters (Sq.mts)
1 Hectare (Ha)	:	2.471 Acres (Ac)
1 Metric Ton (MT)	:	1000 Kilograms (Kg)
1 Million	:	10 lakhs
1 Square Kilometer (Sq.Km)	:	100 Hectares (Ha)

EXECUTIVE SUMMARY

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

The key aspects of Slum Free City Planning comprises mainly of Urban Planning, Law and Legislation, MIS, GIS, Provision of Land, Community Participation, Stakeholder Convergence, Project Management and Capacity Building. The process starts with conducting slum survey and updating MIS database, preparation of the city and slum level maps in GIS, integration of the spatial and non-spatial data, analysis of the existing situation of slums, preparation of slum specific proposals, involve the community from the inception of 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 City Plan of Action (SFCPoA), Community Mobilization, MIS and GIS etc. The states have to pass legislation for the assignment of property rights to the slum dwellers, and take steps to prevent new slums, with certain existing reservation of land.

The present report is the tentative Plan of Action for Slum Free City under the scheme of Rajiv Awas Yozana (RAY) sponsored by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), Govt. of India. To implement the scheme, the city of Muzaffarnagar is selected as one of the Pilot Cities for the development of 22 slums 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 Muzaffarnagar** as a preventive measure. The report contains 7 sections namely, ***SFCPoA Initial Framework, City Profile & Institutional setup, Assessment of Existing slums, Slum Rehabilitation Strategy, Requirement & Investment, Slum Preventive Startegy, Finanancing strategy*** respectively. The slum – free City Plan of Action includes preparation of Geo-referenced city base map satellite imagery, identifying and demarcating slums and surrounding vacant lands, analyzing the slum profile features, finding infrastructure gap assessment, line estimates and detailed city/slum level analysis. The report provides a gross understanding of slum situation in the city, categorizes the slums, proposes the development mode required for each slum, and majorly phasing the slum development for the next coming five years. The first year prioritized slums have been finalized by conducting various stakeholder meetings under the leadership of "Project Officer", District Urban Development Authority (DUDA) of the city. The report aims to summarize, analyze the slum situation and propose a roadmap to reach slum free Muzaffarnagar.

This report is accompanied by annexure 1 & 2 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 1 & 2**.

SLUM FREE MUZAFFARNAGAR

Muzaffarnagar city is the district headquarters of Muzaffarnagar district and politically well-known constituency in India. The city has 22 slums with 5085 households. About 7% of the city population lives in slums. Among the slum population, 74% belongs to OBC and SC division of social groups and 29% are living below the poverty line (BPL). It is found that the slums are having a housing deficit of 2038. In concern to Infrastructure, 44% of the slum households do not have access to individual water supply connections and 1 out of 22 slums are not connected to city wide water supply system. Ironically, it is found that about 7% of the slum households practice open defecation. In this context, the plan of action provides line estimates for housing and infrastructure gaps and proposes civic amenities as per RAY guidelines and the report calls for an approval and action to prepare DPR's for year wise phased slums.

ACKNOWLEDGEMENT

The Regional Centre for Urban and Environmental Studies (RCUES), Hyderabad was established in the year 1970 by the Ministry of Urban Development, Government of India in the Osmania University campus. The RCUES caters to the training and research needs of the constituent state governments namely, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Arunachal Pradesh, Nagaland and the Union Territory of Puducherry in the urban sector. Apart from the training programmes, the RCUES is providing capacity building, research and consulting services and has developed exclusive divisions comprising of twenty in house professionals in the areas of Urban Finance, Environment, Urban planning, GIS and Poverty Alleviation.

RCUES, Hyderabad has been awarded the project of preparation of 'Slum Free City Plan of Action' under Rajiv Awas Yojana (RAY) Scheme for Bareilly, Etawah, Kannauj, Mathura, Moradabad, Muzaffarnagar, Raebareli and Rampur of Uttar Pradesh state. The RCUES has completed the plan of action reports following the step by step methodology of RAY as specified by the Ministry of Housing and Poverty Alleviation, Government of India.

RCUES, Hyderabad would like thank the Director and all the staff of State Urban Development Agency (SUDA), Lucknow for the co-operation they provided during the project period. We would like to thank the Project Officers (PO's) and the staff of District Urban Development Agency (DUDA) of respective cities for their generosity while helping RCUES teams to collect data, conduct workshops and played a big role in the preparation of Plan of Action. We would also like to express our gratitude to the officials of respective Nagar Nigam's/ Nagar Palika Parishad's, Jal Sansthan and other agencies who co - operated for the successful preparation of Slum Free City Plan of Action.

RCUES, Hyderabad looks forward for implementation of the effective strategies by the nodal agencies and making Uttar Pradesh state free from slums.

CHAPTER 1 - INTRODUCTION

1.1 BACKGROUND

The Government of India in 2009 launched Rajiv Awas Yojana (RAY) with an aim to achieve the vision of a 'slum - free India' with inclusive and equitable cities in which every citizen has access to basic civic and social services and decent shelter. It aims to achieve this vision by encouraging States/Union Territories to tackle the problem of slums in a definitive manner, by a multi-pronged approach. It focuses on bringing all existing slums, notified or non-notified within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town. It also seeks to tackle the shortages of urban land and housing that keeps shelter out of reach of the urban poor. The Rajiv Awas Yojana aims to provide support to enable States to redevelop all existing slums in a holistic and integrated way and to create new affordable housing stock. The Ministry of Housing and Urban Poverty Alleviation (MoHUPA) is the nodal ministry for RAY scheme.

Against this background, considering the importance of the scheme for achieving inclusive and sustainable development of the city, state and the nation, the Slum Free City Plan of Action for Muzaffarnagar city is prepared to provide a systematic and holistic approach to tackle with existing slums in the city and to prevent the formation of new slums in future.

1.2 OBJECTIVES OF SLUM FREE CITY PLAN OF ACTION

A Slum Free City Plan of Action (SFCPoA) is an important instrument for cities to attain the objectives of RAY. It is a citywide plan of action, which consists of two parts; a plan to bring about the improvement of existing slums through participation of the existing dwellers and strategies for prevention of future slums. In doing so, the 'Slum Free City Plan of Action' takes into consideration the present status of slums, priorities of slum dwellers, the resources and capabilities of the city in improving the quality of life of the urban poor and the capacity of the urban poor to be partners in this development process.

The Objectives of Rajiv Awas Yojana (RAY):

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

1.3 PERSPECTIVE

The lack of housing and basic services at the required pace to meet the challenges of urbanization has resulted in the development of slums and squatter settlements with wider ramifications on the health, safety and well-being of the citizens. In 2001, there were 23.5 percent of households in urban areas which were living in slums. In 2011, it has come down to 17.4 percent. But there are still 13.74 million slum households and 68 million people living in the slum areas as per 2011 census. As per the report of the Technical Group on Urban Housing Shortage (2014-19) constituted by the Ministry Of Housing and Urban Poverty

Alleviation (MoHUPA), there is a shortage of 18.78 million dwelling units in the country out of which nearly 96% belong to the Economically Weaker Sections (EWS) and Lower Income Group (LIG) households. There are constraints and challenges both on the supply side and the demand side, which need intervention by the governments.

In context of Uttar Pradesh, though the state is considered as one of the less urbanized states of India, it has second largest urban population in the country. About 22% of the population lives in urban areas in Uttar Pradesh, which constitute more than 44 million. As per the statistics of committee on Slum Statistics/census, 2011, GoI, about 10.8 million urban population of Uttar Pradesh is living in slums, which constitute about 24% in urban population.

In spite of various central and state government programmes implemented in the state the problem of urban poverty and slums is still prevailing on large scale. In order to resolve the problem through inclusive and in a holistic manner, the state government with the assistance of central government has adopted Rajiv Awas Yojana (RAY). The Urban Employment & Poverty Alleviation Programme Department, Govt. of Uttar Pradesh is the concerned department in the state for carrying RAY. In July 2012, the sub-agency of the department, State Urban Development Agency (SUDA) is appointed as a nodal agency for executing the task of RAY. In Uttar Pradesh, till date 21 cities are selected under the scheme. Of them, the task of preparing Slum Free City Plan of Action (SFCPoA) for 14 cities is entrusted to Regional Centre For Urban and Environmental Studies (RCUES), Hyderabad in two phases i.e., 6 cities in Phase- I (Lucknow, Kanpur, Allahabad, Varanasi, Meerut, Agra) and 8cities in Phase – II (Bareli, Etawah, Kannauj, Muzaffarnagar, Rampur, Moradabad, Muzaffarnagar, Mathura). The present report is a Plan of Action prepared for Muzaffarnagar city, which is selected for RAY in second phase.

1.4 SFCPOA METHODOLOGY IN MUZAFFARNAGAR

For the preparation of Slum Free City Plan of Action, the following methodology is followed for Muzaffarnagar city.

- **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.

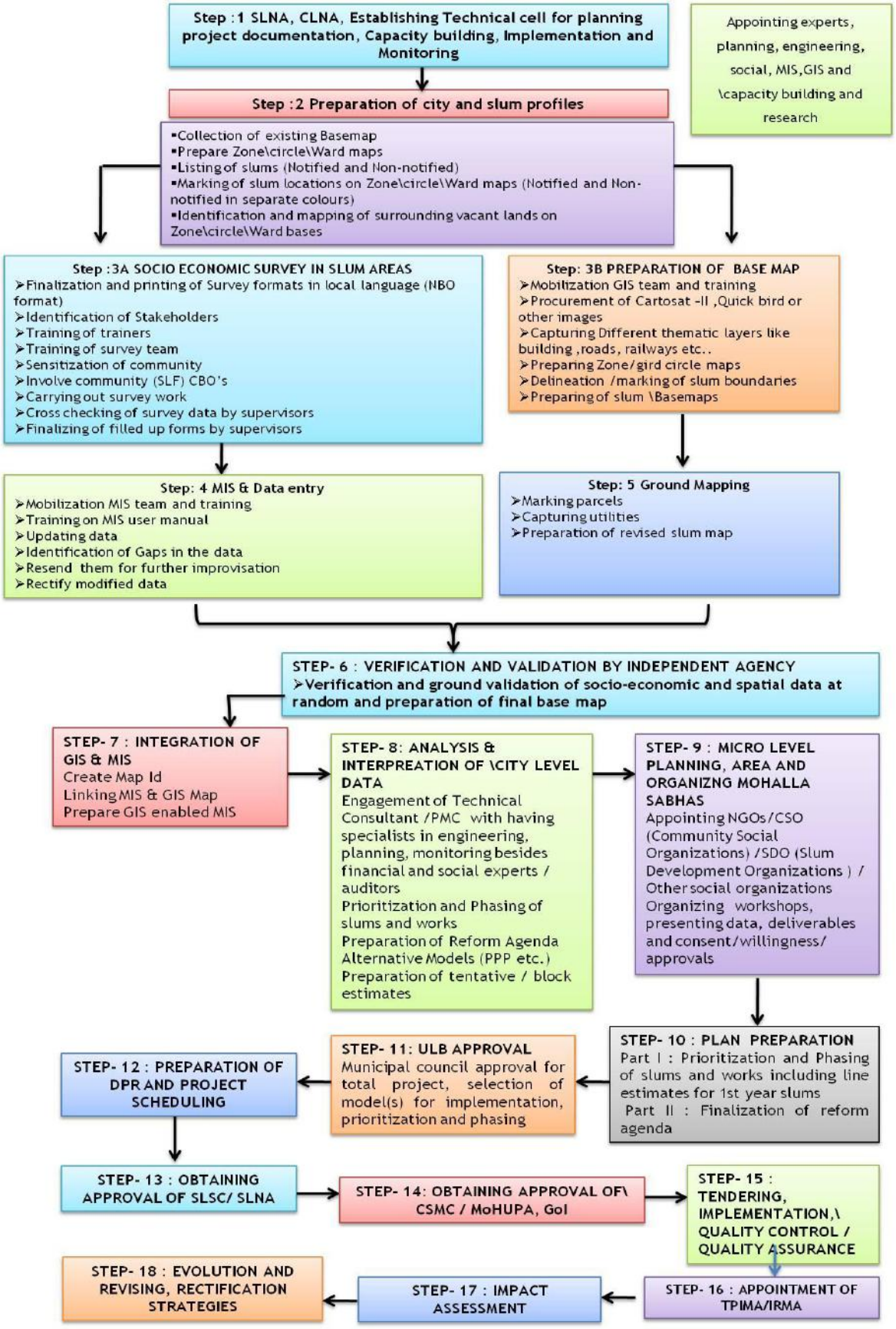


Chart 1-1 : SFCPoA Methodology for Muzaffarnagar

1.5 SURVEYS, INVESTIGATIONS & CONSULTATIONS

1.5.1 Listing of Surveys and Timelines (annexure)

State Urban Development Agency (SUDA) is the nodal agency to implement surveys for the scheme 'Rajiv Awas Yojana' in the State of Uttar Pradesh. As per the directions of Government of India, slum survey started in Uttar Pradesh from the year 2009. Initially the survey was taken up under USHA programme, which was having 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. The following institutional methodology has been adopted for the state.

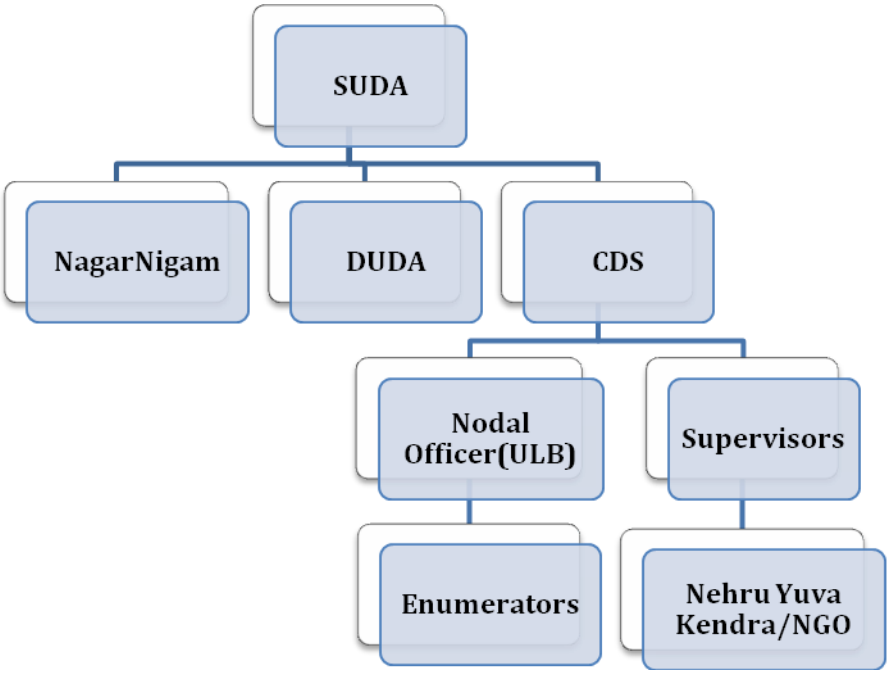


Chart 1-2 : Agencies & Stakeholders involved

1.5.2 Agencies (including procurement process) & Stakeholders involved

State Urban Development Agency (SUDA) as State level authority and District Urban Development Agency (DUDA) as city level authority have been the Nodal agencies to monitor the quantity and quality of surveys performed by individual cities. DUDA is headed by Project Officer (PO) 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 done the surveys. Member of Community Development Societies (CDS), Self Help Groups constituted under SJSRY and other schemes have been involved in conducting surveys and a minimum qualification of SSC was taken as Enumerators eligibility to collect information and to fill up the survey forms. The various stakeholders involved in the process comprised of CDS, Nehru Yuva Kendra societies, NGO's working in the local areas.

a. City level Technical cell

Although the policy for appointing state and city level cell has been initiated only state level cell comprises of RAY specialists in State Urban Development Agency (SUDA), Head office, Lucknow. District Urban Development Agency (city level RAY nodal agency) how ever is finding it tough to identify and appoint RAY specialists. The necessary support required is been hired by available qualified consultants properly monitored by the state level technical cell.

b. GIS mapping

RCUES, Hyderabad is the Nodal agency for preparation of GIS base maps for Muzaffarnagar city. RCUES, Hyderabad has collected the base maps from Uttar Pradesh State Remote Sensing Center which is prepared in the year 2008. RCUES has revised the base map and also prepared the slums level maps collecting the slum boundaries from concerned ULB staff and other NGO's. The satellite images were acquired for all cities and digitization of city and slum boundaries have been completed in RCUES, Hyderabad Urban Planning Division by in house GIS staff. The key stakeholder for the GIS map preparation would be RCUES, Hyderabad and Uttar Pradesh State Remote Sensing Center.

c. MIS

SUDA has initiated the work of MIS to UPTRON, which in turn has outsourced to Infinite systems, performed the operations of MIS. Data Entry has been done at ULB level and ported the data to the main server at CGG. A routine checkup of data has been performed and uploaded in a web tool specially prepared for RAY project. 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 Postgres and Java. Once the data is frozen and migrated to centralized data base at CGG, any editing of data will be done by the Project Director, DUDA in case of cities and by Commissioners in case of City Corporations.

d. Stakeholder Consultation

The various stakeholders involved along with SUDA in the process of RAY comprised of District magistrate, DUDA, Officials of Nagar Palika/Parishad, RCUES - Hyd, UP Remote Sensing Center, elected people representatives, private agencies, NHG's, NHC's, CDS ,NGO's, slum inhabitants, media and other agencies, individuals working in the local areas.

1.6 STAKEHOLDERS CONSULTATIVE WORKSHOP / MEETING

As part of preparation of Slum Free City Plan of Action (SFCPoA), a consultative stakeholder meeting/workshop in Muzaffarnagar city is held on 28th September, 2013 at Vikas Bhawan, from 11 AM. The objective of the meeting was to discuss about the draft Plan of Action, review upon the gap assessment analysis for the city, receiving suggestions from stakeholders.

The meeting was chaired by Shri. Pankaj Kumar, Chairman, Muzaffarnagar Nagar Palika Parishad, Shri.Ravinder Gowdbhole, Chief Development Officer/Project Director, DUDA, Muzaffarnagar, Shri M.Rama Rao, Head of Urban Planning Department along with the team of two urban planners represented from Regional Centre for Urban and Environmental Studies, Hyderabad. The key stakeholders who participated in the workshop were from Muzaffarnagar Nagar Palika Parishad, District Development Authority, ward corporators, local NGOs, CDS, various other public representatives, few slum dwellers and few residents from the city.

The meeting started at 11am in Meeting Hall, Vikas Bhawan, Muzaffarnagar. Shri. Deepak Kumar, Project Officer, DUDA, Muzaffarnagar welcomed all the stakeholders to the consultative workshop and explained the purpose of conducting the workshop. With reference to the existing situation of slums in the city, he detailed out the significance of Rajiv Awas Yojana scheme to upgrade the housing and infrastructure in the slums. He detailed out various parameters considered in RAY primary surveys that has been carried out in city for all the 22 slums in February, 2013. He detailed the existing status of Detailed Project Report (DPR) prepared for Mahmoodnagar slum. In response to a query, he clarified the difference between In-situ and up gradation modes of development. He explained the importance of community participation in the scheme and called for the effective coordination of Muzaffarnagar Nagar Palika and other agencies with DUDA in executing RAY scheme and making the city free from slums. He detailed out the outline and purpose of preparation of Slum Free City Plan of Action. He then introduced Shri Rama Rao and the RCUES team to the stakeholders.

Shri. M.Rama Rao, RCUES in his initial remarks explained the difference between the Slum Free City Plan of Action (SFCPoA) and the Detailed Project Report (DPR), where the prior is a plan focuses on all the slums in the city and the later prepared for every individual slum. He then explained the major findings of draft Slum Free City Plan of Action prepared for Muzaffarnagar City. He explained the step by step methodology followed for preparation of plan. He detailed out the spatial distribution of slums in ward wise in the city. He explained the existing situation of slums in the city with respect to physical characteristics of the city,

demography, socio-economic profile, housing profile, status of physical and social infrastructure facilities etc. He visualized the GIS based slum mapping done for each and every slum of the city. He detailed out the proposals, year wise phasing of slums, mode of development proposed for each and every slum. He visualized the sample layout designed for Gehrabagh slum proposed for development under In-situ mode. He detailed out the cost estimates made for provision of housing and infrastructure in the slums. He highlighted various challenges that are probable to occur in preparation and implementation of Plan of Action like slum boundary identification, community consensus, approval of plan of Action, preparation of DPR etc. In this line, he highlighted the need for active community participation. He asserted that any project or plan can be successful only when people own the plan and believe that it is their plan. He expressed his appreciation for State Urban Development Agency (SUDA) and District Urban Development Agency (DUDA) for their cooperation throughout the project.

Ravinder Gowdbhole, Chief Development Officer/Project Director, DUDA, Muzaffarnagar district appreciated the work done by DUDA and RCUES. He wished RAY project a great success and said the plan of action is certainly the necessary beginning to eradicate poverty. He asserted that any project or plan can be successful, when people own the plan and believe that it is their plan. He appreciated the initiative to conduct the stakeholder meeting, and the platform has provided a potential co-ordination required by the concerning agencies during the course of programme. He suggested DUDA for making the draft plan of action report available to the public for certain period of time so that the local slum dwellers, ward corporators can go through it and suggest for any further rectifications. He expressed the wish that the project would be well executed with both stakeholder and community participation even in the later phases and make Muzaffarnagar a slum free city.

Shri. Deepak Kumar, PO, DUDA, and Muzaffarnagar invited the slum dwellers, citizens of Muzaffarnagar, CDS etc attended the workshop for their suggestions.

Suggestions from People attended the Meeting:


1. Wajid, ward councilor suggested for regular conducting of stakeholder meetings so that the issues in various stages of project initiation, execution and implementing can be resolved co-ordination
2. Ahmed Hussain, ward councilor said "the city is having a cluster of dwelling units in poor housing condition and insanitary facilities in some places" and asked for inclusion of these places in slum list.

   Shri Deepak Kumar, PO, DUDA in respect to the above query assured for visiting those places soon along with ward councilors and said "if the places really depict the situation of slum, they will be definitely enrolled in the list and RAY survey will be carried out".
3. Smt. Poonam, ward councilor, 34 ward suggested that the design of 'dwelling unit' has to be discussed and finalized with the consultation of people.
4. Yogesh Sharma, ward councilor, 1 ward suggested that, the aspect of livelihood has to be considered while designing housing layouts.
5. Display of Ward wise slum list should be made available in DUDA and Nagar Nigam offices for the reference of the people.
6. Mohammed Shaheed expressed some queries regarding to beneficiary contribution, transit housing etc

Shri Rama Rao, RCUES elaborated the financial framework proposed by MoHUPA for RAY scheme and explained the stakeholders with the concepts of transit and rental housing which are the part of RAY scheme.

Shri Pankaj Kumar, Chairman, Muzaffarnagar Nagar Palika Parishad acknowledged Central and State Governments for selecting Muzaffarnagar city under RAY scheme, which aimed at making cities free from slums. He congratulated the ward councilors, CDS and slum dwellers for attending the stakeholder meeting and for raising the queries. He wished the city can achieve the aim of 'slum free' in very less time as it has only 22 slums. He said "the active participation of slum dwellers, respective ward councilors and timely co-ordination between all the planning and implementing agencies are the vital key aspects for success of any project". He assured timely assistance from Muzaffarnagar Nagar Palika Parishad to DUDA

for effective execution of RAY scheme in the city. He said "regular meetings have to be conducted between all the agencies involved in RAY scheme, at least once in every three months". He assured for conducting a meeting with all departments very soon. As concluding remarks, he said "spending funds for right beneficiaries and in right areas is a critical task to be followed with equity and transparency for making the project successful."

Shri. Deepak Kumar, PO, DUDA, Muzaffarnagar thanked the Chairman, Chief Development Officer, RCUES staff, ward councilors, slum dwellers and people of the city, press and media for attending the workshop and making it successful.

Please refer the Annexure for the list of participants attended for the Stakeholder meeting / workshop

CHAPTER 2- CITY PROILE & INSTITUTIONAL FRAMEWORK

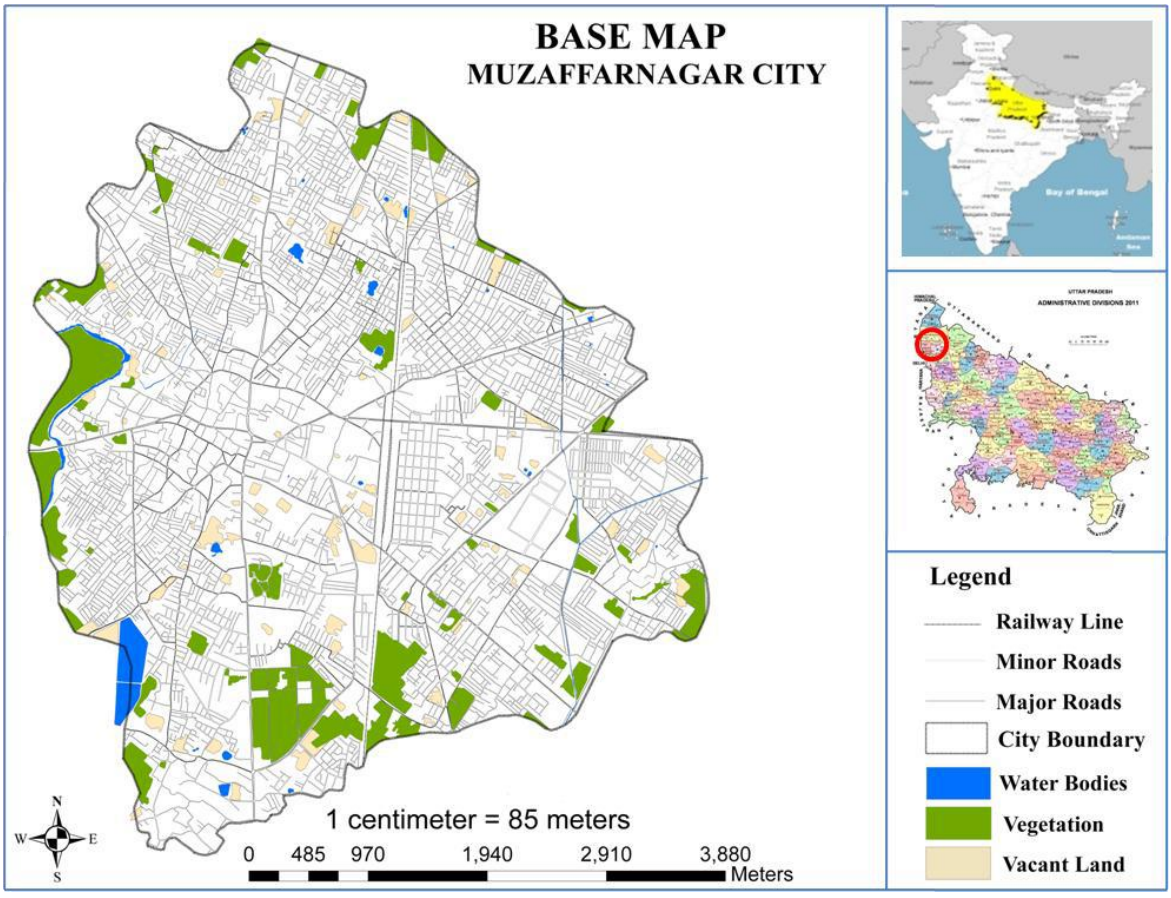
2.1 INTRODUCTION

Muzaffarnagar classified as Class I town[1] is a statutory town and the administrative head quarters of Muzaffarnagar district falls under Saharanpur administrative division of Uttar Pradesh state. The city is famous for its sugar and jaggery production Industries. The city lies in the so called 'Sugar belt region of western Uttar Pradesh'. The region is one of the major sugar cane producing regions in the world.

2.2 PHYSICAL CHARACTERISTICS

2.2.1 Location

The city is situated in the western part of Uttar Pradesh on tract of land lying between Ganga – Yamuna Rivers. The city is located 125 Km North East to the National capital, New Delhi. The city lies on the geographical coordinates of 29°28'North Latitude and 77°41' East Longitude.



Map 2-1 : Location of Muzaffarnagar City in Uttar Pradesh State

[1] According to Census of India 2011, the UAs/Towns are grouped on the basis of their population in

2.2.2 Topography

Muzaffarnagar district forms a part of upper Gangetic plains lies on fairly compact tract of gently undulating land. The Loam soils forms the major geological formation. The region is under Hot Subhumid (Dry) climate. It is situated at an altitude of 232 mts. The district is drained by bore wells and canals for Irrigation with sugar cane and wheat being the major cultivated crops. The region falls under Seismic Zone-III [2] termed as moderate damage risk zone.

2.2.3 Climate & Rain fall

Muzaffarnagar has a warm subtropical climate with very cold and dry winters from December to Mid February and dry, hot summers from April to Mid June. The rainy season is from mid-June to mid-September, when it gets an average rainfall of 1200 mm mostly from the south-west monsoon winds. During extreme winter the maximum temperature is around 12 degrees Celsius and the minimum is in the 3 to 4 degrees Celsius range. Fog is quite common from late December to late January. Summers can be quite hot with temperatures rising to the 40 to 45 degree Celsius range.

2.2.4 Regional Setting & Connectivity

Muzaffarnagar city situated in northwestern part of Uttar Pradesh state is well connected to the other parts of state and northern part of country both by road and railways. The Muzaffarnagar district is surrounded by Meerut distinct on south, Saharanpur district on north, Bijnor district on south and bounded by Haryana state on west. The National Highway - 58 passes through Muzaffarnagar city. This highway provides connections towards Delhi on the southern direction and reaches of the Himalayas in the Uttarakhand state on the northern direction. The highway is the backbone of the road transportation for the Muzaffarnagar city as well as Garhwal region of Uttarakhand. Cities and areas of Hardwar, Rishikesh, Dehradun as well as Badrinath and Kedarnath are served by this highway. The city is also well connected with national railway network. Muzaffarnagar is a major junction on Delhi – Saharanpur Railway line connecting directly to Delhi,Jammu & Kashmir, Punjab, Western and South India and other parts of the country. Dehradun Shatabdi and Dehradun Jan Shatabdi express trains pass through and halt at the Muzaffarnagar station. From Meerut, Delhi, Lucknow, Dehradun and Ambala the city is situated at a distance of 57,117, 534, 173 and 145 Kms respectively.

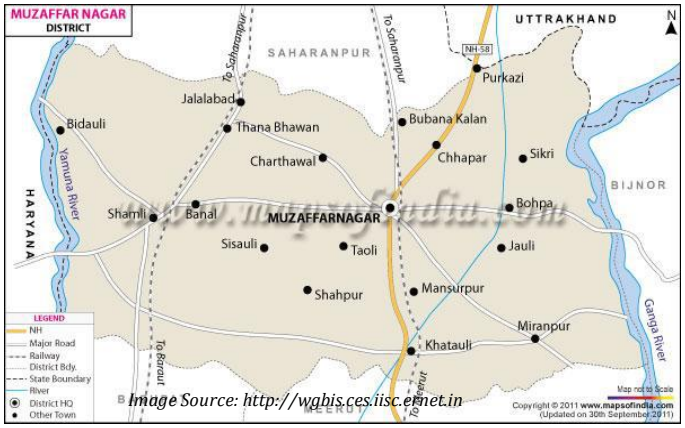


Image Source: http://wgbis.ces.iisc.ernet.in

Picture 2-1 : Regional connectivity of Muzaffarnagar district

[2] The Bureau of Indian Standards delineates India in to four seismic zones, where the areas fall under Zone-II are said to be least active to earth quakes where as Zone-V is the highest seismic zone vulnerable to earth quakes.

2.2.5 History

The history of Muzaffarnagar is ancient and records pre-birth of Christ. The earliest settlement is discovered in the Mandi village of Sadarpur Tehsil of the district which belongs to Harappan Civilization (6000 BC); it appears that the pots and pans and other objects of that era, are seen occasionally in neighboring villages. Also, according to a local tradition, the legendary Mahabharata war between the Kauravas and the Pandavas was fought in the fields of the present village of 'Pachenda' and their army camps were located respectively at the sites now famous as 'Kaurawali' and 'Pandavli' being close to Hasthinapur and Kurukshetra. It is important to note that probably the district was on a trade route as some Greco-Roman coins have also been excavated.

The Muzaffarnagar's early medieval history is obscure till the Indo-Mogul period. In Akbar's time, most of the Muzaffarnagar district region, called Sarwat then, belonged to Sarkar-Saharanpur territory. Akbar bestowed pargana of Sarwat on Sayyid Mahmud Khan Kundliwal which remained with his descendants up to 17th century. After killing Peer Khan Lodhi styled as Khan Jahan lodhi, Shahjahan bestowed title of deceased Peer Khan Lodhi and Pargana of Sarwat on Sayyid Muzaffar Ali Khan, whose son Munawar Lashkar Ali established a town in 1633, named it Muzaffarnagar in honour of his father. The British East India Company occupied the region of Saharanpur, in 1803 which included the present Muzaffarnagar district. This district's boundaries and jurisdiction changed frequently and its separate existence may be said to start from 1826. When North India rebelled against British occupation in 1857, Muzaffarnagar region was part of this uprising, now referred to as the First War of Indian Independence. The centre of revolt operations was Shamli, which was liberated for some time. After the uprising failed, British retribution was severe here - large scale massacre of freedom fighters in Shamli and of their Sayyid-Pathan supporters in Thanabhavan and around - crippling the region completely. However, covert spirit of self-rule survived and in 1899 an office of the Indian National Congress was opened in Muzaffarnagar city, to continue freedom struggle through peaceful means. In 1901, it was carved out of Saharanpur district and became separate district headquarter under the Meerut Division of United Provinces of Agra and Oudh. After Independence, in 1951, when United Provinces renamed as Uttar Pradesh, the Muzaffarnagar remains as a part of the state of Uttar Pradesh and comes under Saharanpur Division

2.3 SOCIAL AND DEMOGRAPHIC PROFILE

2.3.1 City Population

The population of Muzaffarnagar (Nagar Palika Parishad) as per 2011 census is 3, 92,451 out of which male and female were 2, 06,902 and 1, 85,549 respectively. The population of the city in year 1901 is 23,444 and it increased to 3, 92,451 in 2011 with an average decadal growth rate of 30.26 percent. Considering the population statistics from the last century, the city never faced a decrease in population. The decade 1971-1981 showed an increase in the decadal rate of 49.69 followed by 44.12 percent growth rate in 1981-1991. The population of children (0-6 yrs) as on 2011 census in Muzaffarnagar is 48,692 which constitute about 12.4 percent of total population.

Table 2-1 : Decadal growth trend of Muzaffarnagar city population

Census Year	Population	Decadal Population Increase (In No.)	Decadal Population growth rate (in Percentage)
1901	23444		
1911	23811	367	1.57
1921	23937	126	0.53
1931	35347	11410	47.67
1941	46758	11411	32.28
1951	64213	17455	37.33
1961	87622	23409	36.46
1971	114783	27161	31.00
1981	171816	57033	49.69
1991	247624	75808	44.12
2001	331668	84044	33.94
2011	392768	61100	18.42

Source: Census of India

2.3.2 Slum Population

As per the National Building Organization (NBO) Annexure primary survey carried out in February, 2013, the city is having a total of 22 slums. The total slum population in the city is 27100 which constitute about 7% of city population. The total number of slum households in the city is 5085.

2.3.3 Population Density

In the year 1991 the population density of the city was 205 persons per hectare. In 2001 the density increased to 275 and as per 2011 census the population density became 326 persons per hectare. The population density of 326 persons per hectare doesn't depict the real situation of the city as the core/inner areas of the city are highly densified. The population density in the old city / inner parts of the city is about 700 persons per hectare or even more.

2.3.4 Sex Ratio & Literacy

As per census 2011 the sex ratio in Muzaffarnagar stood at 897 female per every 1000 male. In the year 2001 it was 892, in 1991, 1981 and 1971 the sex ratio was 880, 873 and 843 respectively. The average literacy rate of Muzaffarnagar in 2011 is 70.94% with male and female literacy rate being 74.86% and 66.56% respectively. The average literacy rate as per census 2001 and 1991 was 63.79% and 59.83% respectively. Though the city lag behind in sex ratio and literacy rate compared to the national average of 941 in sex ratio and 74.04 % in literacy rate, the city is making a progress compared to its past decadal statistics. The increase in the rate of sex ratio and literacy were considered as the positive indicators of human development and quality of life. The above city statistics disclose the progress made by the city in its development process.

Table 2-2 : Physical & Demographic profile of Muzaffarnagar city

PARAMETER	UNIT	
Municipal Area	Ha.	**1205**
Municipal wards	No.	**45**
Population (2011 census)	No.	**3,92,768**
Households (2011 census)	No.	**68975**
Average Household size	No.	**6**
Literates	No.	**2,78,405**
Literacy rate	%	**70.94**
Sex Ratio	No.	**897**
Slum Settlements	No.	**22**
Slum area	Ha	**41.80**
Percentage of slum area to total area	%	**3.5**
Slum Population	No.	**27,100**
Percentage of slum population to total population	%	**7**
Slum Households	No.	**5,085**
Average Household size	No.	**5**

Source: Muzaffarnagar Master Plan, Census – 2001, 2011, RCUES Primary survey etc.

2.3.5 Population Projection

The Muzaffarnagar city is the tehsil head quarters as well as the administrative head quarter of the district. The city is an important industrial town with sugar, steel and paper being the major industries. The Muzaffarnagar district is one of the major producers of sugar and jaggery in the world. The city encompasses services like agricultural credit society, agricultural market, district hospital, private clinics, higher and secondary educational institutions. Apart from the above, the city is situated near to the national capital, New Delhi and on the transport corridor connecting Delhi to Uttarkhand which attracts large number of tourists. All these parameters led to growth of cities population. The population of the city in 1901 was 23,444 and it increased to 3, 92,768 in year 2011 with an average decadal growth rate of 30.27 percent.

The city experienced an average decadal growth rate of 32.13 percent in the last three decades (1991 to 2011). In view of the population growth rate of last three decades, the population projections were drawn for the next 15 years using geometric mean method. It is projected that by the year 2016 the population of the city would be 4,40,780 by the year 2021 it would be 4, 94,661 and 2026 the projected population of the city is 5, 55,129.

Table 2-3 : Population projections for Muzaffarnagar city

Year	1991	2001	2011	2016*	2021*	2026*
Population	2,47,624	3,31,668	3,92,768	4,40,780	4,94,661	5,55,129

Source: Census of India, * - Projected Population

2.4 ECONOMIC PROFILE

2.4.1 City Economic Base

The economical position of any city depends on the capacity of production of various activities and the surrounding areas. Despite being the tehsil and headquarters of district, the Muzaffarnagar city economy is mainly depend on territory/service sector followed by secondary sector activities. As per 1981 census, the work force participation rate in the city was 25.75 comparatively less than the state's workforce participation rate of 27.06 percent. As per census 1991, the work force participation rate was 27.06 percent. The percentage of work force out of total population in the city for the last 5 decades is presented in the *Table 2-4.*

Table 2-4 : Percentage of Working Population out of total Population in the city

S. No	Census Year	Percentage of working population
1	1961	28.39
2	1971	25.25
3	1981	25.75
4	1991	26.05
5	2001	26.23

Source: MMP - 2021

As mentioned earlier, the Muzaffarnagar city economy is mainly depend on territory/service sector followed by secondary sector activities. The master Plan of the city reveals, the percentage of work force engaged in primary and secondary sector activities has decreased in number from 1971 to 2001. Whereas, the percentage of work force engaged in tertiary sector activities like business, commerce, transportation and other related activities/services had increased in large number. Comparing the work force statistics of year 1971 and 2001, the city experienced a growth at increase in percentage of working population (refer *Table 2-5*), and at the same time the percentage of working population involved in tertiary /sector has increased from 71.15 in 1971 to 93.71 in 2001.

Table 2-5 : Distribution of work force in different activities in the city

S. No	Sector	1971		2001	
		No. of workers	Percentage	No. of workers	Percentage
1	**Primary**	1465	5.05	2048	2.35
2	**Secondary**	6895	23.80	3430	3.94
3	**Territory**	20625	71.15	81523	93.71
	Total	28985	100	87001	100

Source: MMP-2021

The old part of the city is a major commercial centre of the city. Shiv Chowk, Muzaffarnagar – Meerut Road, Muzaffarnagar – Roorkee road, Muzaffarnagar – Shamli road (Kachrahi road) are the major commercial centers in the city where most of the tertiary sector activities are concentrated. The land use in these areas is mostly mixed type of land use. The city has old and new markets where the major goods sold are jiggery, sugar, plastic, paper, agricultural goods and machinery, steel, vegetables and fruits etc.

In consideration with the projections of Master plan, the working population is projected for the city in next 15 years. It is projected that, by the year 2021, about 28.5% (0.68 million) of the city population constitutes the active work force and it would increase to 28.75% in year 2026. These projections may vary if the development and Industrialization happens at high pace in the city in the next 10–15 years.

Table 2-6 : Working population projection in Muzaffarnagar

S. No	Year	Total Working Population	Percentage in city population
3	2011	109975	28.00
4	2016	125622	28.50
5	2021	143452	29.00*
6	2026	163763	29.50

Source: MMP- 2021, * - Percentage Projected in Muzaffarnagar Master Plan for the year 2021

2.5 HOUSING PROFILE

2.5.1 Housing Stock

As per 1981 census, the city is having a total of 28354 households with an average household size of 6. As per the Census 1991 and 2001 the city is having a total of 40101 and 52916 households respectively. The average household size of the city in the year 1991 was 6.17 and it increased to 6.26 in the year 2001. The Total No.of Households in the city as per census 2011 is 68975.

Table 2-7 : Households in the City across the decades

Year	City Population	Households
1971	114783	19501
1981	171816	28354
1991	247624	40101
2001	331668	52916
2011	392768	68975

Source: MMP-2021

2.5.2 Housing Projection

As per census 2001, the city is having a total of 52,916 Households residing in 51,238 dwelling units. Considering each household resides in a dwelling unit, the total housing shortage in the city as on year 2001 is 1,588 dwelling units. The Household statistics for the past decades reveal that the average household size in the city is slightly more than 6.

Considering the average household size at 6 persons and assuming 2% as dilapidation rate per decade. The Housing projections were calculated for the next 15 years and shown in *Table 2-8.*

Table 2-8 : Projection of Housing & Housing shortage in Moradabad city

Year	2011	2016*	2021*	2026*
Projected Housing	68975	74198	83268	93447

The Muzaffarnagar Master Plan – 2021, estimated the average household density of the city will reduce to 5 by the year 2021.The Muzaffarnagar Master Plan projected that the total housing stock in the city for the year 2021 will be 81,254. It was further projected that, Economic Weaker Sections in the city make up 25% of the city households, Low Income Group (LIG) constitute 45%, Middle Income Group (MIG) and High Income Group (HIG) form 20% and 10% of total households in the city. Based on the household projections, the Master plan has worked out the average dwelling unit size for each category of household and also the proposed density of Households in the city. The housing projections of city for the year 2021 is presented in *Table 2-9*

Table 2-9 : Proposed Distribution of Households and allocation of area in the city for different Social Groups for the year 2021

Income Group	% of Households	No. of Households	Proposed Size of Dwelling Unit (in Sq. ft)	Total Proposed area under Plotted Development (in Ha)	Total Land Requirement (in Ha)
EWS	25	20,314	30 - 50	81.25	203.12
LIG	45	36,564	50 - 100	274.20	609.33
MIG	20	16,250	100 - 200	243.75	487.50
HIG	10	8,125	200 - 300	203.15	338.58
Total	100	81,254	--	--	1,638.53

Source: MMP-2021

2.5.3 EWS & LIG Housing

Working towards slum free Muzaffarnagar city, there is needed to build up Economic Weaker Sections (EWS) and Low Income Group (LIG) housing stock. According to Ministry of Housing and Urban Poverty Alleviation, GoI, EWS housing are meant for people whose annual income is below ₹ 1,00,000 while LIG housing are meant for people whose annual income is less than ₹2,00,000.

Most BPL/EWS and LIG households in cities live in informal settlements/slums on encroached lands. There is no authoritative data stating the numbers of poor families without adequate housing in cities. Census of India provides estimates of number of poor in each city and they also project future population growth for cities using an urban growth rate. City Master Plan and other plans/studies make estimates on housing demand on the basis of Census information. In Muzaffarnagar as per NBO Annexure slum survey, 2013 about 7% of the city population is living slums, which further accounts 7% of the total city households. Considering the past census data and development plan reports/studies of Muzaffarnagar city, it is assumed that about 3% of EWS and LIG households with out proper housing would reside in other parts of the city apart from EWS and LIG households living in slums.

Assuming 3% of the EWS and LIG households with poor housing condition live in other parts of the city, the EWS/LIG housing projections are calculated for the next 15 – 20 years.

Table 2-10 : Future Housing projection pertaining to EWS & LIG

Year	2011	2016	2021	2026
EWS & LIG Housing	1813	1950	2188	2456

Note: The EWS and LIG Housing projections for the city were made excluding the slum housing stock

2.6 CITY GROWTH PATTERN

2.6.1 Existing Land Use

Muzaffarnagar is situated along Delhi - Ambala – Sahranpur main railway line. The railway line divides the city into two parts. The Meerut -Delhi road situated towards south to the railway network constitutes the major service sector, industrial activities. The villages settlements situated on the Meerut – Delhi road are growing towards the city. The road leading towards Roorkee is situated in the North of the Railway track, which is in old city area with predominantly residential type of use. The core city / city centre lies towards the west of the railway line. The major commercial establishments, government offices including collectorate, Municipal Office, Cinema Theatres, Police station, Market, Bus stand etc are situated in the city core. The new vegetable and flower market, jail, transport Nagar, technical institutions etc are situated towards east of the railway track. The Bye –pass /Bijnor road passes proximity to this area. This area is experiencing residential developments in large scale. The Master Plan of the city projected large scale development to happen in this area. The Existing land use statistics of the city as on year 2007 is tabulated below in *Table 2–11.*

Table 2-11 : Land Use of Muzaffarnagar City – Year 2007

S.No	PARAMETER	YEAR 2007	
	Land Use	**Area (Ha.)**	**Percentage**
1	Built area	607.04	31.31
1	Residential	820.70	42.30
2	Commercial	91.13	4.70
3	Industrial	115.19	5.94
4	Public & Semi Public services	42.60	2.20
5	Administrative Offices	44.00	2.27
7	Transportation	218.01	11.25
	Total	**1938.67**	**100.00**
Other land Use			
1	Village Settlements	128.40	
2	Burial / Cremation Grounds	39.20	
3	Water Bodies	68.84	
4	Parks/Play grounds	84.20	
	Grand Total	**2259.31**	

***Source*:** Muzaffarnagar Master Plan 2021

2.6.2 Master plan of the City – (1981 - 2001)

The Muzaffarnagar Master Plan (1981-2001), prepared in year 1981 projected the population of the city will be about 3.50 lakh by the year 2001. As per census 2001, the

population of the city stood at 3, 31,668 which are considerably less than the projected population.

The development in the city didn't have taken place entirely in line with the Master Plan – 2021. The city doesn't do well at traffic and transportation sector like which resulted in traffic problems in the city. Even the master plan is unsuccessful in developing parks and open spaces in the city. Even the decrease in percentage of working population in primary and secondary sector has impacted the agriculture and industrial development in the city which impacted the economy of the city.

The Master Plan, 2001 for the projected population of 3.50 lakh proposed 1,466 Ha of land for Residential development. Out of which 132.50 Ha of land is reserved for high population density, 471 Ha for medium population density and 862.50 Ha for Low population density. Where, the high population density, medium and low population density forms 371 – 495 persons per Hectare, 246 – 370 persons per Hectare and 123 – 245 persons per Hectare respectively. The population density for the entire city as projected by Master Plan for the year 2001 is 113 persons per Hectare, where it is 285 persons per Hectare, when only the area reserved for residential use is taken into consideration.

Table 2-12 : Comparison of change in Existing Land Use in the city between 1981 to 2007

S.No	Land Use	Existing Land Use in Year 1980 (in Ha)	Existing Land Use in Year 2007n(in Ha)	Land Use Growth from 1981 to 2007 (in Ha)	Growth rate (in Percentage)
1	Residential	402.67	1427.74	1025.07	254.57
2	Non - Residential	322.53	510.93	188.40	58.41
	Total	725.20	1938.67	1213.47	176.98

Source: MMP – 2021

2.6.3 Master Plan 2021- Proposed Land Use

The Master plan of Muzaffarnagar is revised for year 2021. The Master Plan has reserved 2,996.39 Ha of land for Residential use. The detailed proposed land use for the year 2021 is presented below in *Table 2–13.*

Table 2-13 : Proposed Land Use for Muzaffarnagar City, 2021

S.No	PARAMETER	YEAR 2021	
	Land Use	Area (Ha.)	%
1	Residential	2996.39	45.04
2	Commercial	182.28	2.74
3	Industrial	954.68	14.36
4	Public & Semi Public services	382.04	5.74
5	Administrative Offices	64.26	0.97
6	Traffic & Transportation	900.26	13.53
7	Parks & Open Spaces	1051.36	15.80
8	Other Use*	120.95	1.82
	Total	**6652.22**	100.00

***Source*:** Muzaffarnagar Master Plan 2021,

* - Other Use includes area under Water Bodies, Burial /Cremation grounds, other uses

For the year 2021, the Master Plan has reserved 2989.64 Ha of land for the estimated population of about 7.50 lakhs. The Master Plan proposed the city population density of 110 persons per hectare and 244 persons per Hecate in residential land use area. The master plan has adopted zoning regulations and mixed use development in the city. The Master plan has proposed for the development of bus stand and work shop in 13.58 Ha and transport nagar in 6.79 Ha of land. About 1051.36 Ha of land, which constitutes 15 % of the city area, is proposed for development of parks, play grounds and open spaces.

2.7 INFRASTRUCTURE

2.7.1 Water Supply

The source of water supply to the city is through Ground water. The quality of water supplied to the city is of standard 'India Mark II'. The Groundwater is pumped to the tube wells present in various parts of the city. The water collected is chlorinated and then supplied to overhead elevated reservoirs of different capacities (1000 KL to 1800 KL) situated in various in the city. From the over head reservoirs the water is supplied to the Individual and public tap connections in the city through the city wide water supply network. It is estimated that about 80 percent of the city area is covered with water supply network. The total estimated water supply demand for the city is 53MLD (considering the standard of 135 lpcd), where as the average daily water supply is less than the estimated demand.

2.7.2 Sewerage and Drainage

In Muzaffarnagar majority of the city area is not connected to sewerage system. As per the statistics of Nagar Palika only 20% of the city is fully connected to city wide sewerage system. The storm water runs through different drains present in various parts of the city. It was found that even the newly developed area in the city doesn't have full connectivity to the city wide drainage system. The Muzaffarnagar Master Plan – 2021 stressed the need for construction of sewerage and drainage in the city.

2.7.3 Solid Waste Management

The city at an average per capita of 350 gms generates an approximate quantity of 130 MT daily. The Muzaffarnagar Nagar Palika is responsible for the collection of solid waste within the municipal area limits. The method of Door to Door collection of waste is not practiced in the city. The households and the other establishments dump their waste in containers of different capacities (4.5 cubic meters, 3.5 cum, 1.5 & 1.1 cum) placed at different parts of the city. The waste from the containers is collected by municipal vehicles (trucks & lorries) and transferred to the dumping yard situated near Kali River. The Master Plan have proposed for thwe development and extension and existing dumping yard and setting up of scientific treatment disposal site in another place in the city.

2.7.4 Transportation

The Jouli Marg, Shamli road, Chartaval marg, Sarvat marg are the major arterial roads in the city. The width of the major roads in the city varies between 12 mts to 30 mts. The movement of heavy vehicles in the city is high as it is situated on the National Highway No.58 and State Highway No.12. As the city is situated on Delhi – Uttarkhand Road, it is well

connected to other parts of the city through road. Many state and private busses runs through the city. The Muzaffarngar city bus stand situated near Railway station is one of the major domestic transport centre in the region with more than 400 busses running in inter and intra state running daily. About 15000 passengers travel from the bus station daily. The Ambala - Delhi railway line passes through the city. Daily about 45 trains halt and passes through the city with about 20000 passengers and large amount of goods flowing daily.

2.7.5 Power Supply

The power distribution to the city is done through 11 sub stations of one with 660 KV capacity and the other ten of 33/11 KV capacity. The Uttar Pradesh Power Corporation Limited (UPPCL) is responsible for distribution of power to the city. The city is having 51,975 domestic household connections, 12,418 commercial and 648 Industrial connections. The Master estimated for further requirement of one 110 KV capacity in the city.

2.7.6 Office / Administration

As the city is administrative head quarters of the Muzaffarnagar district, the city is having many important offices like district court, district collectorate, vikas bhawan etc. As per existing land use statistics for the year 2007, about 44 Hectares of city area is under administrative offices which constitutes about 2.27 percent of total city area.

2.7.7 Education

The city is a well known Education centre in the region. The city houses large number of primary, high schools and Degree colleges both government and private. The city has many engineering, medical and management colleges. Muzaffarnagar Medical college, Gandhi Polytechnic, SD College, Sri Ram Engineering College, Agriculture college, Ayurvedic college etc.

2.7.8 Health

Health is considered as a major indicator for calculating quality of life and overall development of the city. The District Hospital located on Muzaffarnagar – Sahranpur is the major hospital in the city. The city also has a Hopital for Women and a TB Hospital. These hospitals serve the people of the city as well as the Muzaffarnagar district. Along with this hospital, the city is having allopathy hospitals, ayurvedic hospitals, homeopathy hospitals and Unani hospital. Apart from the above the city is having many private clinics and nursing homes.

2.7.9 Police & Fire station

Muzaffarnagar is having 3 City Police stations (Kotwali) covering the entire judistriction of Muzaffarnagar city. There are 14 police chowkis in the city that comes under the police station located at various locations. The city is having a fire station equipped with 2 fire engines, one jeep and one ambulance.

2.7.10 Postal and Telephone services

The city is having a head post office which serves the entire Muzaffarnagar district. Along with that there are 13 sub-post and telegram offices providing services in the city. The city is having an approximate of 1680 PCO and more than 48600 telephone collections. The city is well connected with the network of all the major mobile service providers.

2.8 MUZAFFARNAGAR INSTITUTIONAL SETUP

The city of Muzaffarnagar, with in a judistriction of 1205 Ha (12.05 sq.km) of area, housing a population of 3, 92,451 (as per 2011 census) is a Municipal Board administered by Muzaffarnagar Nagar Palika Parishad. The Muzaffarnagar Nagar Palika Parishad constituted as per the Constitutional provision (74th Ammendment Act of India,1992) is responsible for administration and providing civic services in the city. The administration is headed by an Executive officer as Commissioner of Municipal administration.The Municipal comissioner is most often a state government officer belonging to the PCS (Provincila Civil Services) cadre.The Governing body or elected wing of Muzaffarnagar Nagar Palika Parishad consists of a chairperson and 45 ward corporators.

The Muzaffarnagar Regional Development Authority situated in the city is responsible for the preparation and revision of master plan, monitor the orderly development of Muzaffarnagar Urban agglomeration, which covers an area of 66.52 Sq.km. The Power supply to the city is done by the Uttar Pradesh Power Corporation Limited (UPPCL). The state Public Works Department is responsible for construction and maintenance of roads and other public infrastructure in the city.

Apart from the Muzaffarnagar Nagar Palika Parishad, the institutional responsibility for slum improvement vests with the State Urban Development Authority (SUDA), the apex policy making and monitoring agency for urban areas in the state. The Muzaffarnagar District Urban Development Authority (DUDA) undertakes the executions of SUDA in the district. The DUDA is responsible for works relating to community development and various schemes related to urban poor such as development of slum communities, construction of community toilets, assistance in construction of household latrines, infrastructure improvement in slums creation of awareness etc.

2.9 REVIEW OF SLUM DEVELOPMENT PROGRAMME

IHSDP: Integrated Housing and Slum Development Programme formulated by combining the existing schemes of VAMBAY (Valmiki Ambedkar Awas Yojana) and NSDP (The National Slum Development Program). The basic objective of the scheme is to strive for holistic slum development with a healthy and enabling urban environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas. The scheme will apply to all cities/towns, excepting cities/towns covered under JNNURM. The target group under the scheme is slum dwellers from all sections of the community through a cluster approach. The components for assistance under the scheme will include slum improvement / up gradation / relocation of houses and infrastructural facilities like water supply and sewerage. Cost of land for such projects will not be provided under the programme and has to be borne by the State Government.

Two Projects are initiated under this scheme in Muzaffarnagar. In first project total number of Dwelling Units (DU's) approved (new + up gradation) are 476 with total approved project cost of 10.36 crore. The amount released to implementing agency is 7.78 crore and the amount utilized by the agency is 4.48 crore. The amount remain unspent is 3.30 crore. Construction work of 414 DU's is in progress and the remaining 62 DU's yet to be started. Beneficiaries are identified and the allotment will be done after the due completion of the project. Uttar Pradesh Rajkiya Nirman Nigam (UPRNN) is the implementing agency of the project. The details are summoned up in *Table 2-14*.

Table 2-14 : Status of IHSDP in Muzaffarnagar city

Project Name	Total No. of DU's Approved	Total project cost approved	Amount released to Implementing agency	Amount utilized by agency	DU's in progress	Implementing Agency
Banat	476	10.36	7.78	4.48	414	UPRRN

***Source*:** IHSDP status, August 2011

DPR: A pilot Detailed Project Report has been prepared for Janakpuri and Rampuram - Khalapar slum cluster under Rajiv Awas Yojana. As per DPR, population in these clusters is 2759 which are residing in 615 households with an average household size of 4.5. The beneficiaries households identified are 255 which are kutcha in nature. These households will be developed in In-situ mode. However the project cost for Janakpuri slum cluster is just finalized by the local authorities i.e. DUDA, nagar palika, jal nigam etc and the details are shown in *Table 2-15.*

Table 2-15 : Project cost for Jankapuri slum

	S. No	Parameter	Cost (in lakhs)
Housing	1	Construction cost of Insitu Dwelling Units (DU's)	241.22
Infrastructure	1	Water supply	12.86
	2	Sewerage	39.33
	3	Storm Water	5.093
	4	Roads and pathways	72.27
	5	Development of green areas	31.21
	6	Community spaces	46.35
	7	Electrification	5.26
	8	Rickshaw Stand	2.072
Total			**214.474**

Source: DUDA - Muzaffarnagar

2.10 MUNICIPAL FINANCE STATUS OF MUZAFFARNAGAR NAGAR PARISHAD

Municipal finance holds the key for overall status and progress of service delivery in the city. Effective financial management can help municipalities to transform their local areas into a better place to live and work. The revenue for Muzaffarnagar Nagar Palika generates through taxes, non-taxes, assigned revenues, plan and non-plan grant receipts from central and state governments. The average annual income of Muzaffarnagar Nagar Palika for the last five financial years (2007-08 to 2011-12) is ₹4186.32 lakhs. Out of which, income incurred through plan and non - grants constitute majority of the total revenue. The assigned revenue and taxes are the other major contributors of revenue generation. In the year 2007-08 the

total income of city is ₹2402.3 lakhs and it increased to ₹5631.5 lakhs in financial year 2011-12, with an average annual growth rate of 26.5 percent.

The expenditure pattern of Muzaffarnagar Nagar Palika is categorized under the heads of establishment, operation & maintenance, capital expenditure and others. On an average for the last five financial years major portion of expenditure is made on establishment head which mainly include salaries for the municipal staff and other administrative costs. The average yearly expenditure of the city in the last five financial years is ₹4196.09 lakhs with an average yearly growth rate of 32 percent. In the last five financial years Muzaffarnagar Nagar Palika experienced deficit budget with margin of ₹49 lakhs. The following *Table 2-16* presents a comparison of the receipts and expenditure incurred by Muzaffarnagar Nagar Palika for the last five financial years (2007-08 to 2012-13).

Table 2-16 : Municipal Finance details of Muzaffarnagar Nagar Palika for the last five financial years (2007-2011)

Financial Year	2007-08	2008-09	2009-10	2010-11	2012-13
Income	2402.3	5230.1	2469.6609	5198	5631.5
Expenditure	2047	5172.6	3032.8691	5158	5570
Surplus / Deficit	355.3	57.5	-563.2082	40	61.5

***Source*:** Muzaffarnagar Nagar Palika

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA) in 2010 directed municipalities to allot a minimum of 25% of their annual budget as a fund to create basic services to urban poor. With an average budget of ₹ 4200 lakhs per financial year, the city has to allot a minimum of ₹1050 lakhs in delivery of services for urban poor. Considering the financial soundness of the city, the specified task seems to be not viable. There is need for Muzaffarnagar Nagar Palika to strengthen its income base through adaptation of appropriate best practices and modern technologies.

CHAPTER – 3 ASSESSMENT OF EXISTING STATUS OF SLUMS

3.1 DIAGNOSTIC ASSESSMENT OF SLUMS

The living conditions in slums represent the worst of urban poverty. Individuals and communities living in slums face serious challenges in their efforts to survive. Every slum is different in its origin, location, size and demographic characteristics. All characteristics are not common for all slums in the city. It may differ due to various reasons such as its appearance, economic condition, overcrowding of buildings, tenements, population, health and sanitary conditions, morality, way of life, standard of living, isolation of other residential communities etc

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 slums.

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

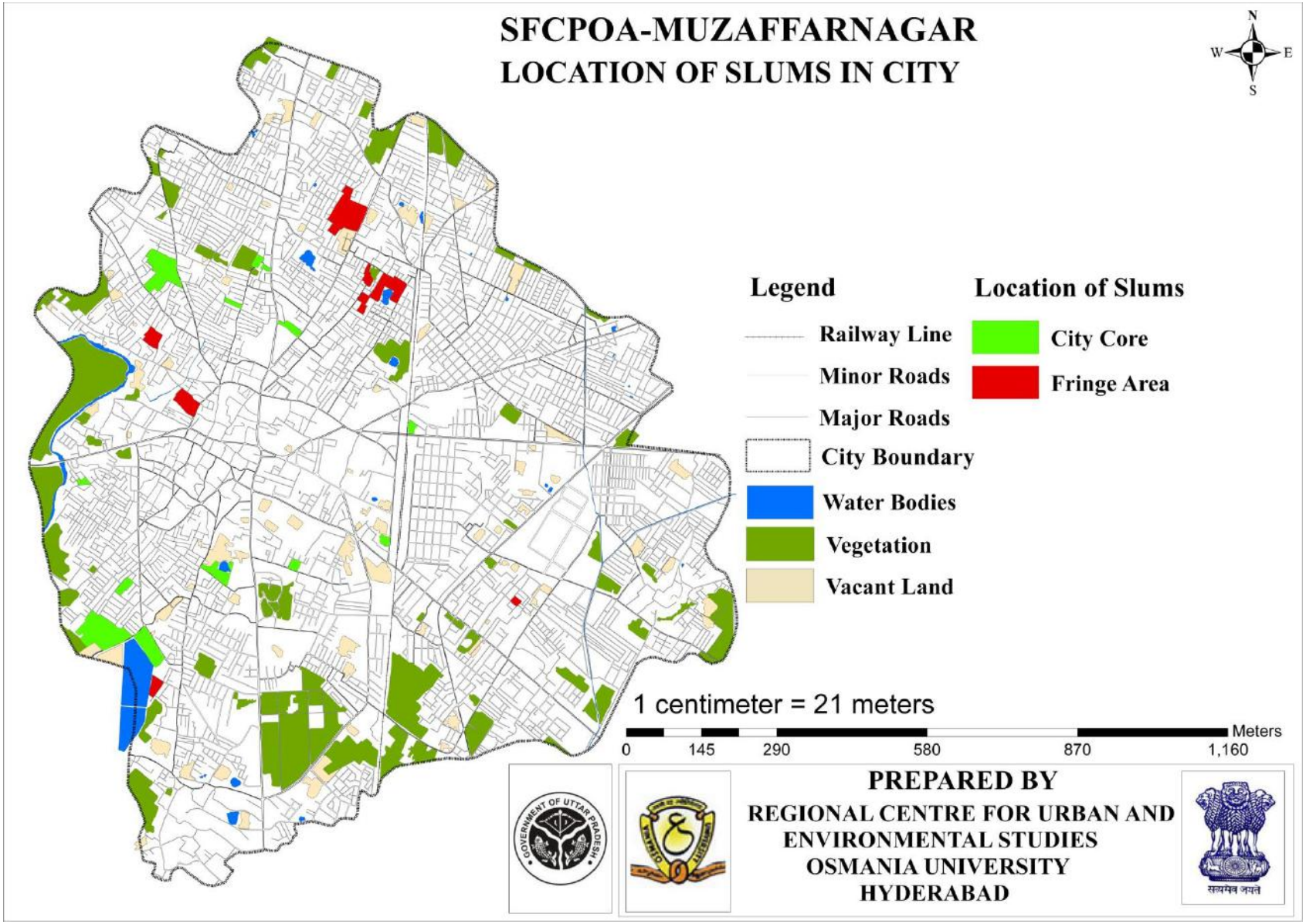
Muzaffarnagar city has a total of 22 slums, where all are Non-notified. Out of 22 slums, 19 were built on land belongs to private ownership and 2 slums were situated on land belongs to both private and Local Body and one on defense. The total population living in slums is 27100, which accounts 7% of the city population (as per census 2011). Of the total 22 slums in the city, 7 slums have existed for more than 50 years. Considering the physical location of the slums, 14 slums are located on non-hazardous / non-objectionable sites and 2 slums are on along major transport alignment and railway line. All the slums are located far distinct to hazardous locations or activities making all slums as non-hazardous. Most of the slum settlements are concentrated around the core area of the city, along the highways and around other dominant location/land use forming larger clusters.

Table 3-1 : Comparison of city population & area against the slums

City Population	Slum population	% of slum population to city population	City Area (Ha)	Total Area under slums (Ha)	% of slum area to city area.
3,92,768	27100	7	1205	41.80	3.5

Source: Census 2011, RCUES primary surveys, 2013

As shown in the *Map 3-1*, 13 slums are located in the core part of the city, while the other 9 slums in fringe areas. The abutting land use around the slums is predominantly residential in nature.



Map 3-1 : Location of Slums in Muzaffarnagar City

3.2 LISTING OF SLUMS – BASED ON NUMBER, STATUS, TENABILITY, AND TENURE STATUS

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

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

Considering the above variables, the details of each slum in the city that are characterized by poor physical and socio-economic conditions, irrespective of land tenure status and ownership have been identified through primary surveys. The following *Table 3-2* summarizes the aspects crucial for determining the current status of Muzaffarnagar slums.

Of the total 22 slums, 19 slums are on private lands and remaining 2 slums were situated on land belongs to both private and ULB ownership. As shown below in the *Table 3-2*, 91% of the slums do possess a secured tenure status and an enabled pleasant living condition.

Table 3-2 : Distribution of the slums w.r.to Tenure, Land tenability, and Age and Land ownership

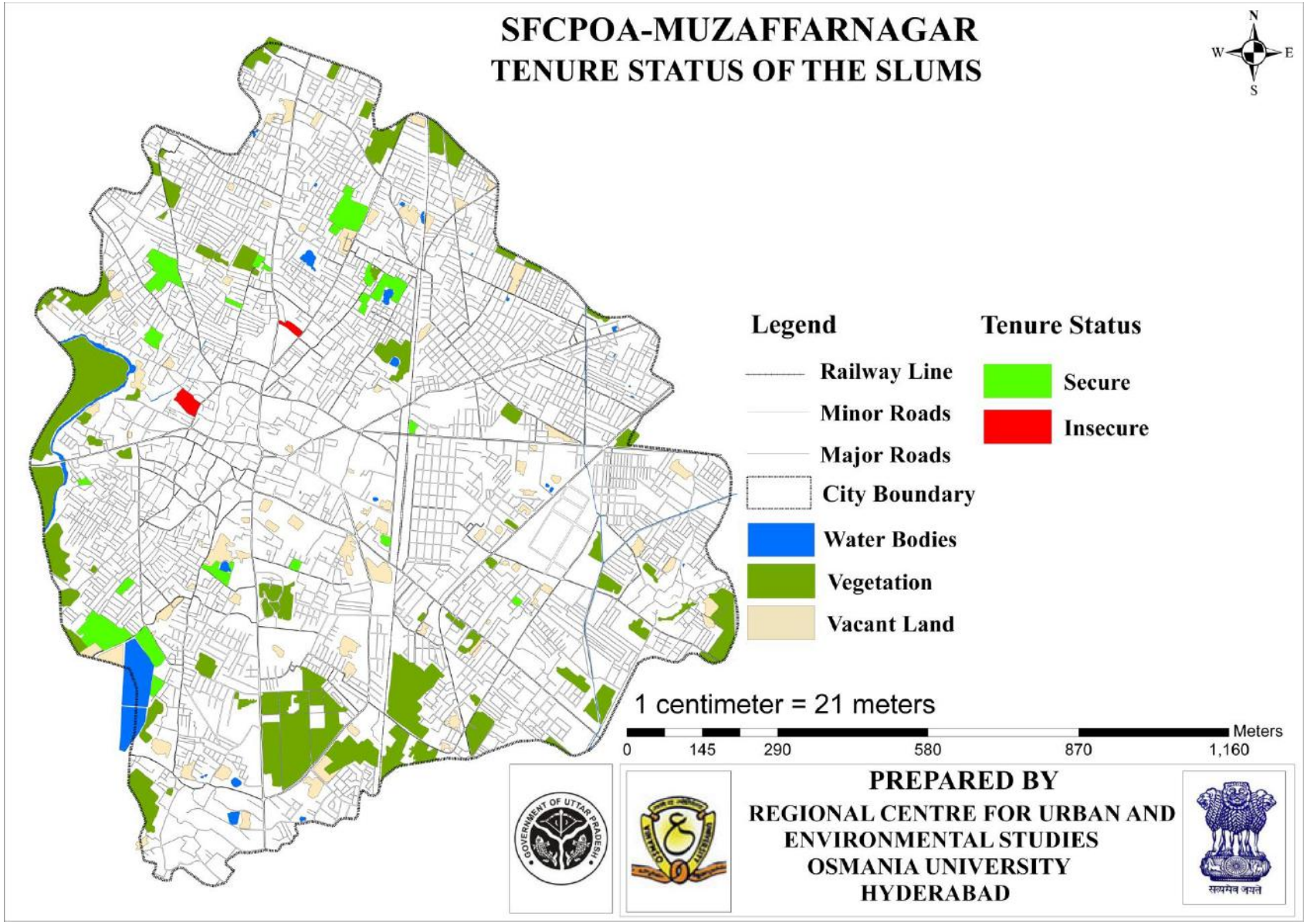
TENURE			LAND TENABILTY		
Status	**Secure**	**In secure**	**Tenable**	**Semi Tenable**	**Un - Tenable**
No. of Slums	20	2	22	0	0
AGE OF THE SLUMS					
Age	**Below 10 years**	**10 to 20 years**	**20 to 30 years**	**30 to 40 years**	**40 - 50 years**	**Above 50 years**
No. of Slums	3	0	6	4	2	7
LAND OWNERSHIP					
Ownership	**Local Body**	**State Government**	**Private**	**Defense**	**Others**
No. of Slums	2*	0	19	1	0

***** - 2 slums in the city were situated on land belongs to both Local body & private ownership

Source: RCUES primary survey, 2013

3.2.1 Distribution of slums by Land Tenure Status

Land tenure is an important part of social, political and 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 shown in the *table 3-2*, 91% of the slum lands are secured and have access to basic amenities and in possession of certification while 8% of the slums are still insecure, which needs regularization.



Map 3-2 : Tenure Status of slums for Muzaffarnagar City

3.2.2 Distribution of slums by Land Tenability Status

The land status of all listed slums/informal settlements should be classified by the ULB as Tenable[3], Semi Tenable[4] or Untenable[5] in order to determine whether the land is fit for human habitation and void of health hazards (RAY Guidelines).

As shown in *Figure 3-1*, the current land tenability status for the 22 slums as identified has been presented where 100% (22 slums) of the slums are found to be Tenable.

3.2.3 Distribution of slums by Land Ownership

Over 86% of the slums are situated on land belongs to private ownership and 9 % are located on land belongs to both Local body and private ownership and 5% are on defense. In 86% of the slums situated on private land, 100% of the households hold pattas and are still eligible for slum redevelopment programmes considering the varying economic status of those dwellers.

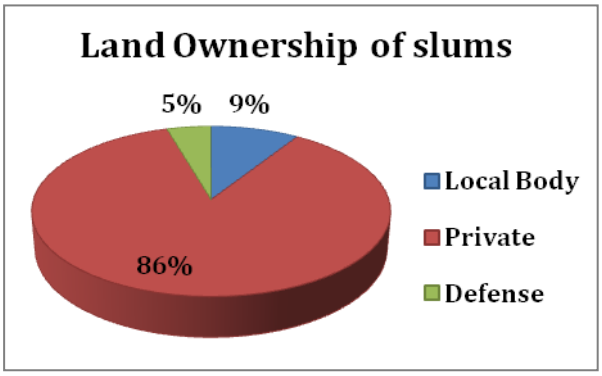


Figure 3-1 : Ownership of Land

3.2.4 Distribution of slums by Age

Age of the slum is one of the important information to assess the condition of a slum in any city. Considering the fact that Muzaffarnagar being one of the oldest habitat as well as the major agricultutal centre in the state of Uttar Pradesh, it has slums into existence over 50 years. It is interesting to note that 32% of the slums in the city have been into existence for more than 50 years with remaning 68% of slums less than the 50 years. (*shown in Figure 3-2*).

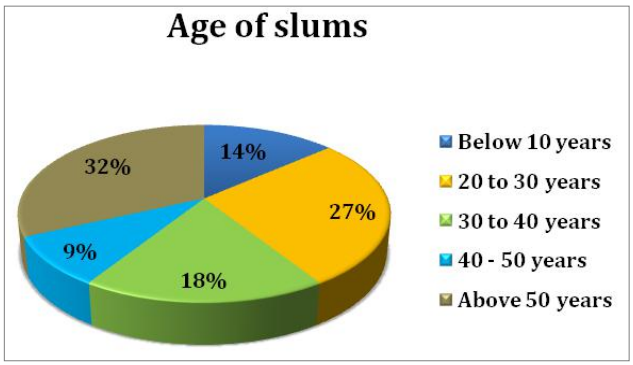
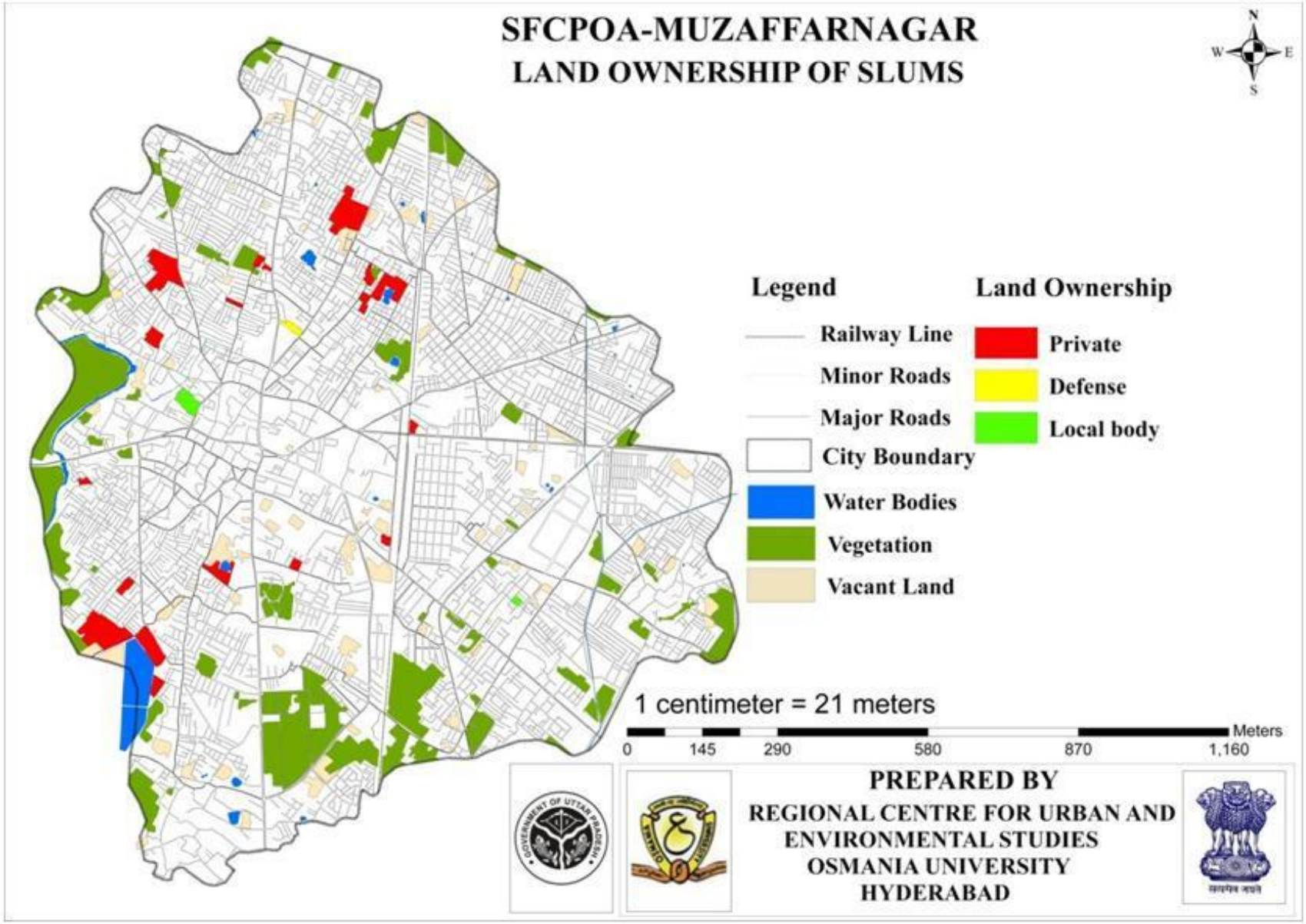


Figure 3-2 : Percentage distribution of slums w.r.to Age

[3] 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.

[4] Semi tenable slums are those slums which are located on land zone for non-residential uses as prescribed by the master plan.

[5] Untenable slums are those settlements which are on environmentally hazardous sites, ecologically sensitive sites, prohibited areas around heritage sites, and on land marked for public spaces, utilities and services and infrastructure. These shall include settlements in lake/tank beds or near hazardous or polluting industries / activities which are detrimental to the life and property of the inhabitants occupying them.



Map 3-3 : Ownership of land in slum settlements

3.2.5 Notification status of the 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", they tend to receive higher level of services and those unrecognized by the local bodies were considered as "Non-notified slums". As per DUDA, Muzaffarnagar the city is having a total of 22 slums and all are Non-notified slums. The city doesn't have any notified slums. The NBO Annexure – I primary survey has been done for all 22 slums in the city.

Table 3-3 : Notification status of Slums

	NOTIFICATION STATUS			% PROPORTION OF SLUMS	
Status	**Notified**	**Non-Notified**	**Total**	**Notified**	**Non-Notified**
No. of slums	0	22	22	0%	100%

Source: DUDA, Muzaffarnagar

Please refer **Annexure-1A**, for a detailed slum wise description of the above.

3.3 PHYSICAL PROFILE

Slums in Muzaffarnagar are scattered throughout the city and found mostly in the core area. The general composition of majority of slums comprises of scheduled caste, and other backward classes, forming the weaker section of the society. From habitation point of view, in general, the 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 was studied 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 area
- Flood prone slums
- Physical location of slums
- Abutting land use
- Housing type

Table 3-4 : Summary table of the slums – area, location, abutting land use & flood vulnerability

AREA OF SLUM								
Area (Ha)	0 - 1 Ha	1 - 2 Ha	2-3 Ha	3 - 4 Ha	More than 4 Ha			
No. of Slums	13	3	1	2	3			
LOCATION OF SLUM IN CITY								
Location	Core area			Fringe area				
No. of Slums	13			9				
PHYSICAL LOCATION OF SLUM								
Location	Along Nallah (Major Storm water Drain)	Along other drains	Along Railway line	Along Major Transport Alignment	Along River / Water body bank	On River/ Water body bed	Hazardous/ Objectionable	Non-Hazardous / Non - Objectionable
No. of Slums	0	3	1	1	3	0	0	14
SLUMS PRONE TO FLOODING DUE TO RAINS								
No. of Days	Not Prone			Up to 15 days				
No. of Slums	15			7				
TYPE OF AREA SURROUNDING SLUM								
Type of Use	Residential	Industrial	Commercial	Institutional	Other			
No. of Slums	22	0	0	0	0			

Source: RCUES primary survey, 2013

3.3.1 Distribution by Slum Area

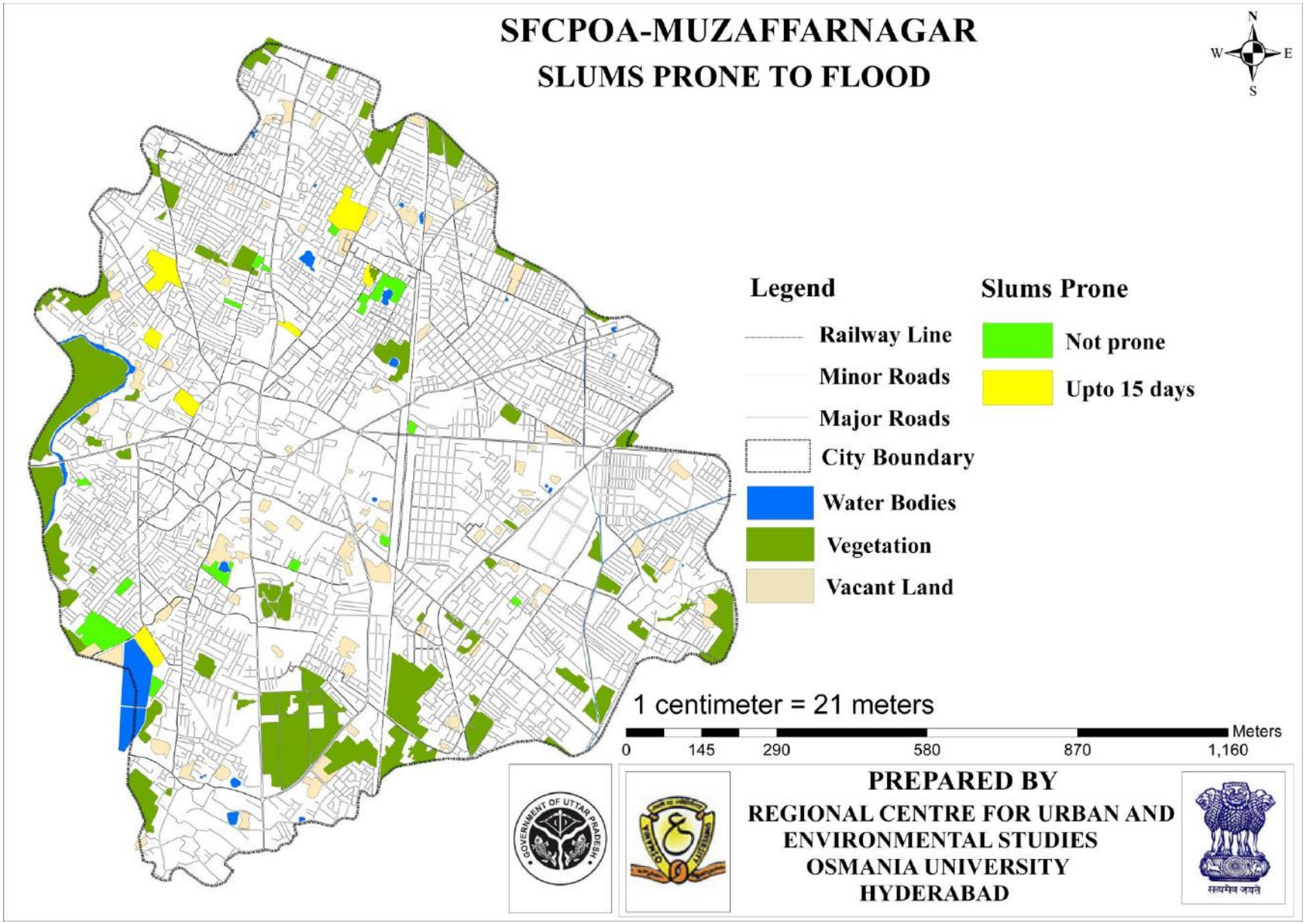
According to the primary survey, slum population constitutes 7% of the total City population where as the total slum area is (41.80 Ha) 3.5% of the total city area. Nearly 73% of slums are found to be situated in area less than 2 Ha and 27% of slums are situated in area more than 2 Ha. The total slum area under the ownership of Local body and defense (includes some portion of private land) is 6.14 Ha, and the Private ownership is 35.67 Ha.

3.3.2 Flood Prone Slums

As indicated in the *Table 3-4*, 15 slums are found not prone to floods and the remaining 7 slums are found to be flood prone with rain water remnant for up to 15 days or even more, indicating lack of safety to the slum dwellers.

Picture 3-1 : Stagnant of rain water in Janakpuri slum

Picture 3-2 : Rain water remnant in Aabkhari slum for more than 15 days



Map 3-4 : Slums Prone to flood

3.3.3 Distribution of slums by Physical location

Out of 22 slums, 13 slums are located in core area such as in old city and in other residential areas and remaining 9 were located in urban fringe. With respect to the physical location, around 14% of slums are located along other drains, 4% along the railway lines, 4% are along the major transport alignment, 14% are along river/water body bank. In addition, 64% of the slums are located on the sites of non hazardous / non objectionable areas. The location of slums with respect to various physical settings is shown in the *Map 3-5*.

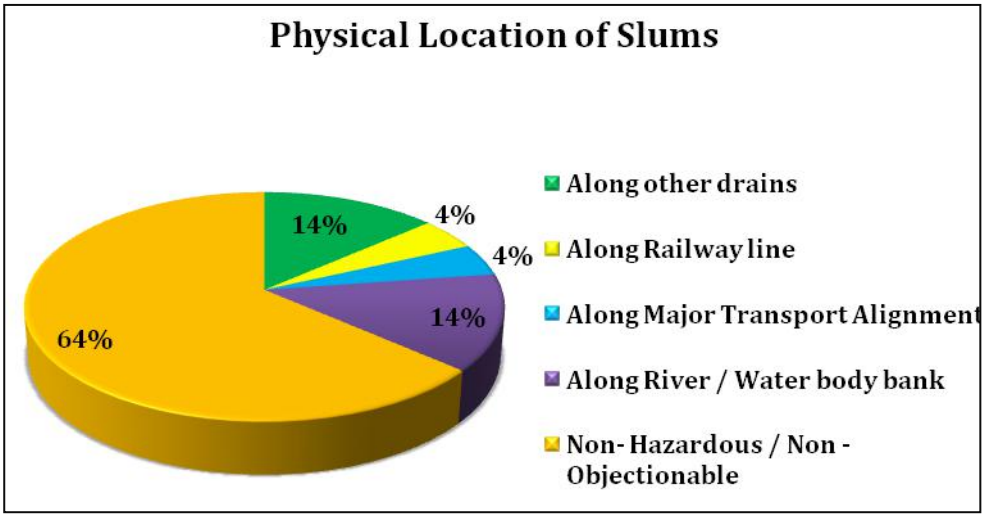


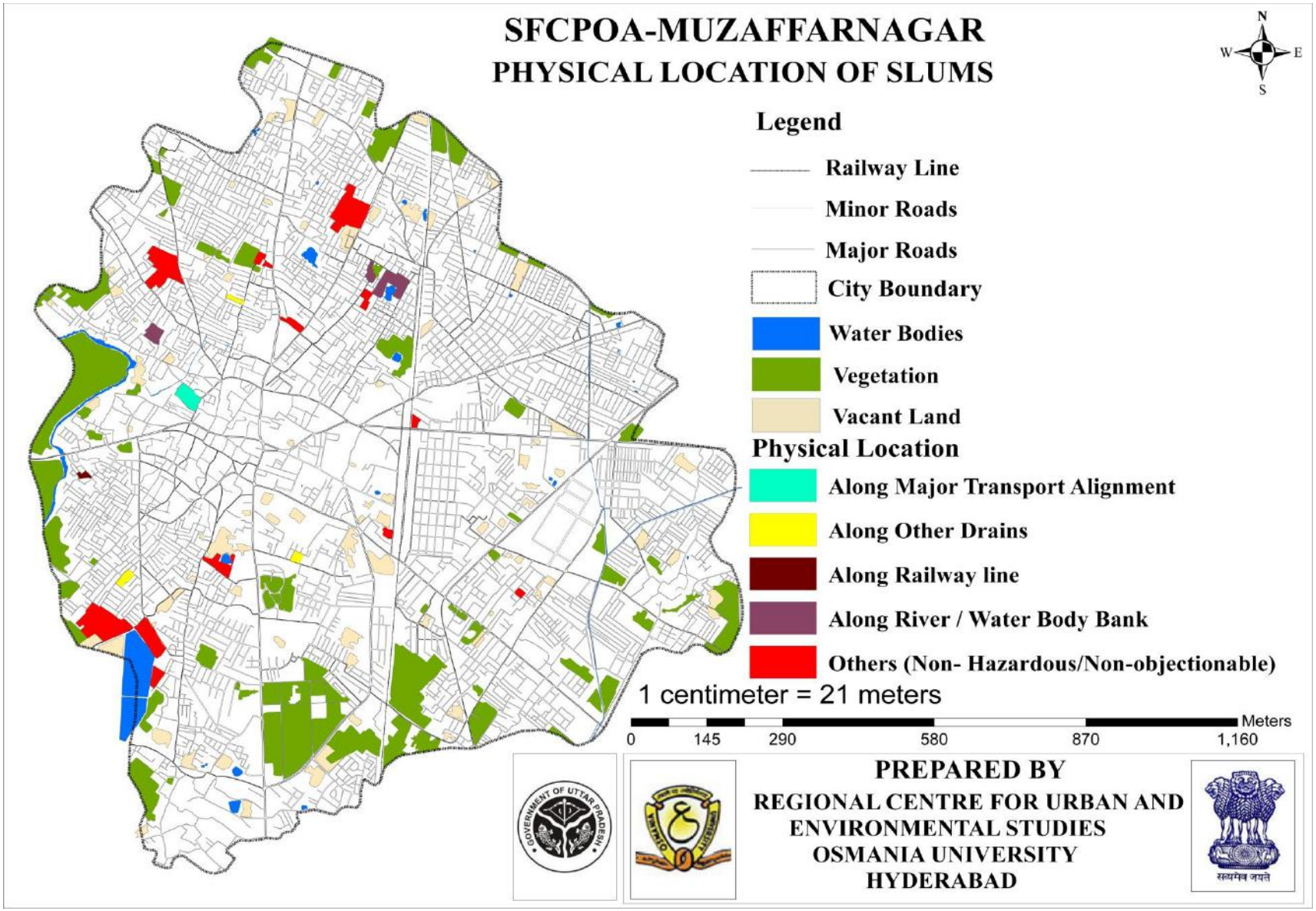
Figure 3-3 : Percentage distribution of slums w.r.to Physical location

3.3.4 Distribution of slums by Abutting Land use

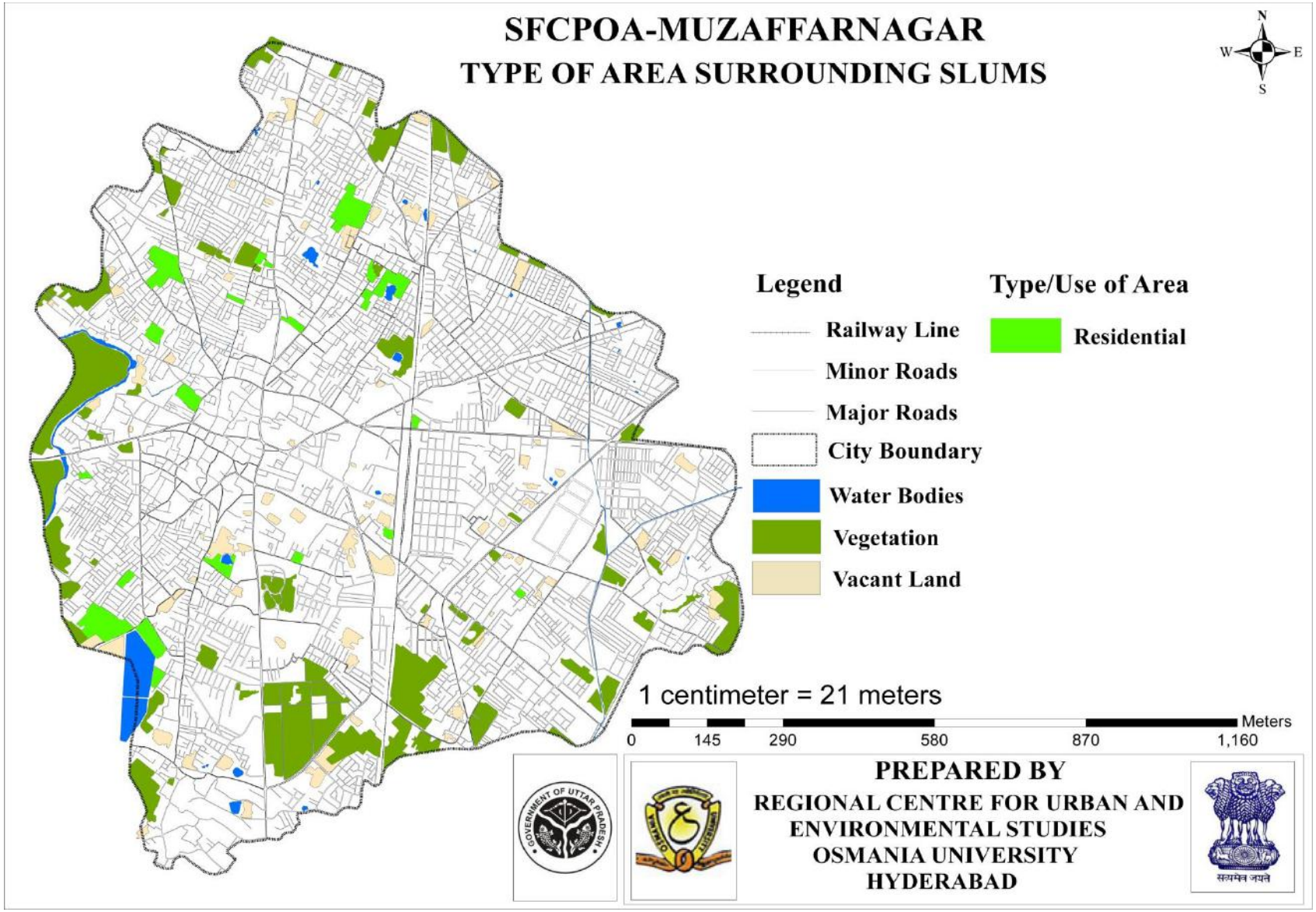
Picture 3-3 : Nallah passing between Laddawala Paschim slum

Picture 3-4 : Railway track in the vicinity of Anandpuri slum

Looking into the aspect of abutting land use, 100% of the slums are surrounded by residential land use.



Map 3-5 : Physical Location of slums

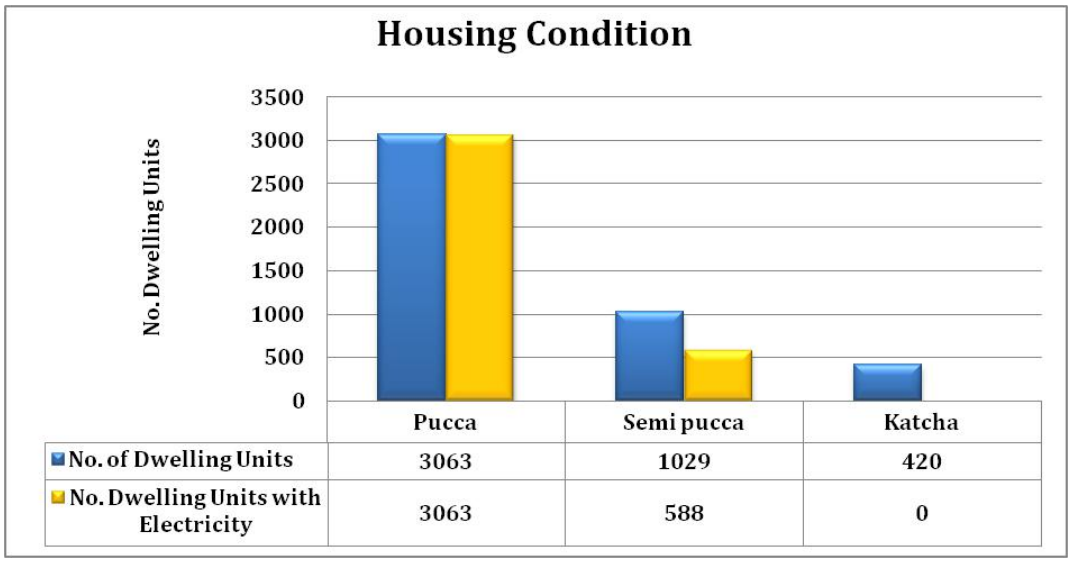


Map 3-6 : Type of area surrounding the slums

3.3.5 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 type of housing structures in the slums is collected to examine the housing scenarios. For analysis purpose, the dwelling units were classified into pucca, semi-pucca and kutcha, based on the kind of roofing and wall materials used.

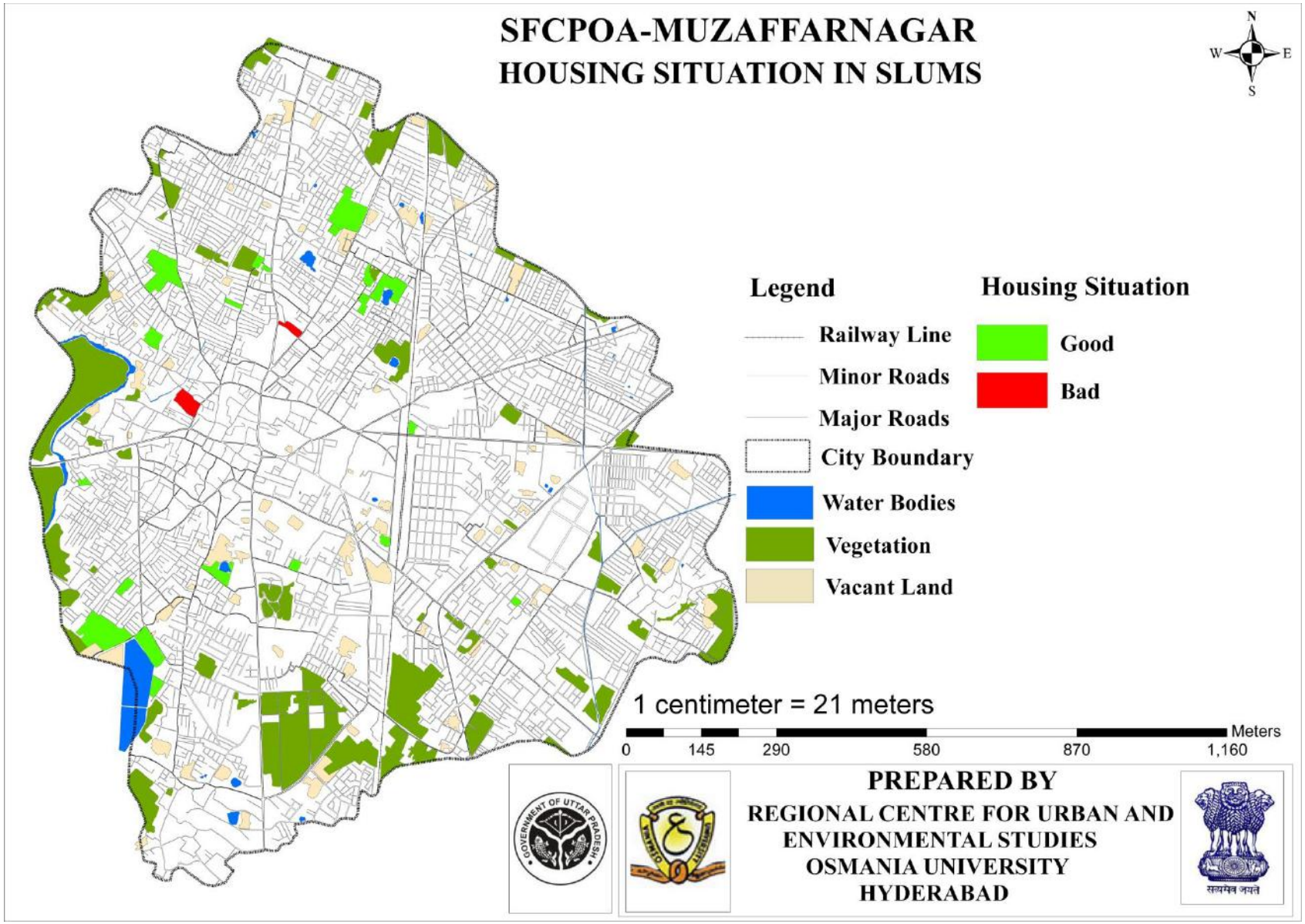
In Muzaffarnagar the total No. of dwelling units in the slums are 4512. Out of these, 68% of dwelling units are Pucca constructions, 23% units are Semi-Pucca and the remaining 9% are kutcha in nature. With respect to electricity connection, about 81% of the dwelling units have access to electricity where 100% of pucca dwelling units, 57% of semi pucca dwelling units have access to the same. Hence there is a dire need to cover 19% of total houses with electricity, indicating the pathetic status of the slum dwellers.



Source: RAY Primary survey, 2013

Figure 3-4 : Housing condition of dwelling units in the slums w.r.to structure type and electricity

The *Map 3-7* depicts the current housing structure condition in the slums of Muzaffarnagar. For analytical purpose, semi pucca and kutcha houses were considered exclusively to determine the housing shortage and the need to implement suitable housing redevelopment programmes. If the semi Pucca + kutcha 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 + kutcha 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 2 slums have semi Pucca + kutcha houses more than 75% while 20 slums in the latter category.



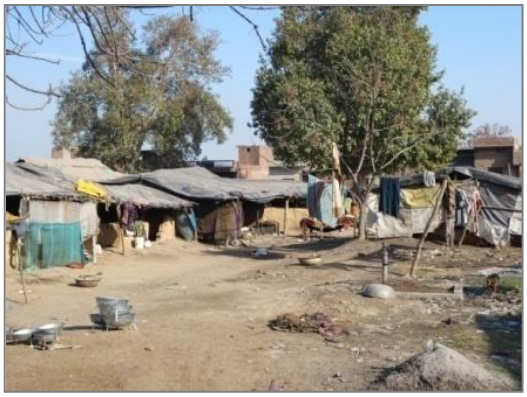
Map 3-7 : Housing condition in slums

Picture 3-5 : Housing Condition in Gehrabagh Slum

Picture 3-6 : Housing Condition in Indracolony Slum

Picture 3-9 : Pucca housing structures in Sarawat slum

Picture 3-10 : Pucca housing structures in Kesavpuri slum



Picture 3-7 : Housing Condition in Janakpuri slum

Picture 3-8 : Kutcha housing in janakpuki Slum

Based on the income levels and the affordability levels of the households, the kind of housing is determined and varies accordingly. Similarly in Muzaffarnagar, 68% 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 kutcha houses are usually found to be built using make shift material like sandstone tiles, thatches, loosely packed stones, Jhopris and temporary tents.

Although most the houses are Pucca in nature, it is irony that these are in a dilapidated condition and in of up gradation. On housing occupancy status, it was found that 84% of the

houses are self-occupied and 16% are encroached the public lands. Due to lack of choice, and security, the population is forced to live and work in informal settlements and earn on a daily basis. For slum wise details, please refer **Annexure-1B.**

3.4 DEMOGRAPHY & SOCIAL PROFILE

3.4.1 Population

According to Annexure 1 primary survey, the total population in **22 slums** is **27100** residing in **5085** households, with an average household size of 5. The average population density of slum area in the city is 513 persons per Hectare. The Rehmania slum is having the highest population (3370) and Keshavpuri / Numashey Camp slum is having the lowest (366). The slum wise distribution of population is shown in *Map 3-8.*

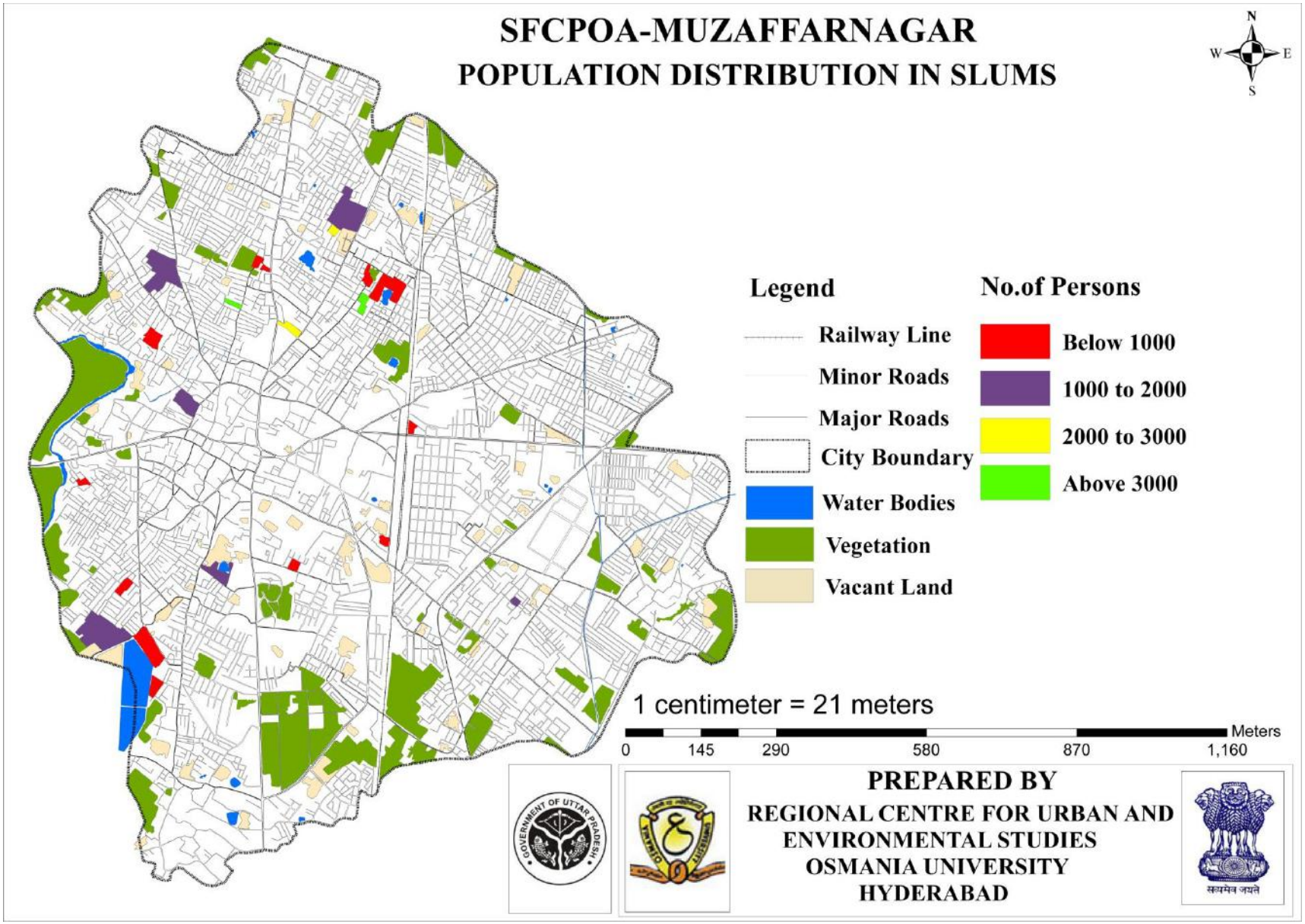
3.4.2 BPL Population & Households

The BPL population constitutes about 29% of the slum population. In Mehmoodnagar slum about 32% of the slum population is BPL population. Janakpuri is the slum with lowest percentage (23%) of BPL population. Of the total slum households, 29% are BPL households i.e., 1453 households.

Table 3-5 : Distribution of Slum population w.r.to different social groups

S. No	Population	SC	ST	OBC	Others	Total	Minorities
1	Total slum population	7175	0	12892	7033	27100	15653
2	Total Households	1419	0	2345	1321	5085	2786
3	Total BPL population	1915	0	3806	2008	7729	4620
4	Total BPL Households	395	0	689	369	1453	821
5	No. of women headed households	179	0	206	81	466	217
6	No. of persons > 65 years	254	0	254	133	641	289
7	No. of child labors	120	0	110	35	265	118
8	No. of physical handicapped persons	5	0	5	0	10	5
9	No. of mentally challenged persons	0	0	0	0	0	0
10	No. of persons with HIV & AIDs	0	0	0	0	0	0
11	No. of persons with tuberculosis	13	0	20	10	43	18
12	No. of Persons with Respiratory Diseases including Asthma	54	0	30	13	97	22
13	No. of Persons with Other Chronic Diseases	0	0	0	0	0	0

Source: RCUES primary survey, 2013

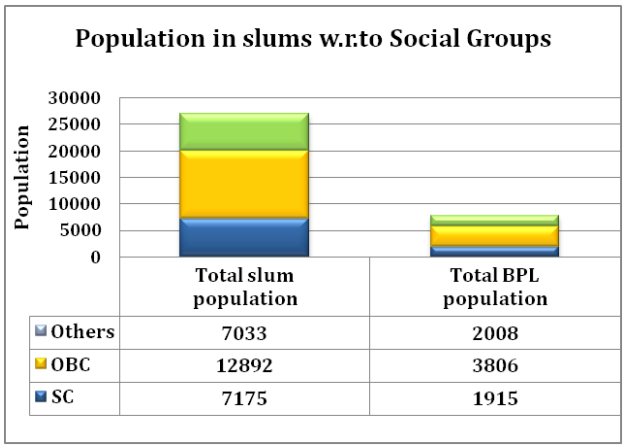


Map 3-8 : Slum wise distribution of population

3.4.3 Distribution of Slum population & households by different Social groups

In notion to different social groups residing in slums of Muzaffarnagar, SCs and OBCs constitute the major proportion. About 74% of the population living in slums belongs to OBC & SC division of social groups. About 74% of OBC & SC population in slums is under BPL.

In consideration with households, about 74% of the households in the slums belong to OBC and SC division of social groups. Of total slum households, about 46% belong to OBC group of social division. It is further observed that 29% of OBC and 28% of SC households are living below poverty line (BPL).



Source: RAY Primary survey, 2013

Figure 3-6 : Distribution of population in slums w.r.to different social groups

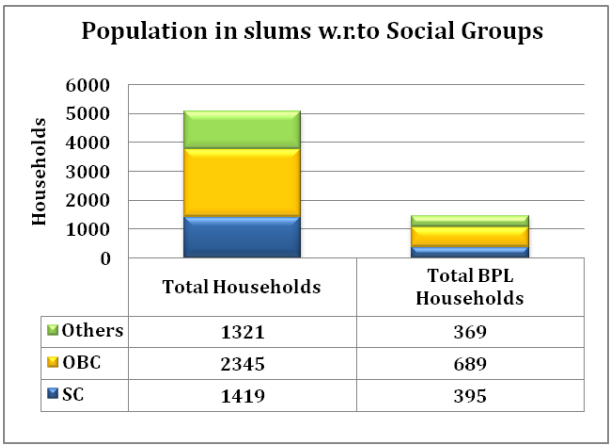


Figure 3-5 : Distribution of households in slums w.r.to different social groups

3.4.4 Distribution of slum households by Minority communities

In Muzaffarnagar a significant proportion of minority[6] communities are living in slums. About 58% of the slum population belongs to minority communities and constitute about 55% of the total slum households. In terms of BPL population and households, 60% of the minority population in slums stood below the poverty line occupying 57% of total BPL households.

As shown in the *Table 3-5*, the persons with more than 65 years of age constitute 2% of the slum population. About 9% the total households in the slums are women headed households, which is more seen among OBC social group of households.

3.4.5 Literacy rate

The literacy rate of slums in Muzaffarnagar is 75%, where the female literacy rate is observed to be more compared to male literacy rate.

3.4.6 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

[6] The Muslims, Christians, Sikhs, Buddhists and Zoroastrians (Parsis) were notified as minority communities in India under section 2(c) of the National Commission for Minorities Act, 1992.

dropout rate was least for those belonging to the highest income group and maximum for those from the lowest income group and economically weaker sections. 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 NBO Annexure-I survey, it is found that 2% (543 children) of the children in slums were school dropouts. The mitigation measures needs to be taken through strict implementation of education policy programmes and provision of elementary education to the deprived groups.

3.4.7 Number of Slums by Disability Status and senior citizens

As per NBO Annexure -1 survey it is found that about 0.04% (10 persons) of the slum population has people who are either physically handicapped. The employment provisions needs to be made for those physically challenged person who are skilled enough.

For the well being of these sections of people viz., old, physically handicapped mentally challenged etc., it is essential to make due concessions and provision of adequate social facilities. In addition, the eligible old aged persons in BPL families should be entitled to National Old Aged Pension Scheme (NOAPS).

3.4.8 Number of households by Health Condition

Poor water and unsanitary conditions leads to adverse effects on health of households living in slums. It is quite apparent that 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/ water bodies making the households exposed to respiratory problems, chronic and other diseases. In slums of Muzaffarnagar, it is found that about 0.5 % of the slum habitants are suffering with either tuberculosis, respiratory or with chronic diseases.

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

3.5 ECONOMIC PROFILE

The Muzaffarnagar city is the tehsil head quarters as well as the administrative head quarters of the district. Muzaffarnagar city economy is mainly depending on territory/service sector followed by secondary sector activities.

The percentage of work force engaged in tertiary sector activities like business, commerce, transportation and other related activities/services is 93.8 %. The old part of the city is a major commercial centre of the city. Shiv Chowk, Muzaffarnagar – Meerut Road, Muzaffarnagar – Roorkee road, Muzaffarnagar – Shamli roads (Kachrahi road) are the major commercial centers in the city where most of the tertiary sector activities are concentrated. The land use in these areas is mostly mixed type of land use. The city has old and new markets where the major goods sold are jiggery, sugar, plastic, paper, agricultural goods and machinery, steel, vegetables and fruits etc.

3.5.1 Livelihood profile

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

As indicated in NBO Annexure –I survey, 25% of the slum population are illiterates, lack in skill and professional training, making it difficult for them to obtain skilled employment opportunities in Muzaffarnagar, hence end up doing low or moderately paid jobs on a daily basis.

A majority of the working population in the slums is engaged as in lives stock and its allied activities, agricultural and construction laborers, rickshaw pullers, auto rickshaw drivers, informal sector like selling fruits, vegetables, other utensils, small scale industries, tobacco making, wholesale business and home based small businesses. On the other hand, women in the families are majorly involved in domestic help.

3.5.2 Distribution of slums by Occupation Status

As per NBO Annexure –I survey, it is inferred that 37% of the households are found to be working as casual laborers and 24% on regular wage basis which includes domestic help, rag pickers, and vegetable vendors. Only 12% is actually working on monthly salary, indicating a secured position and skilled employment. Therefore, nearly 37% of the slum households do not have access to a dependable occupation and secure income.

As per the recent NBO Annexure–I survey, 37% of the slum households do not have opportunities towards sustainable occupation and secure income. This situation of slum livelihoods need to be taken into consideration in future development programmes as there is a dire need for an enhanced productivity in the city.

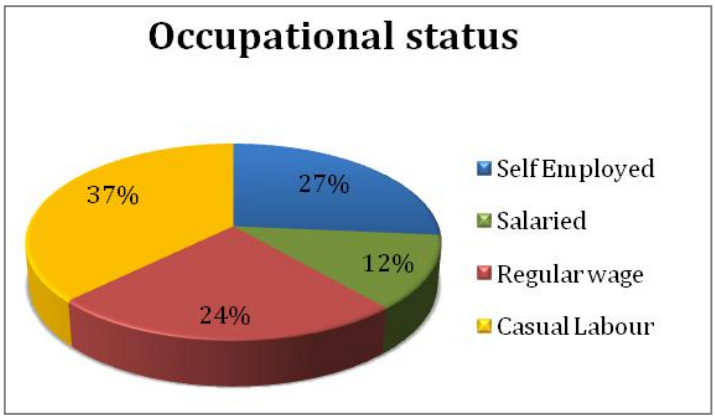


Figure 3-7 : Distribution of slum household's w.r.to occupational status

3.5.3 Monthly Income by Households

In respect to monthly income of households, it is found that, about 41.5% of the households income ranges between ₹2000 - ₹3000. 34% of the households earn in the range of ₹1500 - ₹2000. The households earning less than ₹1500 constitutes about 0.5%.

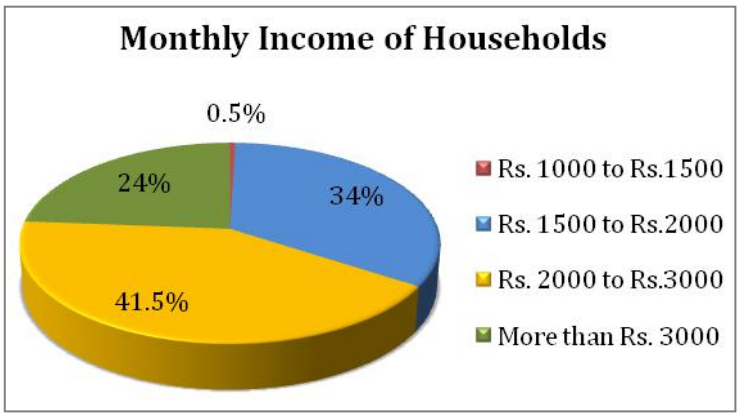


Figure 3-8 : Distribution of household's w.r.to monthly income

Further, the livelihood pattern has become indefinite and irregular for the households, where only 24% of them are earning more than Rs.3000/- per month.

The above statistics reveal that there is urgency in creating economic assistance which has to 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 details.

3.6 PHYSICAL INFRASTRUCTURE

Sustainable growth of a city depends on its infrastructure facilities. Lack of infrastructure and institutional mechanism can lead to collapse of urban system in a city. Access to basic services has now become a criterion for identification of the poor areas in a city. The responsibility for urban service provision in an equitable manner lies with the ULB, where an increasing gap in service levels and the difficulties in providing the same are prevalent. Information on access to services in terms of Physical Infrastructure of slums Muzaffarnagar city has been collected and a brief analysis on the current status of Water Supply, sewerage, Storm Water drainage and Solid Waste Management in slums is presented. The numbers indicated in the following *Table 3-6* are based on NBO Annexure – I survey of 22 slums.

3.6.1 Water Supply

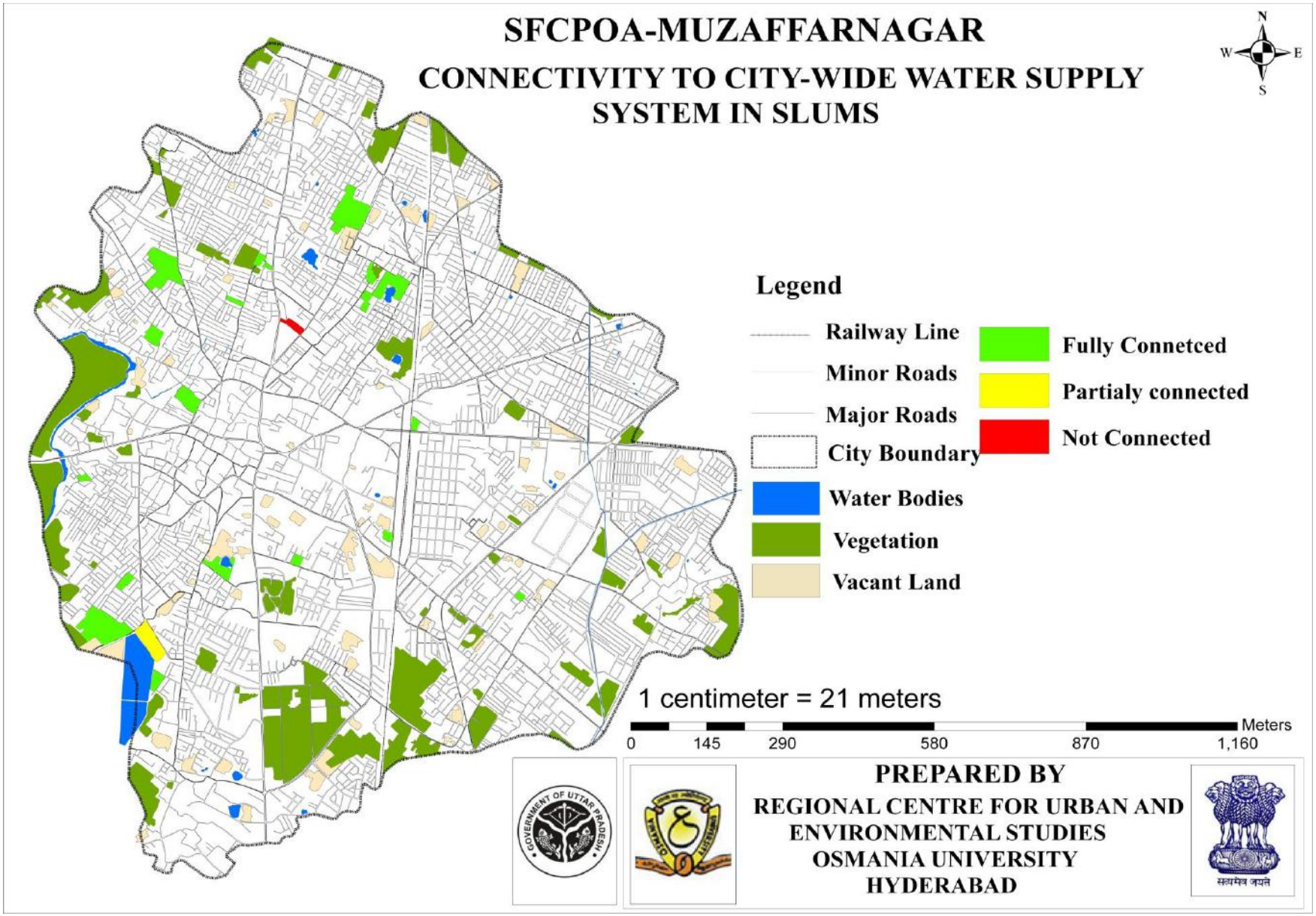
Table 3-6 : Current status of water supply in slums

CONNECTIVITY TO CITY WIDE WATER SUPPLY SYSTEM								
Status	Fully Connected		Partially Connected			Not Connected		
No. of Slums	20		1			1		
SOURCE OF WATER SUPPLY FOR HOUSEHOLDS								
Source	Individual Tap	Public Tap	Tube well/ Bore well / Hand pump	Open Well	Tank / Pond	River/Canal/ Pond	Water Tanker	Others
No. of Households	2837	460	1735	0	0	0	0	53
WATER SUPPLY SOURCE								
Ownership	No. of Individual Taps		No. of Public taps		No. of Tube wells/ Bore wells / Hand pumps			
No. of Connections	2709		34		628			
DURATION OF PIPED WATER SUPPLY TO SLUMS								
Duration	Less than 1 hr daily	1-2 hr daily	More than 2 hrs daily	Once in a week	Twice a week	Not regular	No supply	
No. of Slums	0	18	0	0	0	0	4	

Source: RCUES primary survey, 2013

a. Connectivity to City Wide Water Supply System

Most of the slum households either have direct access to water supply service or access it through community or common facilities. Of the total slums, 91% of slums are fully connected to the city wide water supply system and 5% slums are partially connected. The remaining 4% of the slums do not have connectivity to city water supply system. The following *Map 3-9* shows the number of slums that are connected to city wide water supply system.



Map 3-9 : Connectivity of slums to city-wide Water Supply system

b. Existing sources of Drinking water

In regard with source of drinking water, over **56%** of the slum households i.e.,2837 households out of 5085 households have their own individual water supply connections, where potable drinking water being supplied by the ULB. A significant portion of **44%** of the slum households does not have own water supply connection. They usually depend on public taps, hand pumps, tube wells and on neighbor households who have access to water supply connections.

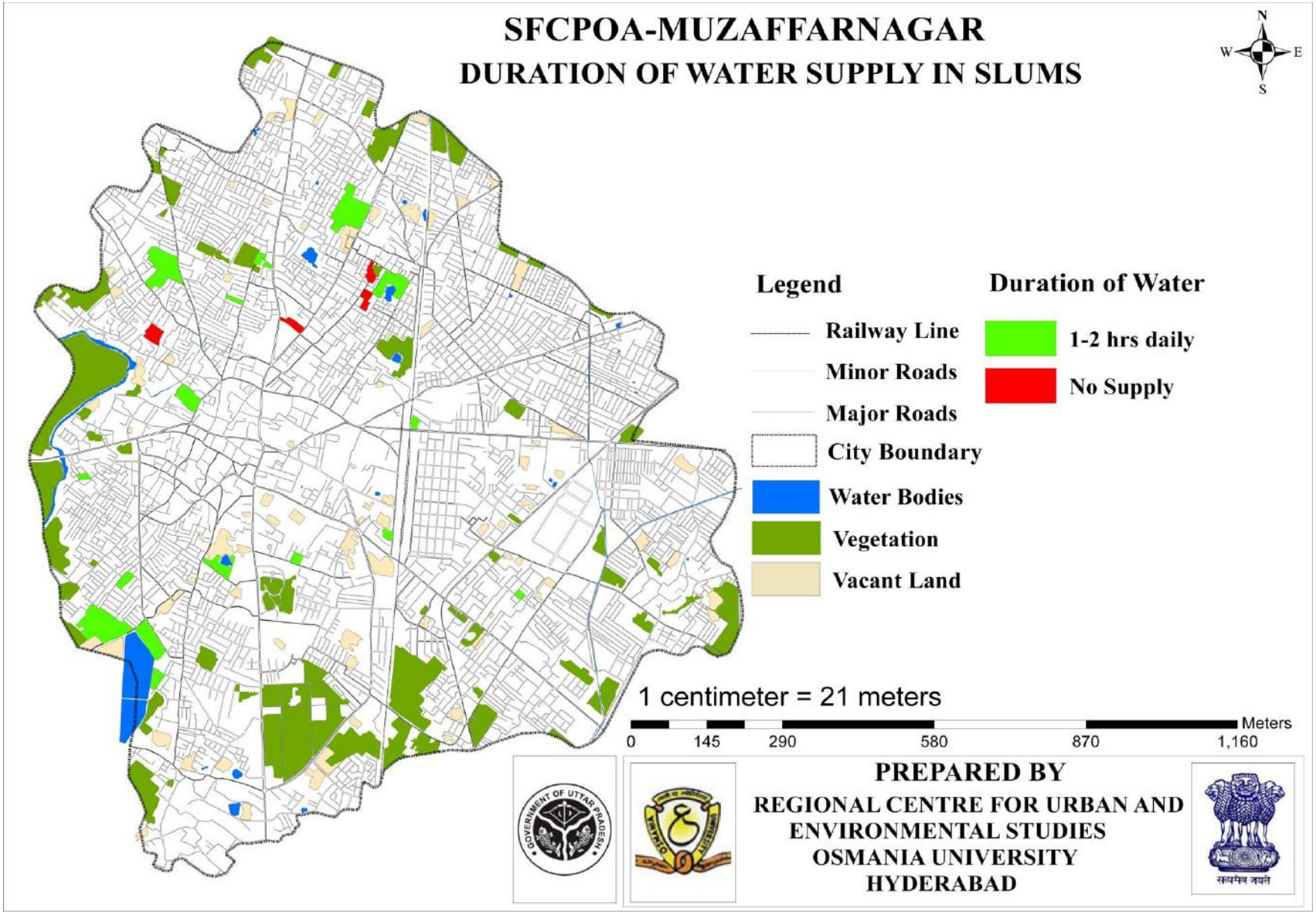
c. Duration of Piped Water Supply

The drinking water is supplied usually once in a day or once in couple of days in the city which change in accordance with season. In Muzaffarnagar for 82% of the slums (18 slums) the piped water is supplied for duration of 1 to 2 hours daily. In 4 slums, the piped water supply is totally absent and the people majorly depend on hand pumps, wells, tube wells for drinking water.

Picture 3-11 : Hand pump in Gehrabagh rahmat nagar slum

Picture 3-12 : Public taps in Kalapar kidwayi slum

Despite the connectivity to city wide water supply system, the major problem observed to be is the poor quality of water. The source of water supply to the city is through ground water and the quality of water being supplied by the ULB is of standard 'India Mark II'. The mix of pollutants, cracked old water pipes may be a factor for contamination of water. The quality of water is one of the major tasks in the city which needs to be addressed immediately.



Map 3-10 : Duration of Water Supply in slums

3.6.2 Sanitation

Sanitation and sewerage system 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 and decency is 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 3-7:*

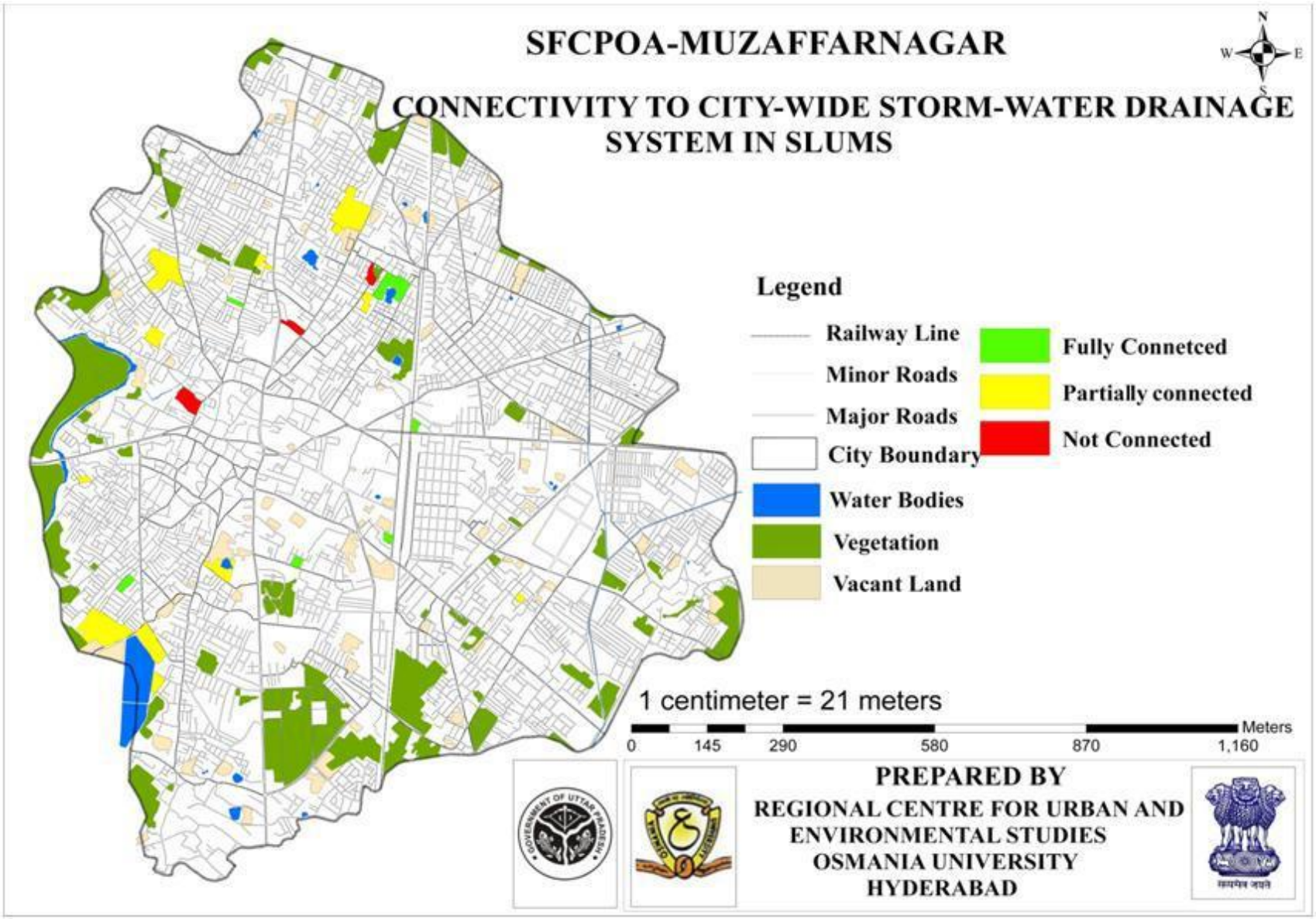
Table 3-7 : Current Sanitation Statistics

DRIANAGE AND SEWERAGE FACILITY									
Type of facility	**Storm water drainage**		**Underground drainage / Sewer lines**		**Digester**		**Not connected to sewer or digester**		
No. of Households	3248		0		0		1837		
CONNECTIVITY TO CITY WIDE SEWERAGE SYSTEM									
Status	**Fully Connected**		**Partially Connected**				**Not Connected**		
No. of Slums	0		0				22		
CONNECTIVITY TO CITY WIDE STORM WATER DRIANAGE SYSTEM									
Status	**Fully Connected**		**Partially Connected**				**Not Connected**		
No. of Slums	6		13				3		
LATRINE FACILITY USED BY HOUSEHOLDS									
Type of Latrine	**Public Community**		**Shared Latrine**			**Own latrine**			**Open Defecation**
	Septic tank/ flush	**Service latrine**	**Septic tank/ flush**	**Service latrine**	**Pit**	**Septic tank/ flush**	**Service latrine**	**Pit**	
No. of Households	24	0	311	0	0	4004	386	0	360

Source: Primary Survey, RCUES

a. Drainage & Sewerage facility

About 64% of slum households are having access to storm water drain system. The underground drainage/ sewer system is absent in the slums.



Map 3-11 : Connectivity of slums with city wide storm water drainage system

b. Connectivity to City wide Storm water drainage

In regard with connectivity of slums with city wide storm water system, about 27% of the slums are fully connected and 59% of slums are partially linked to the system. The rest 14% of the slums does not have connectivity to 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.

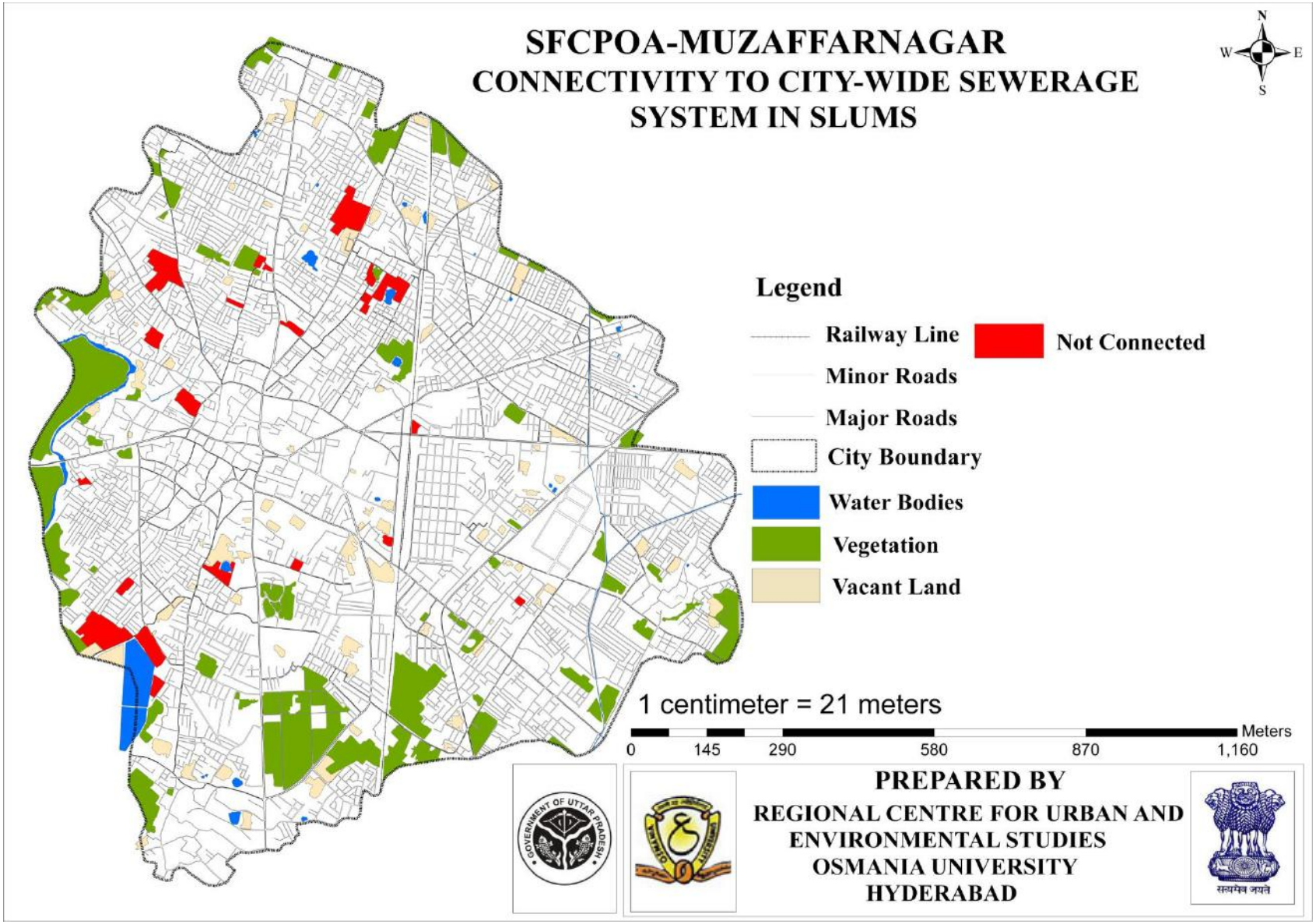
Picture 3-13 : Open Dumping in Gehrabagh rahmat nagar slum

Picture 3-14 : Overflow of storm water in Indira colony

c. Connectivity to City wide trunk Sewerage System

In respect to connectivity of slum with the city wide sewerage system, 100% of slums are not connected to sewerage system.

The following *Map 3-12* presents the status of the slums that connected to city wide sewerage system.



Map 3-12 : Connectivity of slums with city-wide sewerage system

d. Distribution of Households by use of different type of toilet facilities

Access to toilet/latrine is one of the basic necessities and is an indicator used for measuring quality. In Indian context three different types of toilets were usually used viz., pit, service latrine, and septic tank/flush. Three different ways of access to toilet was considered viz., own latrines, shared latrines and public community toilets. In lack of access to these facilities, the practice of open defecation is widespread.

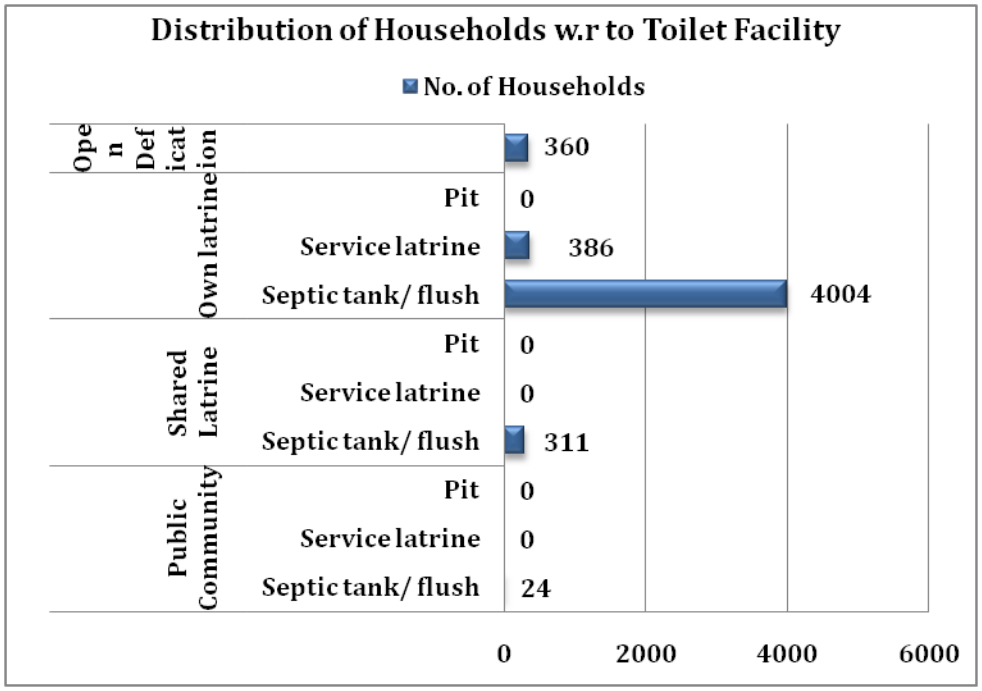


Figure 3-9 : Distribution of Households w.r.to type of toilet

As evident in *Figure 3-9,* about 86% of the slum households have access to own latrine with septic tank/flush type of latrine. A low proportion of 7% households use shared latrines. An alarming share of about 7% slum house holds practice open defication which leads to unhygenic environment and health related problems.

Even though 93% of the households have access to some form of toilet, it is believed the exisitng toilet system is considered to be of primitive stage with no proper maintenance and lacks general hygienic condition, further deteriorating the environment.

3.6.3 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. An efficient, safe and proper dispose of solid waste generated is the prior need for city, community/slum development.

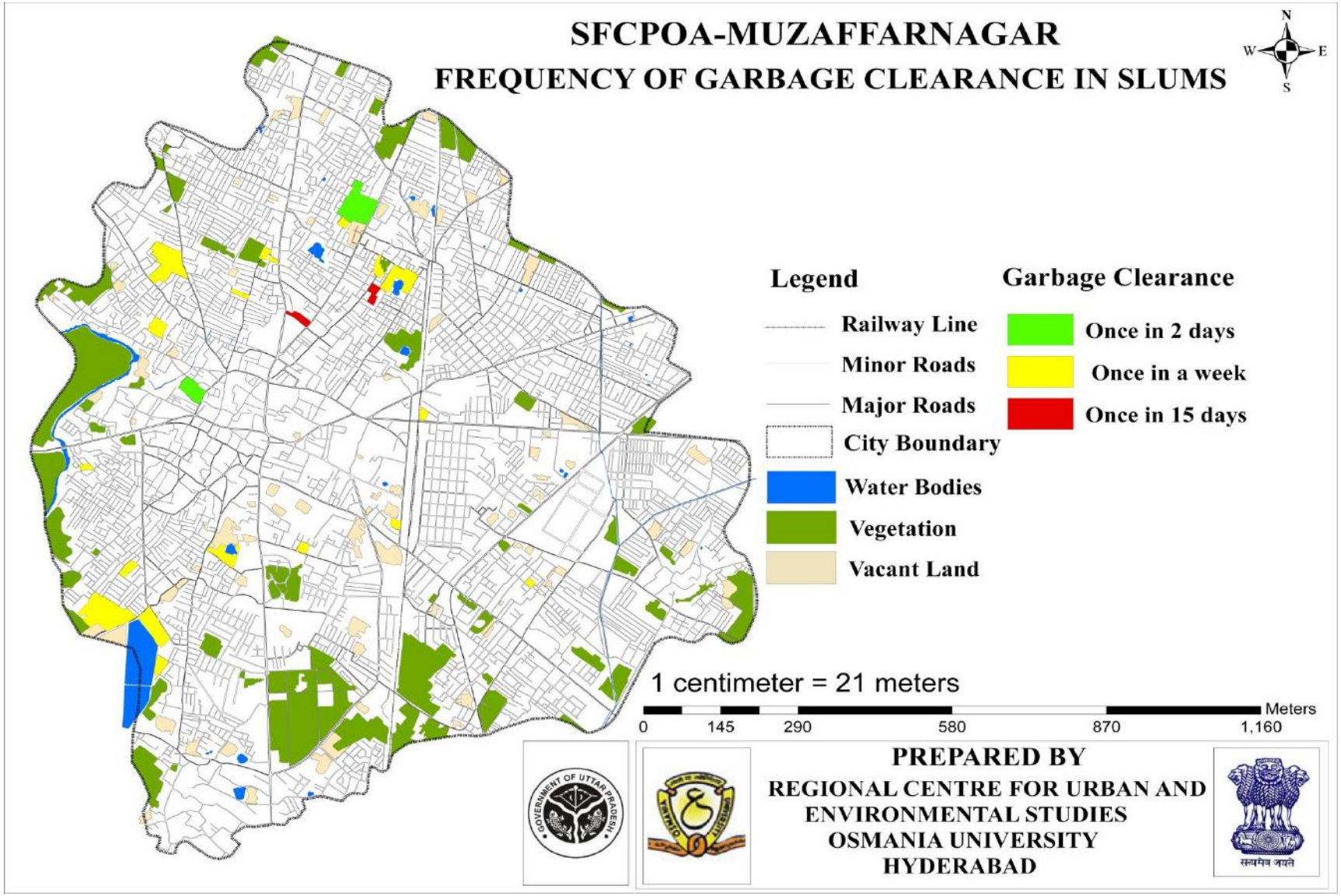
Table 3-8 : Status of Municipal Solid Waste Management in Slums

ACTIVITY	No. of SLUMS
FREQUENCY OF GARBAGE DISPOSAL	
Daily	0
Once in 2 days	2
Once in a week	18
Once in 15 days	2
No collection	0
ARRANGEMENT OF GARBAGE DISPOSAL	
Municipal staff	0
Municipal Contractor	20
Residents themselves	2
Others	0
No arrangement	0
FREQUENCY OF CLEARANCE OF OPEN DRAINS	
Daily	2
Once in 2 days	0
Once in a week	18
Once in 15 days	1
No clearance	1

Source: RAY primary survey, 2013

a. Frequency of Solid waste disposal

The *Table 3-8* gives an overall picture of the solid waste management in slums, about 9% of slums have once in two days clearance of garbage, in 82% of slums the waste is collected once in a week or even more. In about 9% of the slums the collection of waste is totally absent. Though the collection of waste is taking place in few slums, majority of the slum areas are found to be affected with insanitary conditions, which require immediate attention from concerned authority.



Map 3-13 : Frequency of Garbage collection in slums

b. Arrangement of Garbage Disposal

As shown in the *Table 3-8,* in 91% of the slums, the solid waste disposal activity is handled by the municipal Contractors. In areas where there is lack of solid waste disposal or collection, the disposal activity is taken by the residents themselves. The existing scenario of solid waste collection and disposal reflects the necessity for increased staff and regular clearance to avoid the unsanitary conditions.

Picture 3-15 : Open dumping of Garbage In Kidwayi

Picture 3-16 : garbage collection in Mallupura slum

c. Frequency of Clearance of Open drains

In respect with the clearance of open drains, 9% of the slums have daily clearance of open drain; in 81% of slums the clearance takes place once in a week. In about 10% of the slums the clearance takes place either once is every 15 days, even more or totally absent, further deteriorating environmental conditions and contaminating the ground water.

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

3.6.4 Roads - Condition & Connectivity

The movement of heavy vehicles in the city is high as it is situated on the National Highway No.58 and State Highway No.12. As the city is situated on Delhi – Uttarkhand Road, it is well connected to other parts of the city thrgh road. Many state and private busses runs through the city. The Jli Marg, Shamli road, Chartaval marg, Sarvat marg are the major arterial roads in the city. The width of the major roads in the city varies between 12 mts to 30 mts. Majority of the slums in the city or situated in the vicinity of these roads and some near to railway track. Thgh majority of the slums are well connected by approach roads, the condition of the internal roads in the slums are in bad state. The *table 3-9* shows the current statistics of road network in slums.

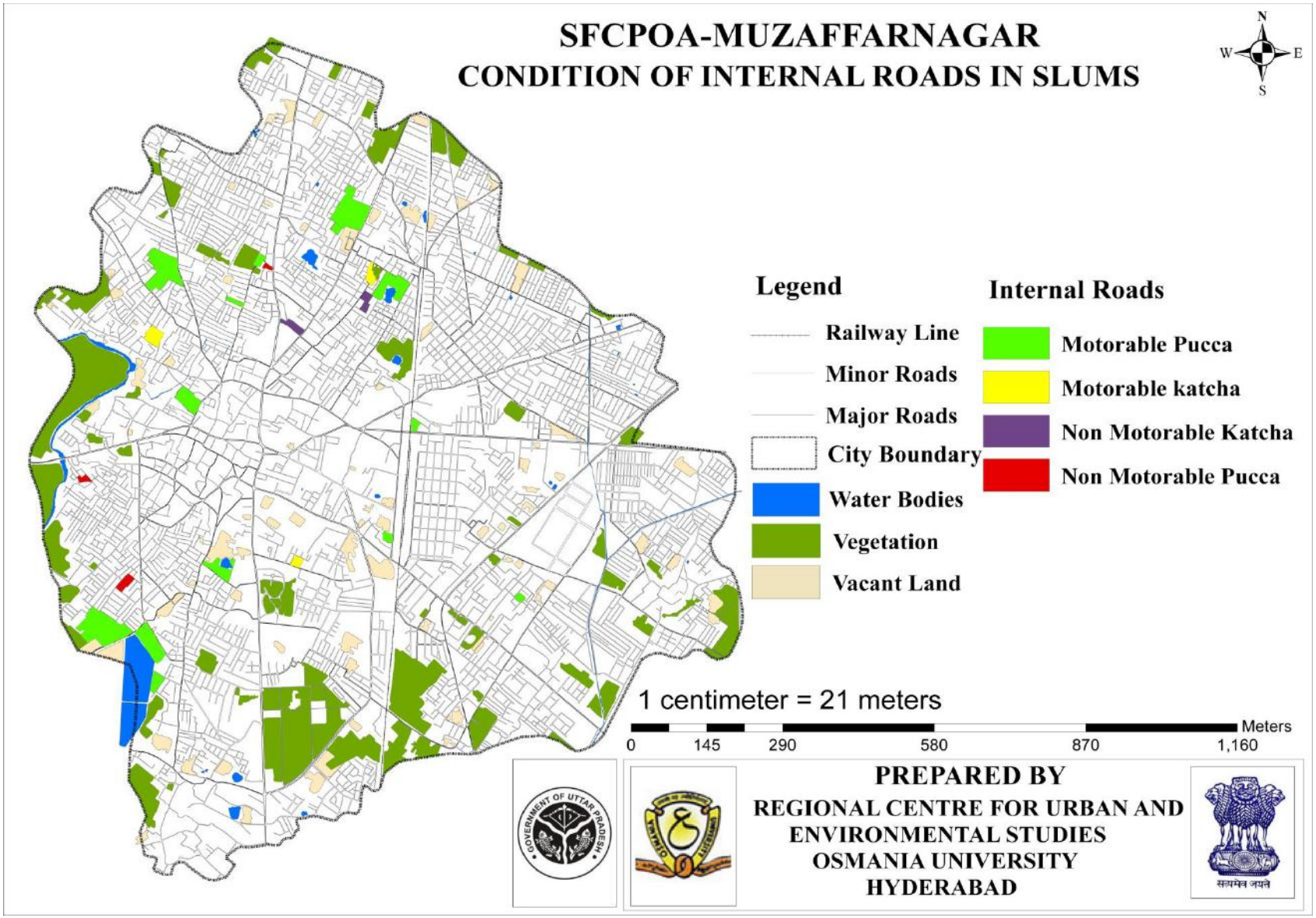
Table 3-9 : Condition of Road network in slums

	No. of Slums
APPROACH ROAD/LANE/CONSTRUCTED PATH OF THE SLUM	
Motorable Pucca	21
Motorable Kutcha	1
Non-Motorable Pucca	0
Non-Motorable Kutcha	0
DISTANCE FROM THE NEAREST MORTORABLE ROAD	
Less than 0.5 Km	21
0.5 to 1.0 km.	0
1.0 km to 2.0 km.	1
2.0 km to 5.0 km.	0
more than 5.0 km	0
CONDITION OF INTERNAL ROADS	
Motorable Pucca	14
Motorable Kutcha	3
Non-Motorable Pucca	3
Non-Motorable Kutcha	2

***Source*:** RAY Primary Survey, 2013

a. Nature of Approach Roads

By and large, 95% of slums in the city are provided /connected with Motorable Pucca roads and 5% are connected with approach roads being Motorable Kutcha in nature. There is a need to upgrade these roads.



Map 3-14 : Condition of Internal roads in slums

b. Distance from nearest Motorable road

Around 95% of the slums have access to the nearest Motorable road within 0.5 Km and 5% between 1 Km to 2 Km.

Picture 3-17 : Non- Motorable pucca road in Gehrabagh rahmat nagar slum

Picture 3-18 : Motorable pucca approach road to Anandpuri slum

c. Type of Internal road

In respect to internal roads in the slums, 64% of the slums have Motorable Pucca internal roads while 14% have Motorable kutcha internal roads. Around 22% of the slums lack in proper internal roads with BT surface. The *Map 3-14* shows the type of internal road provided to the slums.

Picture 3-19 : Non Motorable Kutcha internal road in Indira colony

Picture 3-20 : Non-motorable kutcha internal road in Janakpuri Slum

Picture 3-21 : Motorable Pucca internal road in Mallupura

Picture 3-22 : Non motorable Pucca internal road in Raidaspur

3.6.5 Street Lighting Facility

Table 3-10 : Availability of Street lighting Facility

AVAILABILTY OF STREET LIGHTING FACILITY IN SLUM	
	No. of Slums
Yes	15
No	7

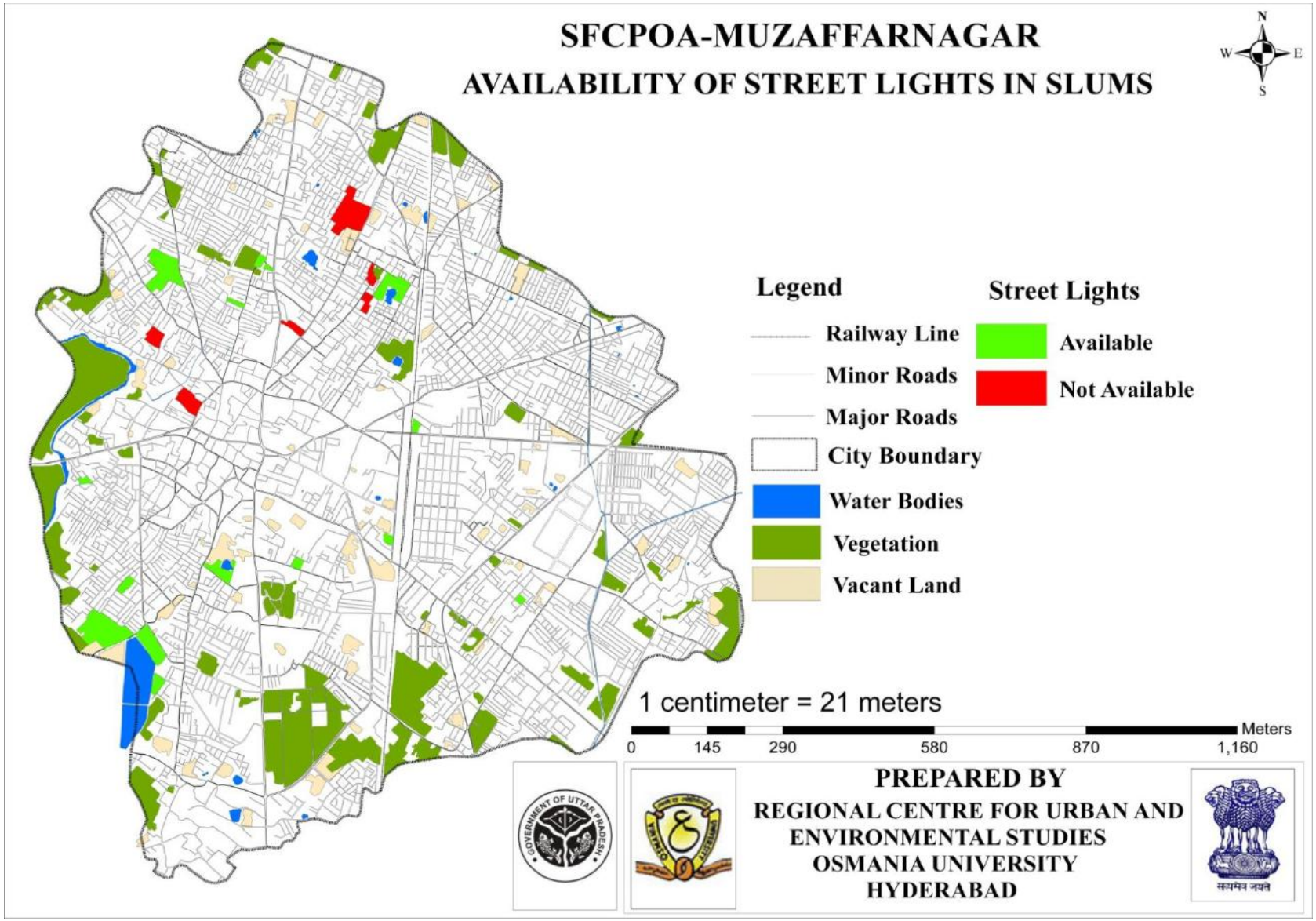
***Source*:** RAY primary survey, 2013

According to NBO Annexure -I survey, 68% of the slums have street lighting facilities, not all of which are in working condition and found to be insufficient. For the 32% of the slums, there is no street lighting facility, hence essential to for security, to prevent any kind of accidents and other inconveniences.

Picture 3-23 : Street light in Raidaspur slum

Picture 3-24 : HT lines in Makkinagar slum

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



Map 3-15 : Availibility of Street light facility in slums

3.7 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
- Parks
- Public utilities such as fire services

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

3.7.1 Education facilities

Table 3-11 : Distance of the slum from the nearest Anganwadi and Pre-primary schools

Distance	Within the slum	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	Not Available
Pre- Primary Schools (Anganwadi)					
No of slums	10	1	0	0	11
Pre- Primary Schools (Municipal)					
No of slums	0	0	0	0	22
Pre- Primary Schools (Private)					
No of slums	0	1	1	0	20

***Source*:** RAY primary survey, 2013

Anganwadi is a part of the Indian public health care system. The responsibility of Anganwadi workers includes basic health care activities like contraceptive counseling and supply, nutrition education and supplementation, as well as pre-school activities. The access to Anganwadi is very essential especially in places like slums where children, pregnant women suffer with lack of proper nutritional diet. As indicated in *Table 3-11*, about 45% of slums have Anganwadi facility within the slum. For about 5% of slums the facility is located within a reachable distance of 0.5 kms. 11 slums do not have any kind of pre-primary schools.

Table 3-12 : Distance of slums from the Nearest Primary & High schools

Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	More than 2 Km	Not available
Primary Schools (State government)						
No of slums	0	0	0	0	2	20
Primary Schools (Municipal)						
No of slums	1	0	0	0	2	19
Primary Schools (Private)						
No of slums	2	2	0	0	0	18
High Schools (State government)						
No of slums	0	0	0	0	2	20
High Schools (Municipal)						
No of slums	0	0	0	0	2	20
High Schools (Private)						
No of slums	0	0	2	0	0	20

Source: RAY Primary Survey, 2013

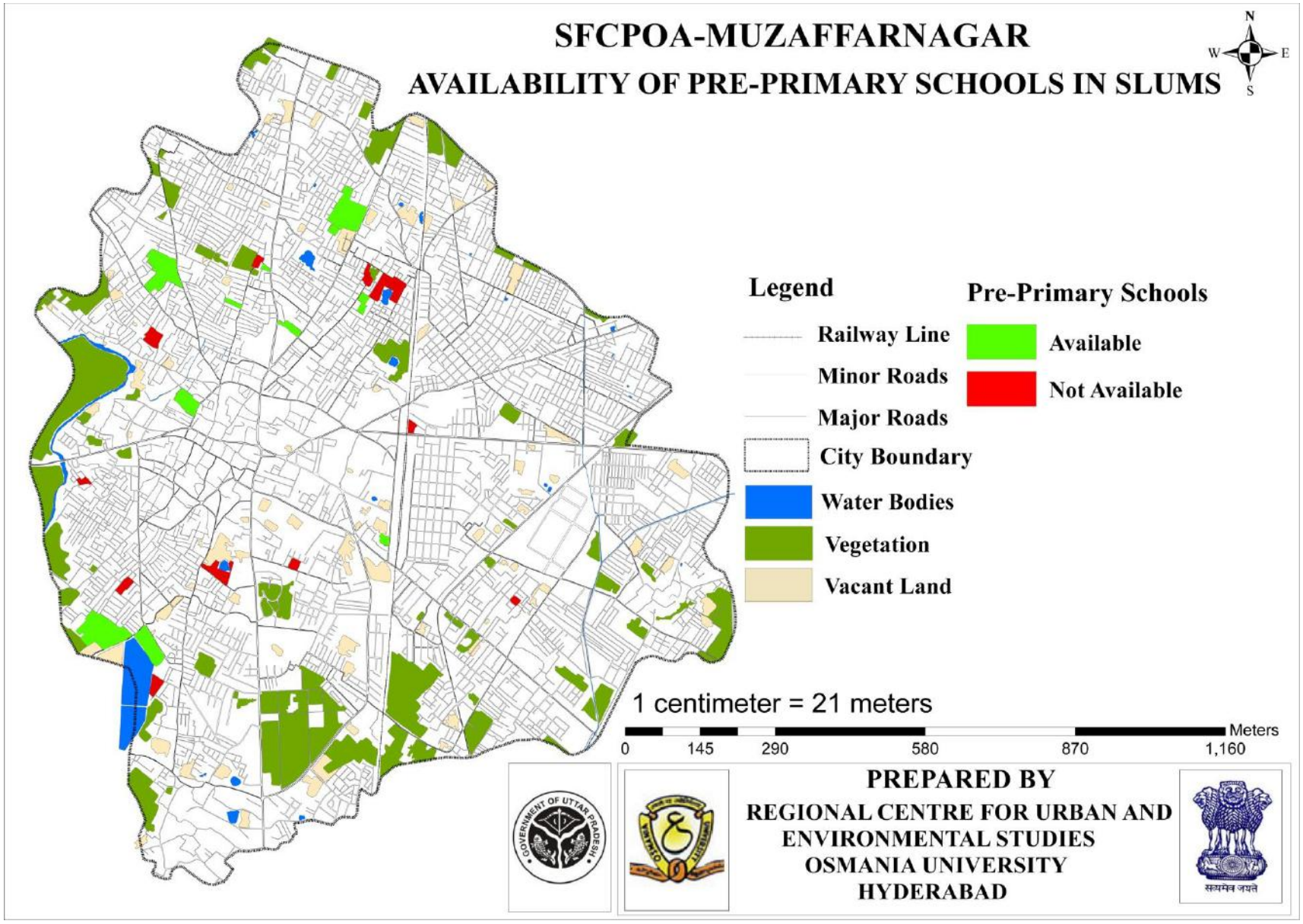
As shown in *Table 3-12*, 2 the slums have access to primary schools run by state government at a distance of more than 2 km. A part from primary schools run by state government, the slums have access to primary schools run by private people. In the same line, the slums have access to high schools run by both state government and private with in a considerable distance of more than 2 kms.

Picture 3-25 : Primary school in Ramleela tilla

Picture 3-26 : pre- primary school in Raidaspur

Picture 3-27 : Private upper primary school in kalapar kidwayi

Picture 3-28 : primary school in Abkari



Map 3-16 : Availability of Pre-primary schools in slums

3.7.2 Health facilities

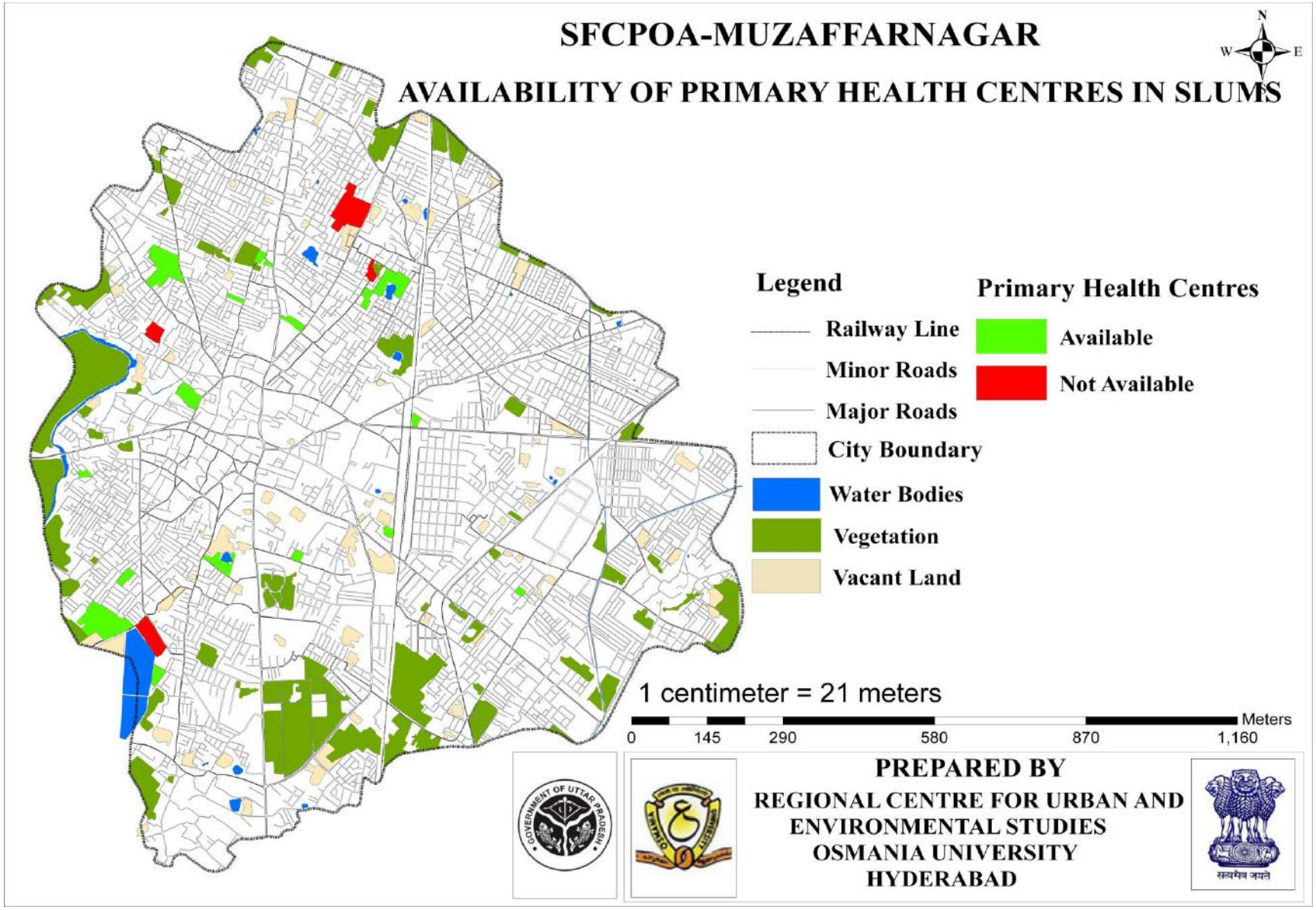
Majority of the health problems in urban slums stem from lack of access to or demand for basic amenities. Basic service provisions are either absent or inadequate in slums. Lack of drinking water, clean, sanitary environment and adequate housing and garbage disposal pose series of threats to the health 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.

Table 3-13 : Distance of slums from the nearest Health Facilities

Distance	Within the slum area	< 0.5KM	0.5 to 1.0 KM	1.0-2.0 KM	More than > 2.0 Km
Urban Health post					
No. of Slums	0	1	2	14	**5**
Primary Health Centre					
No. of Slums	0	1	2	13	**6**
Government Hospital					
No. of Slums	0	1	2	13	**6**
Maternity Centre					
No. of Slums	2	1	2	13	**4**
Private Clinic					
No. of Slums	7	13	0	2	**0**
Registered Medical Practitioner (RMP)					
No. of Slums	4	15	0	2	**1**
Ayurvedic Doctor/Vaidhya					
No. of Slums	1	0	1	13	**7**

Source: RAY Primary Survey, 2013

As per NBO Annexure –I data, 23% of the slums do not have access to any kind of health facilities. Within an accessible distance of 2kms, 73% of slums have primary health centre facility, 73% of the slums have Government Hospital and 77% of slums have urban health post within the distance of 0.5 km to 2.0 km. For all the slums private clinics are situated at an accessible distance of below 2 kms. 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 3-13.*



Map 3-17 : Availability of Health facilities in slums

3.7.3 Social welfare facilities

Similar to the above sections in social infrastructure, the following *Table 3-14* presents available social welfare facilities in 22 slums:

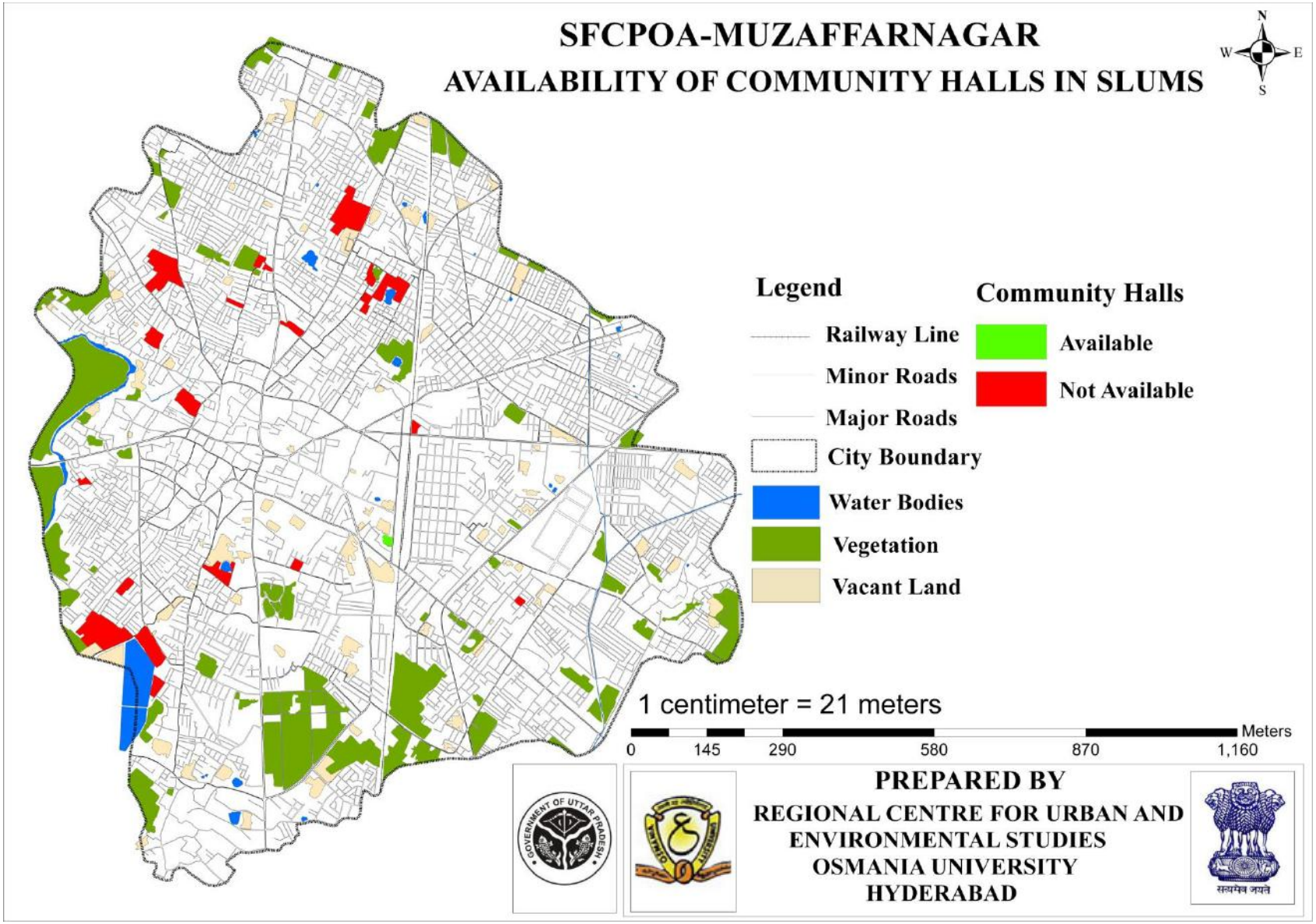
Table 3-14 : Availability of Social Welfare facilities in slums

Availability of Facilities within Slum	No. of Slums
Community Hall	1
Livelihood/Production Centre	0
Vocational training/Training-cum-production Centre	0
Street Children Rehabilitation Centre	0
Night Shelter	0
Old Age Home	14
Social Welfare Facilities	**No. of Holders**
Old Age Pensions (No. of Holders)	63
Widow Pensions (No. of Holders)	25
Disabled Pensions (No. of Holders)	2
General Insurance (No. covered)	0
Health Insurance (No. covered)	1
Self Help Groups/DWCUA Groups in Slum	0
Thrift and Credit Societies in Slum	2
Slum-dwellers Association	**No. of Slums**
Yes	0
No	22
Youth Associations	2
Women's Associations/ Mahila Samithis	0

***Source*:** RAY primary survey, 2013

The community hall is available only in Keshavpuri/ Numashey Camp slum. The Thrift and credit societies in slums are formed only in 2 slums with 4 groups. In 2 slums, 2 Youth associations are formed.

For slum wise details, please refer **Annexure-1F** for **Social Infrastructure**



Map 3-18 : Availability of Community halls

CHAPTER -4 SLUM REHABILITATION STRATEGY

4.1 REHABILITATION STRATEGY

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 the 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 Muzaffarnagar a Slum free city, an imperative slum rehabilitation strategy would be necessary depending on the expected outcomes from the findings or analysis of existing slum situation of a city.

The rehabilitation strategy comprises of several components such as:

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

The following flowchart details the rehabilitation proposed for Slum free Muzaffarnagar.

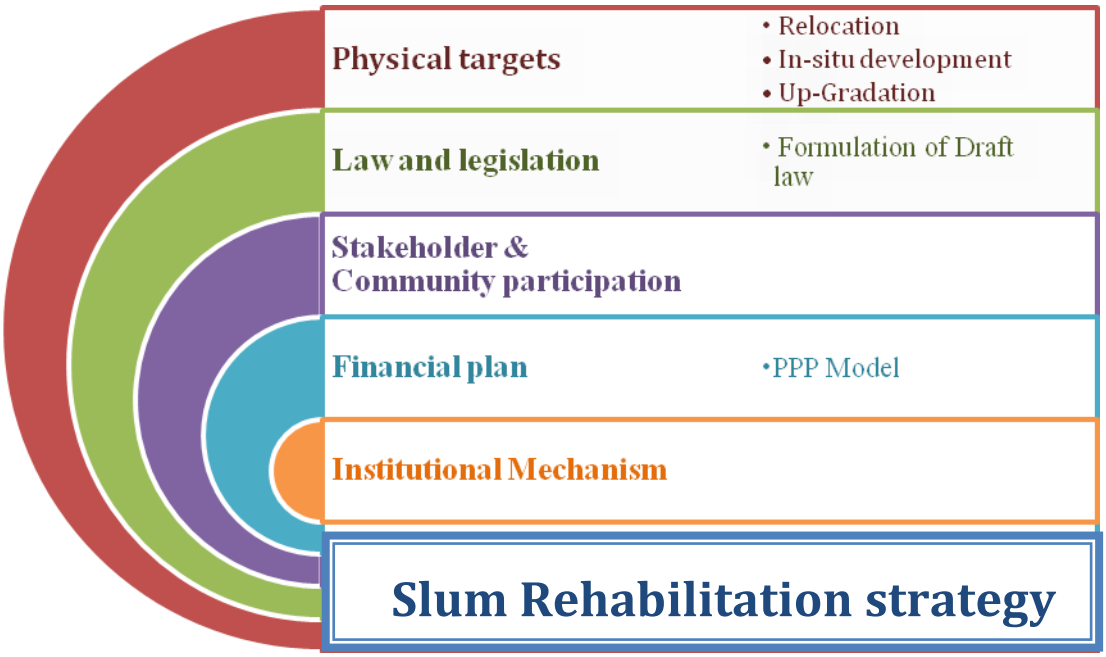


Chart 4-1 : Components of Slum Rehabilitation strategy

4.1.1 Physical targets

For the 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 will be categorized based housing tenure, tenability, physical location, density and ownership:

a. 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

b. In situ 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.

c. Slum Up-gradation

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

4.1.2 Law and legislation

An appropriate legislation is a necessity to achieve and implement the development strategies formulated for Slum Free Muzaffarnagar. 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.

a. 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 Muzaffarnagar. 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.

b. 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.

c. 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 Muzaffarnagar slums to identify the level of urban services. The matrix details the infrastructure and housing services among the slums.

4.1.3 Infrastructure Deficiency and Vulnerability Matrix

According to RAY guidelines, an infrastructure deficiency and vulnerable matrix the existing slums is to be prepared using the scoring and ranking method. The matrix is based on three important parameters: Housing, Infrastructure, BPL, SC/ST population. Within these, Housing and Infrastructure are the physical parameters that are directly related to the existing quality of the housing condition.

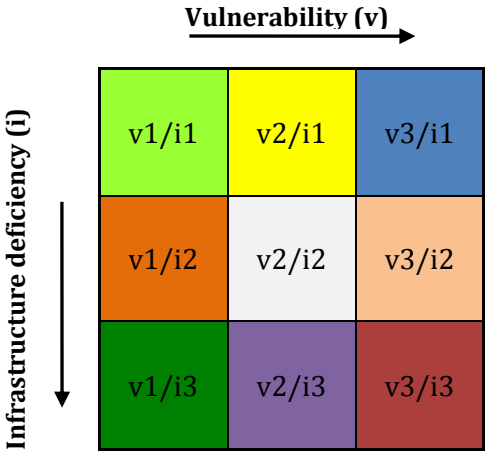


Figure 4-1 : Model Infrastructure deficiency and vulnerability matrix

For evaluating infrastructure deficiency and vulnerability the following parameters are considered:

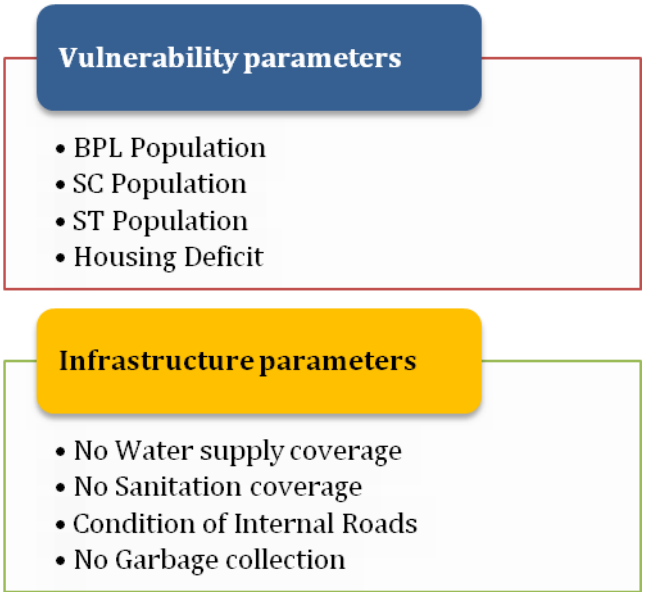
Infrastructure deficiency parameters:

i. Percentage of households not covered with piped water supply
ii. Percentage of households not covered with individual toilets
iii. Percentage deficiency of condition of internal roads
iv. Percentage of households without access to facilities of disposal of solid waste.

Vulnerability Parameters

i. Housing condition based on structural condition (Pucca, Semi-Pucca and Kutcha)
ii. Below the poverty line (BPL) Population, SC/ST population

The scoring is provided to all the slums by comparing the infrastructure deficiency and vulnerability parameters against the same criteria. The average scores for vulnerability and infrastructure are determined separately and clustered into different ranges representing the worst, average and best slum settlements. For that 5 percentage ranges from 100 to 0 with an interval of 20 is considered and the scores were provided accordingly and represented in the matrix.



Percentage range	Score
100 - 81	1
80 - 61	2
60 - 41	3
40 - 21	4
20 - 0	5

Chart 4-2 : Vulnerability and Infrastructure deficiency parameters

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

- Least vulnerable and Good Infrastructure
- Least vulnerable with moderate infrastructure
- Least vulnerable with bad infrastructure
- Moderate vulnerable with Good Infrastructure
- Moderate vulnerable with Moderate Infrastructure
- Moderate vulnerable with Bad Infrastructure
- Most vulnerable with Good Infrastructure
- Most vulnerable with Moderate Infrastructure
- Most vulnerable with Bad Infrastructure

4.2 SLUM CATEGORIZATION

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

4.2.1 Tenability

As a first step, the slums and vacant lands will be categorized as tenable, semi-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 4-1 : Categorization of slums based on tenability

Status	Tenable	Semi - Tenable	Un- Tenable
No of Slums	22	0	0

22 slums are tenable due to surrounding residential land with Non Hazardous situation. In order to make these slums tenable it is recommended to change the present land use zoning, however it will be decided by competent authority.

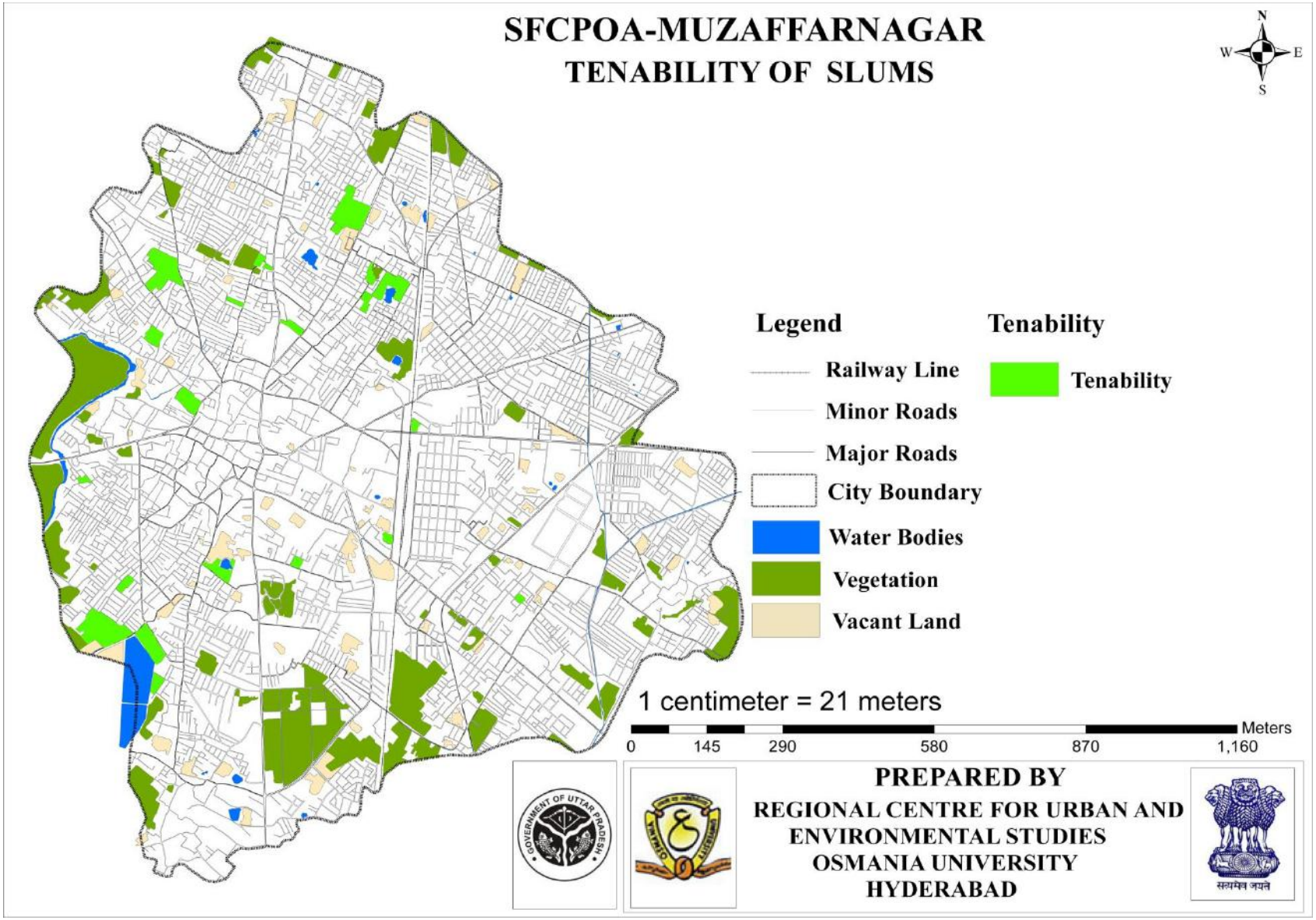
For visual illustration of tenability analysis of slums, please refer *Map 4-1* and for slum wise details refer **Annexure – 1A**

4.2.2 Abutting Land use

Table 4-2 : Categorization of slums based on abutting status

Abutting Land use	No. of slums	No. of Households	% of slums to the total slums	% of slum households to the total slum households
Residential	22	5085	100%	100%
Industrial	0	0	0%	0%
Commercial	0	0	0%	0%
Institutional	0	0	0%	0%
Others (Agricultural)	0	0	0%	0%
Total	**22**	**5085**		

From the above *Table 4-2*, it is established that 100% of the households are situated in the areas surrounded by the residential. 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.



Map 4-1: Categorization of Slums based on the Tenability

4.2.3 Land tenure of slums

The categorization based on land ownership of slums can be used in assigning strategies for development and priorities for implementation under various strategies for development. The following *Table 4-3:* classifies the legal status of the slum households based on the ownership and land tenure status.

Table 4-3 : categorization of dwelling units in slums based on land tenure status

Land tenure Status	Pattas	Possession certificate	Encroached public land	Encroached private land	On Rent	Others
No. of dwelling units	3804	0	0	708	0	0

As shown in the *Table 4-3*, about 84% are registered and have pattas for their respective lands. On the contrary, 16% of slums are encroached on private lands.

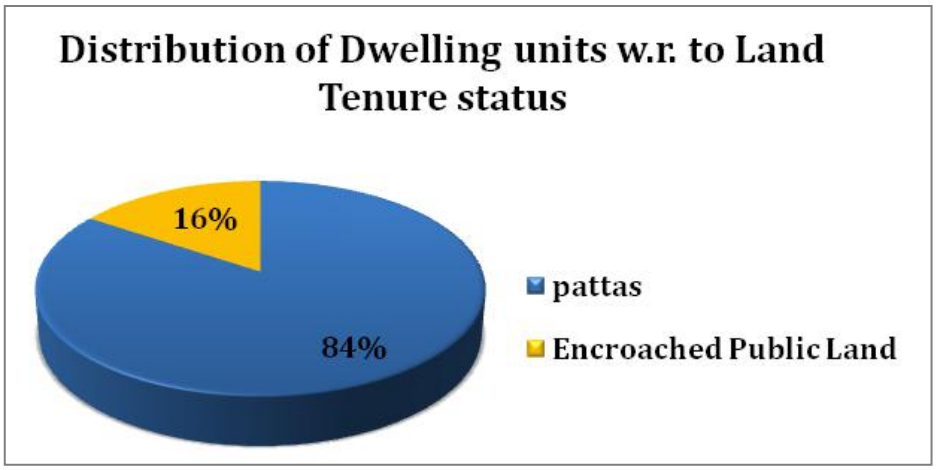


Figure 4-2 : Distribution of dwelling units in slums w.r.to land tenure status

4.2.4 Ownership of Land Status

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

Table 4-4 : Categorization of dwelling units based on ownership of land in slum

Ownership of Land/ Land tenure (No of DU's)		Urban Local Body*	Defense	Private
Registered	Pattas	203	0	3601
	Possession certificate	0	0	0
Un - Registered	Encroached	247	461	0
	On Rent	0	0	0
	Others	0	0	0

Note: * - 2 slums in the city are situated on land belongs to both ULB and private ownership.

About 84% of households in the slums have registered patta or possession certificate to prove their legal status of land, while the remaining 16% of slum households are situated on land encroached land.

Table 4-5 : Categorization of slums based of land ownership

Ownership of Land / Legal Status	Urban Local Body*	Defense	Private
Non-notified (No of Slums)	2	1	19

Out of 22 slums in the city all are Non-notified slums. About 86% of slums i.e., 19 slums are situated on private lands and 2 slums i.e., Sarvat and Janakpuri are situated on land belongs to both Local Body and private ownership and one are Defense. (Refer *Map 3-3* for location of slums in the city and Annexure -1B for slum wise ownership of land details).

4.2.5 Dwelling Unit Density

In this context, due consideration is given to existing density of each slum pocket in order to propose a suitable development option. Based on assessment of existing slums data analysis, the classification of the slums is based on the values of density where:

- **Low** where density is less than 350 dwelling unit per hectare
- **Medium** where density ranges from 350- 500 dwelling unit per hectare
- **High** where density is greater than 500 dwelling unit per hectare

The following *Table 4-6*; presents the mode of development and additional accommodation of density for the slums based on its classification:

Table 4-6 : Distribution of Slums w.r.to dwelling unit density

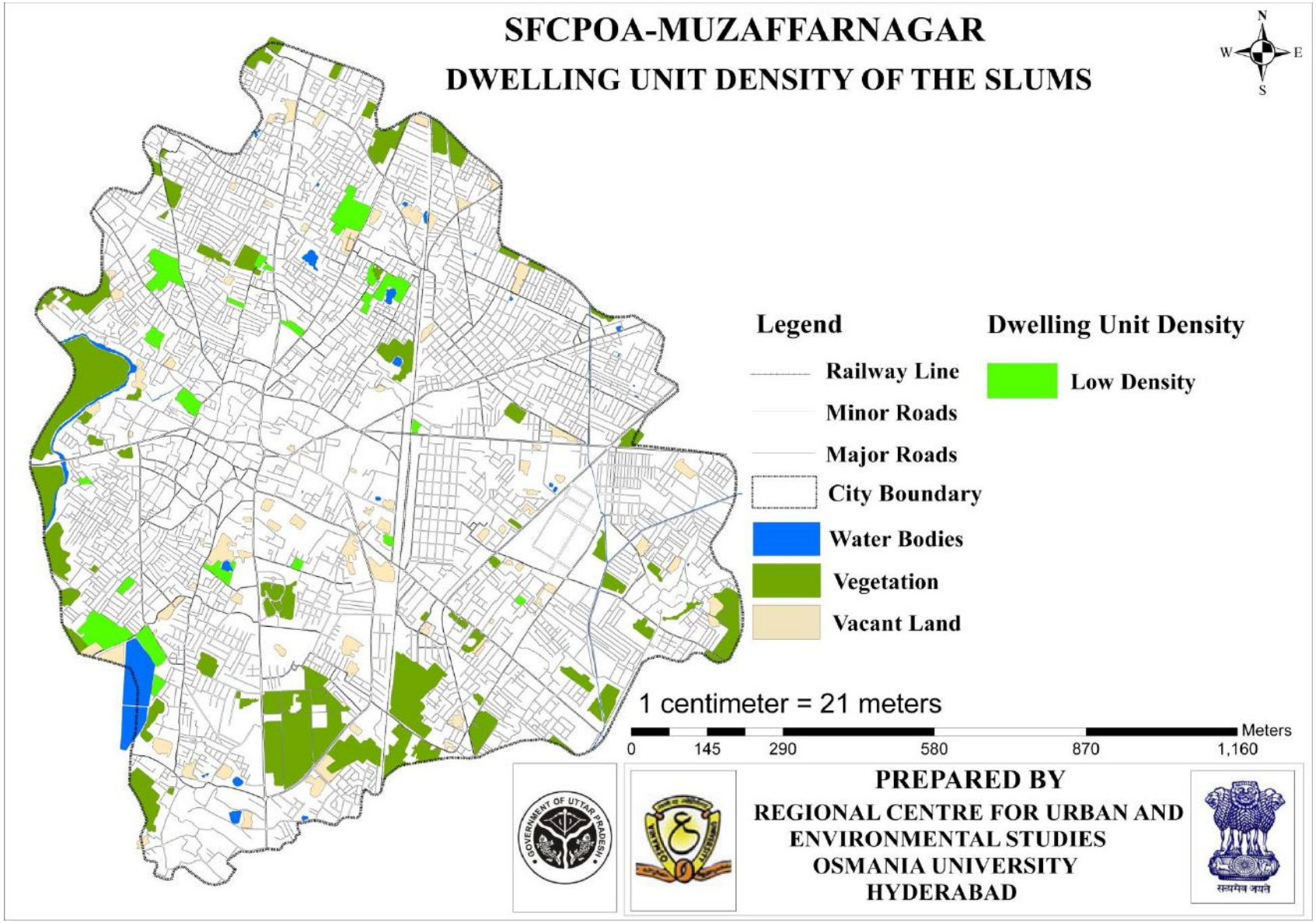
Mode of Development (No. of Slums)	Low Density	Medium Density	High Density	Total
Relocation	0	0	0	**0**
In - Situ development	2	0	0	**2**
Up gradation	20	0	0	**20**
Total No. of Slums	**22**	**0**	**0**	**22**

As per the analysis, it is found that all slums have low density. Out of 22 slums in the city, 20 were proposed for up gradation mode of development and remaining 2 slums for In-situ development.

For slum wise details please refer **Annexure-2 D**

4.2.6 Land value

For Muzaffarnagar 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 rate.



Map 4-2 : Dwelling unit Density map of slums

4.3 SLUM REHABILITATION FRAMEWORK

According to RAY guidelines, analysis and prioritization of housing condition, infrastructure deficiency and vulnerability of slum settlements is evaluated based on scoring and ranking method. The matrix is based on two parameters: Infrastructure deficiency and Vulnerability. Apart from these parameters the housing condition, land tenure, slum tenability, land ownership, demography, employment etc., were considered.

4.3.1 Observations / Findings of Analysis of Existing Situation

a. Housing

- 32% of the slums have been into existence for more than 50 years in the city with old-fashioned infrastructure.
- 3 slums are situated along the other drains and 14 slums are on Non hazardous/Non objectionable sites.
- In about 7 slums, it is found that the rain water will remnant up to 15 days.
- Even though 68% of the total houses are Pucca in nature, a significant portion of them are found to be in bad condition. 32% of the houses are Semi pucca& Katcha in nature making them vulnerable to any kind of disaster.
- In respect to electricity connections, nearly 19% of the total houses do not have access to electricity.

b. Demography & Employment

- Nearly 29% of the total slum population is living under below poverty line (BPL) accounting 1453 households.
- About 74% of the slum population belongs to back ward social communities (OBC &SC).
- About 58% of the slum population belongs to minority communities constituting 55% of slum households.
- The average literacy among slum residents is only 75% where the female literacy rate is observed to be very less.
- It is found that 0.5% of the households are earning an average income of less than Rs 1500 per month. Majority of the slum dwellers derive their livelihood as working labor, street vending, domestic helpers etc.,

4.3.2 Infrastructure

a. Water Supply

Table 4-7 : Water supply Details

WATER SUPPLY			
	Non- Notified Slums		% HH's of total Households
	No of slums	No of HH's	
Connectivity to city wide water supply			
Fully Connected	20	4495	**88%**
Partially Connected	1	129	**3%**
Not Connected	1	461	**9%**
Total	**22**	**5085**	
Duration of Water Supply			
daily Less than 1 hr	0	0	**0%**
daily 1-2 hrs	18	3799	**75%**
Daily more than 2 hrs	0	0	**0%**
Once a week	0	0	**0%**
Twice a week	0	0	**0%**
Not regular	0	0	**0%**
No Supply	4	1286	**25%**
Total	**22**	**5085**	
Source of Drinking Water			
Individual tap	19	2837	**56%**
Public tap	15	460	**9%**
Tube wells/Bore well/hand pump	19	1735	**34%**
Open well	0	0	**0%**
Tank/pond	0	0	**0%**
River/canal/lake/spring	0	0	**0%**
Others	0	0	**0%**
Water tanker	1	53	**1%**
Total		**5085**	

- Out of 22 slums in the city, 21 slums were either fully connected or partially connected with city wide trunk water supply system. The remaining one slum, which account about 9% of households are not connected with city system.

- About 56% of slum households have access to individual tap connections as primary source of water supply and the remaining 44 % are dependent on public taps, tube wells, open wells, hand pump, well etc., These households need to be addressed for provision of individual taps.

b. Sanitation

Table 4-8 : Sanitation Details

SANITATION			
	Non- Notified Slums		% HH's out of total Households
	No of slums	No of HH's	
Connectivity to City wide Sewerage system			
Fully Connected	0	0	**0%**
Partially Connected	0	0	**0%**
Not Connected	22	5085	**100%**
Total	**22**	**5085**	
Connectivity to Storm water drainage			
Fully Connected	6	1064	**21%**
Partially Connected	13	3171	**62%**
Not Connected	3	850	**17%**
Total	**22**	**5085**	
Drainage & Sewerage facilities			
Storm water Drainage	19	3248	**64%**
Underground Drainage/Sewer Lines	0	0	**0%**
Digester	0	0	**0%**
Not Connected to Sewer or Digester	15	1837	**36%**
Total		**5085**	
Latrine Facilities			
Public/Community latrine- Septic tank/flush	1	24	**0%**
Public/ Community latrine- Service latrine	0	0	**0%**
Public/ Community latrine-Pit	0	0	**0%**
Shared latrine -Septic tank/flush/	14	311	**6%**
Shared latrine- Service latrine	0	0	**0%**
Shared latrine-Pit	0	0	**0%**
Own latrine -Septic tank/flush/	21	4004	**79%**
Own latrine- Service latrine	4	386	**8%**
Own Latrine-Pit	0	0	**0%**
Open Defecation	4	360	**7%**
Total		**5085**	

- Of 22 slums, only 6 slums are fully connected and 16 slums are either partially connected or not at all connected to city wide sewerage system. Hence there is a deficiency in overall sewerage system which needs to be upgraded to a complete as well as sustainable underground drainage system.
- With regards to storm water drainage, 19 slums are connected & 3 slums do not have connectivity to city wide Storm water drainage system.
- Around 7% of slum households do not have proper individual toilet system. Hence resulting in open defecation.

c. Solid waste management

Table 4-9 : Solid Waste Management Details

SOLID WASTE MANAGEMENT		
	No of slums	**% of slums**
Arrangement of Garbage Disposal		
Municipal Staff	0	**0%**
Municipal Contractor	20	**91%**
Residents themselves	2	**9%**
Others	0	**0%**
No Arrangements	0	**0%**
Total	**22**	
Frequency of Garbage Disposal		
Daily	0	**0%**
Once in 2 days	2	**9%**
Once in a week	18	**82%**
Once in 15 days	2	**9%**
Not Collected	0	**0%**
Total	**22**	
Frequency of clearance of open drains		
Daily	2	**9%**
Once in 2 days	0	**0%**
Once in a week	18	**81%**
Once in 15 days	1	**5%**
Not Collected	1	**5%**
Total	**22**	

- In 91% of slums with solid waste disposal activity is being done by municipal contractors. On other side, the arrangement is taken care by the slum dwellers, constituting 9% (2 slums).
- 9% of slums are not having adequately covered garbage disposal
- 10% of the slums lack in frequent clearance of open drains, leading to further deterioration of environmental conditions and thereby contaminating the ground water quality.

d. Roads and street lighting

Table 4-10 : Roads and Street lights Details

ROAD & STREET LIGHTS		
	No.of Slums	**% Slums of total slums**
Approach Road/Lane/Constructed Path to the slum		
Motorable Pucca	21	**95%**
Motorable Katcha	1	**5%**
Non Motorable Pucca	0	**0%**
Non Motorable Katcha	0	**0%**
Total	**22**	
Internal Road		
Motorable Pucca	14	**64%**
Motorable Katcha	3	**14%**
Non Motorable Pucca	3	**14%**
Non Motorable Katcha	2	**8%**
Total	**22**	
Distance from Nearest Motorable Road		
Less than 0.5 Km	21	**95%**
0.5-1 Km	0	**0%**
1-2 Km	1	**5%**
2-5Km	0	**0%**
>5 Km	0	**0%**
Total	**22**	
Availability of Street Lighting		
Yes	15	**68%**
No	7	**32%**
Total	**22**	

- 95% of slums have Motorable Pucca and 5% of slums have Motorable kutcha approach roads, which needs to be upgraded.
- 36% of slums lack in proper internal roads with BT surface.
- In case of street lighting, 68% of slums have Street lights and 32% lack in street lighting facility, hence essential for security to prevent any kind of accidents and other inconveniences.

e. Slum Deficiency Matrix & Development Options

With reference to process for generating deficiency matrix (Refer Chapter 4.1.3) and based on the data analysis, 22 slums in Muzaffarnagar City have been categorized based infrastructure deficiency and vulnerability. Based on this, the existing condition of slums is assessed in the following way:

The following matrix presents the Infrastructure deficiency and vulnerability status of slums

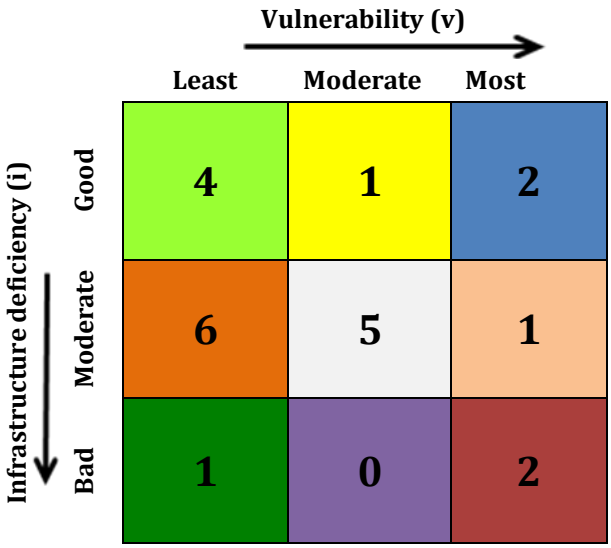


Figure 4- 3 : Slum Deficiency Matrix & Development Options

The No. of slums falling under different categories is as follows:

- Least vulnerable and Good Infrastructure – 4 slums
- Least vulnerable with moderate infrastructure – 6 slums
- Least vulnerable with bad infrastructure – 1 slums
- Moderate vulnerable with Good Infrastructure – 1 slum
- Moderate vulnerable with Moderate Infrastructure – 5 slums
- Moderate vulnerable with Bad Infrastructure – No slum
- Most vulnerable with Good Infrastructure – 2 slums
- Most vulnerable with Moderate Infrastructure – 1 slum
- Most vulnerable with Bad Infrastructure – 2 slums

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

CHAPTER -5 REQUIREMENT & INVESTMENT

5.1 PHYSICAL REQUIREMENTS

5.1.1 Housing

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

Relocation of slums

- Physical location of slums -along Nallah and hazardous
- 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 kutcha houses greater than 75%

Up-gradation of slums

- Semi Pucca and kutcha houses less than 75%

Table 5-1 : Housing Requirements

Mode of development	Hazardous	Non-Hazardous	
		Semi-Pucca + Kutcha houses More than 75%	Semi-Pucca + Kutcha houses Less than 75%
	Relocation	In – Situ	Up-Gradation
No. of Slums	0	2	20
No. of Households	0	710	4375
Hosing Deficit	0	710	1328
Housing Deficit	**2038**		

From the above *Table 5-1*, it was identified that there is a housing deficient of **2038** households in 22 slums. From development point of view, 2 slums are found to be having Semi- Pucca and Kutcha houses greater than 75%, hence considered for In-Situ development while 20 slums with semi Pucca and kutcha houses less than 75% for slum up gradation.

5.1.2 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
- 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 (Upgradation)
- Proposed number of taps= Total Households (In-situ)
- For every 2500 population, an overhead tank of capacity 1 lakh litre

Sanitation

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

Solid waste management

- For every 30 households = 1 garbage bin

Street lighting

- For every 45 mts of road length = 1 street light/light pole

Roads

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

The following *Tables 5-2* and *5-3* present the proposed requirements for each element of the physical and social infrastructure that needs to be implemented.

Table 5-2 : Physical Infrastructure Requirements

S. No	Sector	Services - Unit	Requirement for existing slums
1	Water supply	Running length of sub line (Km)	30.11
		Raising Main (Km)	7.18
		Individual taps (No)	2709
		Overhead water tanks (No)	3
2	Sanitation	Length of Underground Drainage/Sewer Lines (Km)	32.22
		Length of storm water Drainage Lines (Km)	22.44
		Individual toilets (No)	356
3	Solid Waste management	Garbage dumping Bins (No)	168
4	Roads	Total length of Approach roads (Km)	0.10
		Total length of Internal roads (Km)	11.84
5	Street Lighting	Street lights (No)	823

Table 5-3 : Social Infrastructure Requirements

S.No	Sector	Unit	Requirement for existing slums
1	**Education facilities**	Anganwadi (No)	0
		Primary school	0
		High school	0
2	**Health Facilities**	Primary Health Centre (No)	0
3	**Social development**	Community Room (No)	0
4	**Recreation & Open spaces** (Ha)		1.79

As per UDPFI Guidelines, for every 7500 population, a secondary school is required, for every 2500 population a pre-primary school and a primary school for 5000 persons has been recommended. In addition to this open space of area 1.79 Ha (17858.98 sq.mts) has been proposed.

5.2 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.

5.2.1 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.
- **Dwelling unit Density**: - Priority should be given to small and medium size slums with low or moderate densities as it is difficult to improve very high density /large slums.

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

All the slums in the ULB are proposed to be covered under RAY in the phased manner indicated in the *Table 5-4*. 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 of 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 are 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 kutcha houses

The following *Table 5-4* 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 5-4 : Slums to be covered under RAY in the Next 5 Years

Year of Development	Period	No of the Slums	Mode of Development
I	2014-15	0	Relocation
		2	In - Situ Development
		0	Up gradation
Total Slums		**2**	
II	2015-16	0	Relocation
		0	In - Situ Development
		8	Up gradation
Total Slums		**8**	
III	2016-17	0	Relocation
		0	In - Situ Development
		9	Up gradation
Total Slums		**9**	
IV	2017-18	0	Relocation
		0	In - Situ Development
		2	Up gradation
Total Slums		**2**	
V	2018-19	0	Relocation
		0	In - Situ Development
		1	Up gradation
Total Slums		**1**	
Total targeted Slums for 5 Years		**22**	

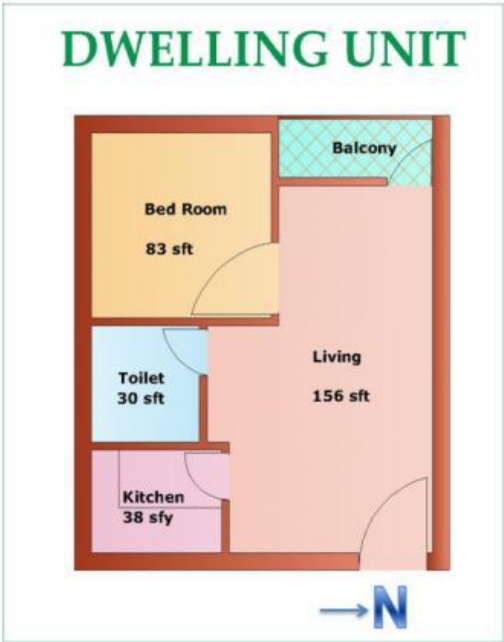
5.2.2 Proposed Modal Layout

a. Housing

To make Muzaffarnagar a slum free city, there is a need to redevelop housing for **2038** 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 facilitated with a living room, single bedroom, kitchen and toilet and with provision of 8 houses 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 following table and plan provides a brief specification of a single unit:



COMPONENT	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**

b. 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.

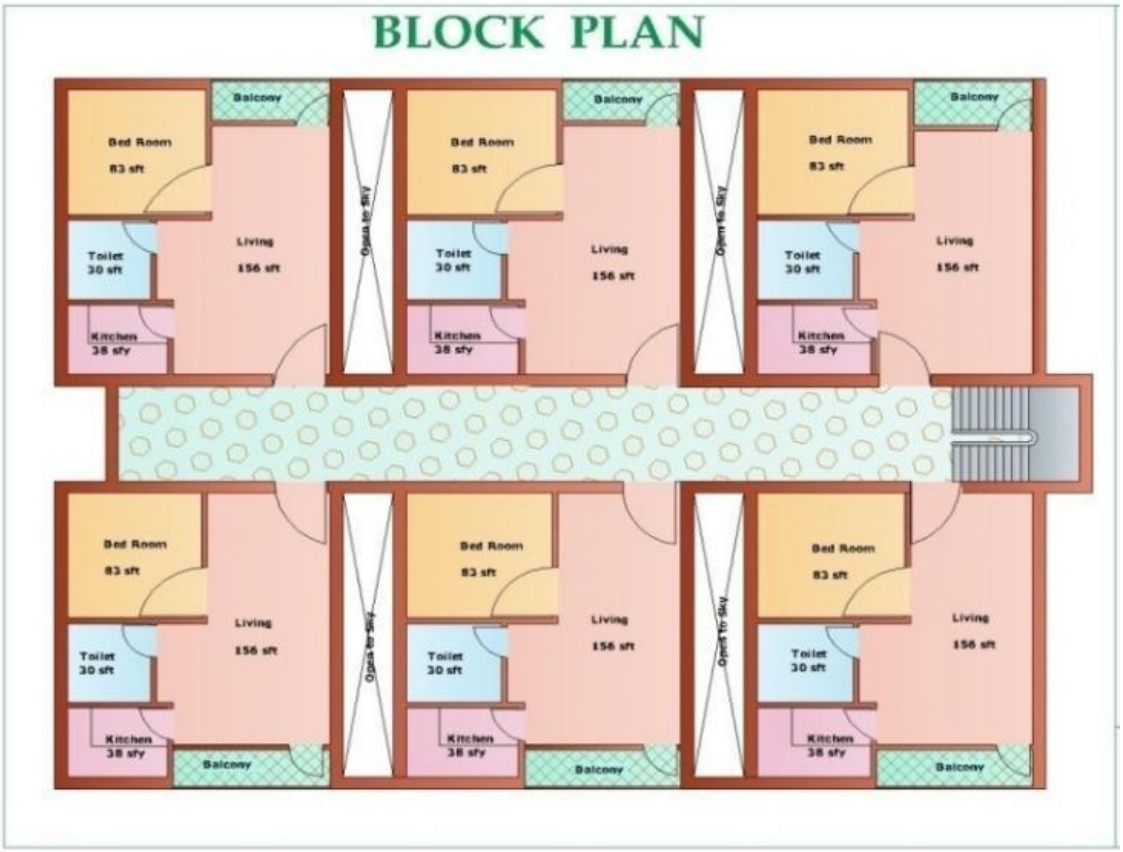
Construction

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 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 plan and specifications 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 X 18) = 828

Map 5-1 : Model layout

5.3 MODALITIES / APPROACH

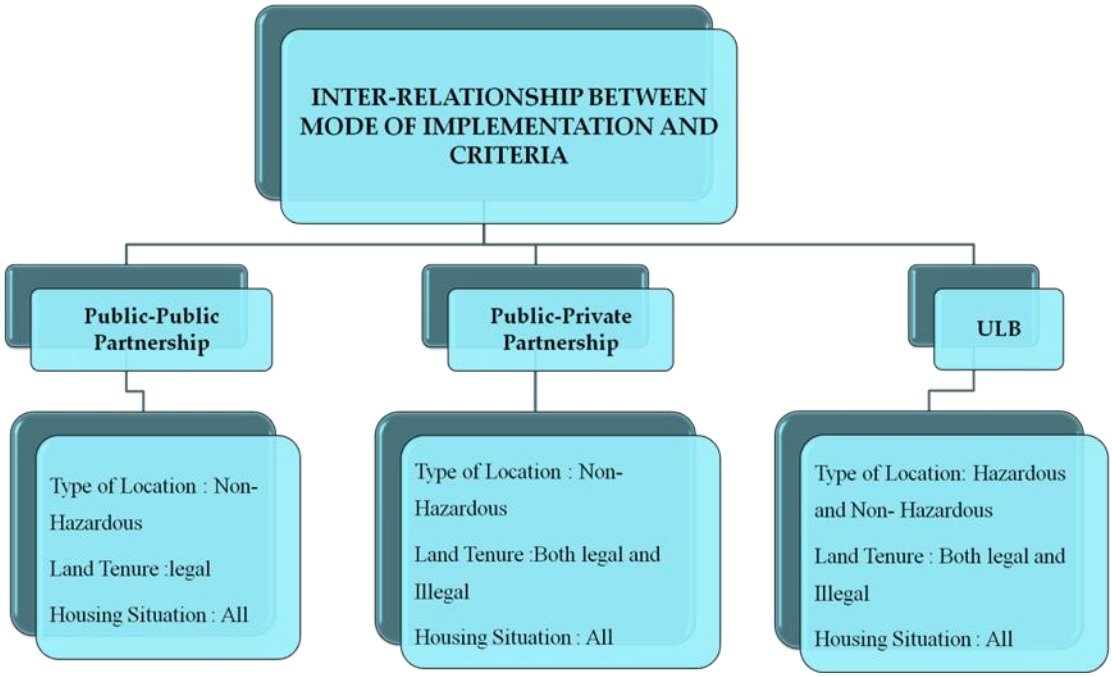


Chart 5-1 : Modalities & Approach

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.

5.3.1 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 the assistance from NGOs/CBOs active in the area of slum housing/ development to identify the possible development options. The *Table 5-4* 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.

5.3.2 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.

a. 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)

b. 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

c. Outputs

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

5.4 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 2014-2019.

5.4.1 Housing

Based on the mode of development, the slums in view of housing condition, and physical location, has been categorized accordingly. The following *table 5-5* presents the required cost for each type of development for the slums.

Table 5-5 : Housing Investment Requirements

Mode of development	Hazardous	Non-Hazardous	
		Semi-Pucca + Kutcha houses More than 75%	Semi-Pucca + Kutcha houses Less than 75%
	Relocation	In – Situ	Up-Gradation
No. of Slums	0	2	20
No. of HHs	0	710	4375
Deficit	0	710	1328
Housing Deficit	2038		
Costing (₹Lakhs)	0.00	3015.55	4379.13
Total Cost (₹Lakhs)	7394.68		
Total Cost (₹Crores)	73.95		

As illustrated in *Table 5-5*, 41% of the total estimated cost is allocated for In-situ mode of development and 59% for slum up-gradation in Muzaffarnagar City. For calculation purpose, costing per unit @ ₹4.05 lakh per house has 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.

5.4.2 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 5-2* and 5-3, the costing has been calculated for each sector shown in *Table 5-6*.

Table 5-6 : Investment Requirement for Infrastructure

S. No	Sector	Sector - Unit	Proposed Cost for 2014-19 (in ₹ Lakhs)
PHYSICAL INFRASTRUCTURE			
1	**Water Supply**	Running length of sub line (Km)	122.28
		Raising Main (Km)	13.75
		Individual taps (No)	0.00
		Overhead water tanks (No)	50.44
		Sub Total	**186.47**
2	**Sanitation**	Length of Underground Sewer Line (Km)	523.55
		Length of storm water Drainage Lines (Km)	365.29
		Individual toilets (No)	44.19
		Sub Total	**933.03**
3	**Solid waste management**	Garbage dumping Bins (No)	15.08
		Sub Total	**15.08**
4	**Roads**	Length of Approach roads (Km)	4.50
		Length of Internal roads (Km)	305.99
		Sub Total	**310.48**
5	**Street Lighting**	Street lights (No)	102.18
		Sub Total	**102.18**
Total Physical Infrastructure			**1547.25**
SOCIAL INFRASTRUCTURE			
6	**Education facilities**	Anganwadi (No)	0.00
		Primary school (No)	0.00
		High school (No)	0.00
		Sub Total	**0.00**
7	**Health Facilities**	Primary Health Centre (No)	0.00
		Sub Total	**0.00**
8	**Social development**	Community Room (No)	0.00
		Recreation park (sq.mts)	52.69
		Sub Total	**52.69**
Total Social Infrastructure			**52.69**
Grand Total Cost (Physical + Social) for Infrastructure			**1599.94**

The total cost estimates for infrastructure up gradation and provision is **₹16.00 Crores**, where physical infrastructure is estimated for **₹15.47 Crores** and social infrastructure is around **₹0.53 Crores**.

The following table presents sector wise cost estimated for five years (2014-19) by taking into consideration the cost calculated for the additional provisions/requirements, mentioned in earlier section:

Table 5-7 : Sector Wise Estimated Cost (in ₹ lakhs)

Sector	Estimated Cost for **2014-15**	Estimated Cost for **2015-16**	Estimated Cost for **2016-17**	Estimated Cost for **2017-18**	Estimated Cost for **2018-19**	Total **Project Cost** for **5 years**
Housing	3015.55	2433.53	1705.95	173.27	66.38	**7394.68**
Water Supply	11.94	96.38	69.90	6.10	2.15	**186.47**
Sanitation	59.82	417.09	398.37	40.12	17.64	**933.03**
Solid waste management	1.93	6.88	5.28	0.68	0.31	**15.08**
Roads	51.94	126.70	120.75	0.00	11.09	**310.48**
Street Lighting	6.81	47.05	41.26	4.95	2.11	**102.18**
Education	0.00	0.00	0.00	0.00	0.00	**0.00**
Health	0.00	0.00	0.00	0.00	0.00	**0.00**
Social development	4.76	18.40	23.75	4.18	1.60	**52.69**
Others	189.17	188.76	141.92	13.76	6.08	**539.68**
Total	**3341.93**	**3334.80**	**2507.18**	**243.06**	**107.34**	**9534.30**

As shown in above table, the total cost projected for 5 years is **₹95.34** Crores, in which 77.5% is allocated for housing as top priority; 16% for physical infrastructure and 0.6% for social infrastructure. Under others head 6% of the housing, physical and social infrastructure is considered.

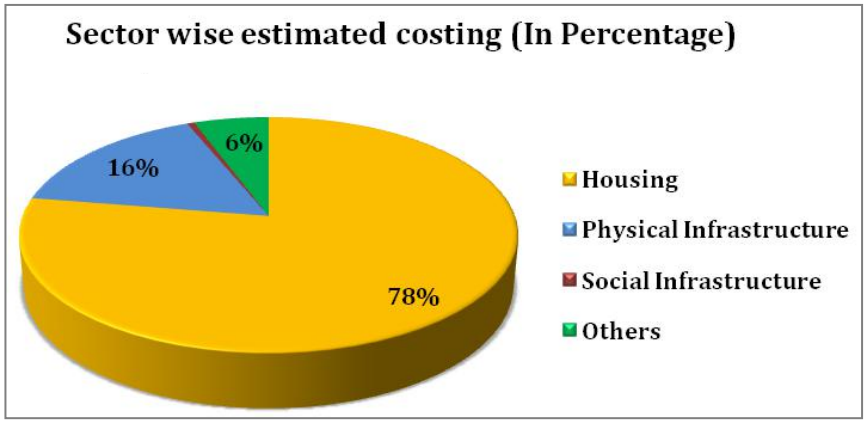


Figure 5-1 : Sector wise estimated Costing

Among physical infrastructure elements, due priority is given for sanitation for the next 5 years followed by roads and Water supply. About 60% of the costing in physical infrastructure is allocated for sanitation. About 20% of the cost is allocated for roads, 12% for water supply, 7% for street lighting and 1% for solid waste management.

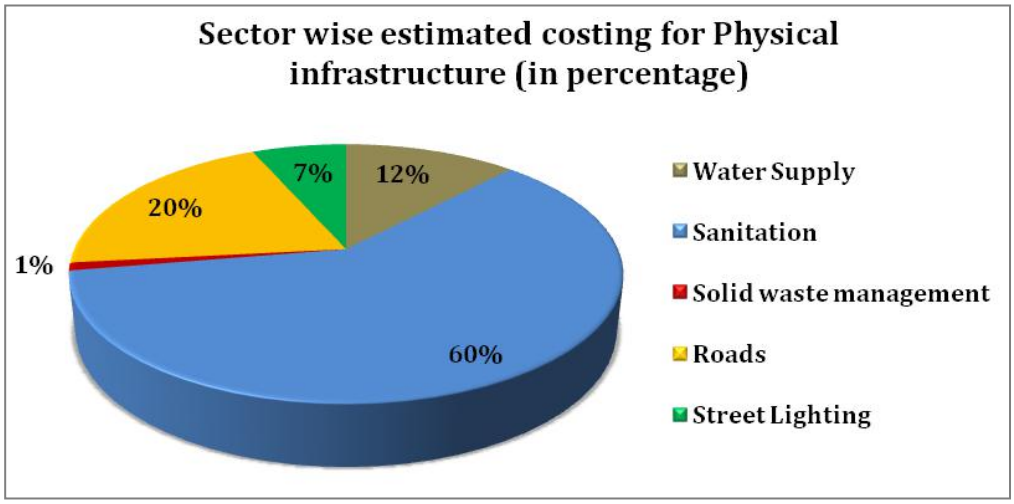


Figure 5-2 : Sector wise estimated Costing for Physical infrastructure

5.4.3 Other costs

In general, operation and maintenance costs form a sizeable share of a slum redevelopment budget. In case of Muzaffarnagar slums, other costs make up 6% 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:

- O&M (2%)
- DPR (1%)
- Project Implementation (1%)
- Capacity Building (1%)
- Offsite cost (1%)

Table 5-8 : Other Costing for 5 years

Year Wise	O & M	DPR	Project implementation	Capacity building	Off site Costing	Annual estimated other costs (in ₹ Lakhs)
Ist Year	63.06	31.53	31.53	31.53	31.53	**189.17**
II nd Year	62.92	31.46	31.46	31.46	31.46	**188.76**
III rd Year	47.31	23.65	23.65	23.65	23.65	**141.92**
IV th Year	4.59	2.29	2.29	2.29	2.29	**13.76**
V th Year	2.03	1.01	1.01	1.01	1.01	**6.08**
Total	**179.89**	**89.95**	**89.95**	**89.95**	**89.95**	**539.68**

Depending upon the mode of development, the operation and maintenance costs will vary from slum to slum. Seen in *Table 5-8*, the others cost catering to the housing and infrastructure investment requirements as set out earlier includes 5 (five) sectors where **₹5.40 Crores** has been estimated for a period of 5 years. Of the total estimated costs under others head, 33% is allocated for Operation and maintenance (O&M).The remaining initial costs such as Project implementation, and DPR, capacity building and offsite costing expenses alone constitute 67%.

5.5 CAPACITY BUILDING

Through the medium of District Urban Development Authority (DUDA), Urban Local Body (ULB) and community organizations, SJSRY Schemes will be integrated with Ministry of Housing and Urban Poverty Alleviation (MoHUPA), GoI.

5.5.1 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.

5.5.2 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 Centres (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.

5.5.3 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.

CHAPTER – 6 SLUM PREVENTION STRATEGY

6.1 INTRODUCTION OF SLUM PREVENTION STRATEGY

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

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

Land Reservation/Land pooling

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

Allocation of land to various organizations

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

New Housing

- Availability of Public 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

While evaluating existing scenario of slums there is a need to provide rental housing for migrating poor dwellers from place to place with respect to work. The provision of rental housing will make sure the poor people will not be forced to stay in a particular slum if they would have a facility of rental homes at several parts of the city. 50 % of the projected housing demand will be considered for provision of rental housing.

- 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

6.2 HOUSING STOCK ASSESSMENT IN SLUMS

6.2.1 EWS and LIG Housing Projection in the city

The EWS and LIG housing projections were calculated for the city for the next 15-20 years (refer *Chapter 2.5.3*). Assuming that, all the slums in the city will be developed under Rajiv Awas Yojana scheme, the EWS and LIG Housing projections were calculated for the rest of the city excluding the slum households. The future housing supply has been computed in accordance with the existing growth rate of the city housing. The identified housing demand for EWS and LIG can also be termed as housing shortage. The efficient and timely provision of EWS and LIG housing at affordable price would avoid formation of new slums and provide basic facilities to the incoming poor migrants.

Table 6- 1: Future Housing projection pertaining to EWS and LIG

EWS and LIG Housing Projection	
Year	**Housing Units**
2011	1813
2016	1950
2021	2188
2026	2456

6.3 LISTING OF AVAILABLE RESOURCES

The Uttar Pradesh state and Muzaffarnagar has a considerable number of Institutions involved in development of Housing, especially for the urban poor in the state. The Key institutions involved are:

- Town and Country Planning Department
- Muzaffarnagar Development Authority
- Uttar Pradesh Housing and Development Board (UP Avas Vikas Parishad)
- Muzaffarnagar Nagar Palika Parishad
- District Urban Development Agency (DUDA)
- Uttar Pradesh Cooperative Housing Federation
- Strict Implementation of Reforms

The mandatory reform under JnNURM targeting urban poor “Earmark at least 20-25 percent of developed land in all housing projects (developed by public and private agencies) for Economically Weaker Section (EWS) and Lower Income Group (LIG) category with a system of cross subsidization” on strict implementation would potentially solve the formation on new slum settlements and would address the migrated urban poor belonging to EWS/LIG.

Apart from that, as per the Housing policy framed in 2010, all government, private and cooperative housing schemes above 3,000 square metres in area is mandated to allocate 10% units each to EWS. This prompts any developer to keep a total of 20% land area reserved for these units; up on which layout plan would be approved by the development authority. On strict implementation of the above mentioned reforms of JnNURM and Housing Policy would solve the existing and future EWS/LIG housing in the city.

6.4 IMPLEMENTATION PLAN

6.4.1 Options for Generating Stock

Public Private Partnership

The rationale behind creating public-private partnerships is that the private sector typically has access to upfront capital and a track record of delivering products efficiently, while the public sector/state/central Govt. controls the regulating environment and, occasionally, crucial resources needed to implement a project, such as land. The following illustrates three different slums chosen for PPP model wherein the housing type with infrastructure has been proposed.

GEHRABAGH SLUM-MODEL LAY OUT

Gehrabagh is one among 22 slums located in the Core area of Muzaffarnagar City. It has a total population of 2296 with 461 households and an area of 19970.59 Sq.m. Of the 461 houses, 32 % are kutcha in nature. Due to lack of well built housing structures and inadequate physical infrastructure, there is a need to improve the living conditions in Gehrabagh 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, 480 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	331.5 (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 24 dwelling units (DU) has been proposed with a total area of 2636.10 sq. ft. A total of 20 blocks has been proposed preferred floors to be G+3 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 24 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

The following table presents the proposed land use for Gehrabagh Slum:

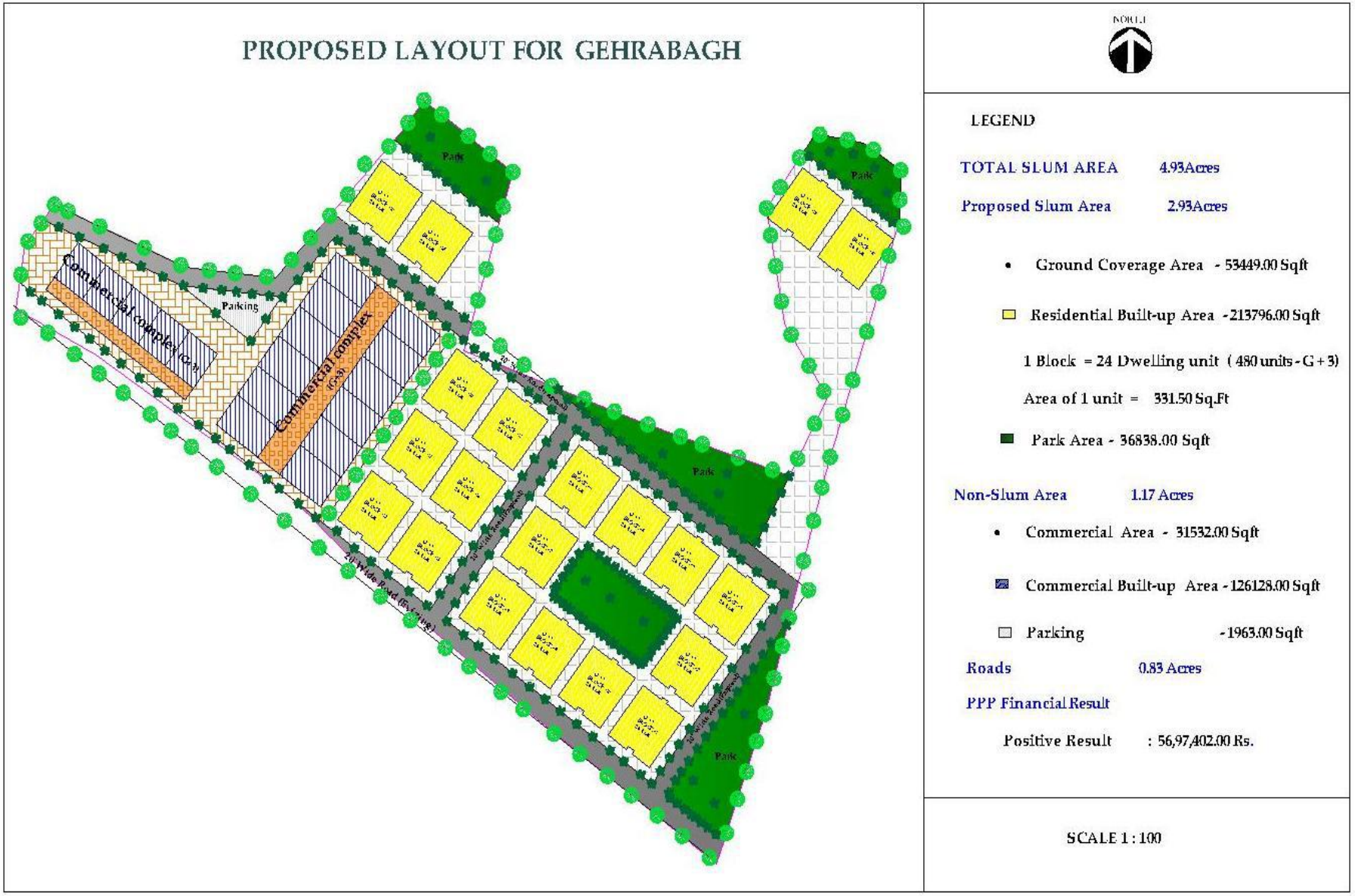
Description	Area (Sq. ft)
Slum Area	4.93 Acres
Proposed Slum Area	213796.00
Commercial use	126128.00
Parking	1963.00
Park	36838.00
Roads	36154.00

To encourage future development in the slum, a Public-Private partnership has been chosen for mixed land use where 126128.00 Sq.ft of land is allocated for commercial space and 16% for roads has been reserved .Under this model, potential business opportunities can be created as well as better access to improved infrastructure, thus fostering Gehrabagh 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 Gehrabagh slum:



Map 6-1 : proposed layout of Gehrabagh

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
- Others- Group housing

6.4.2 Targets & Timelines

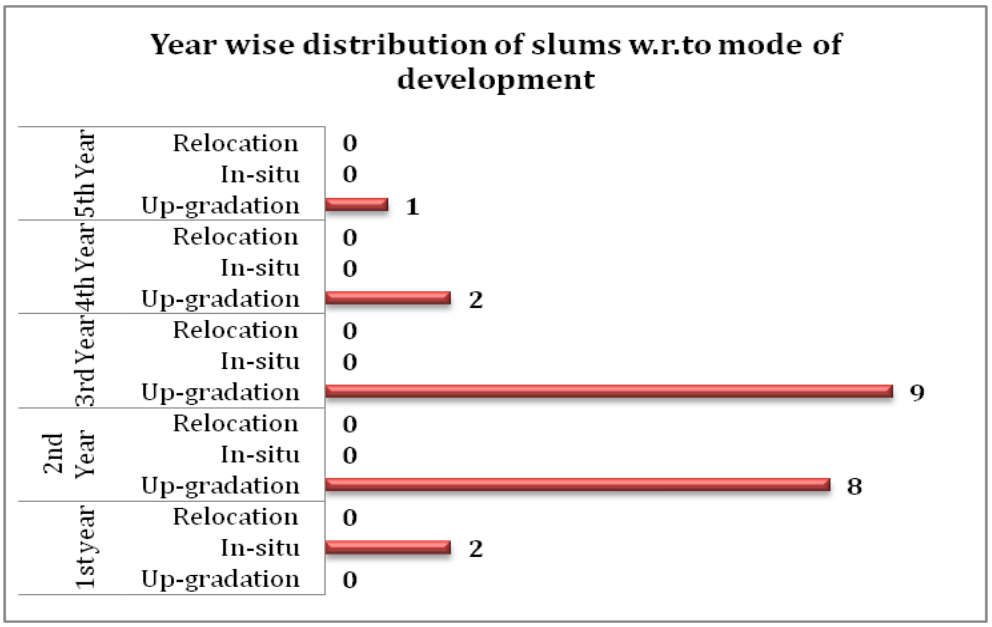


Figure 6-1 : Mode of Development

As seen in the *Figure 6-1*, for 22 slums in Muzaffarnagar city, 2 slums are proposed under in-situ mode of development and 20 for up-gradation 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.

6.5 INVESTMENT REQUIREMENTS

As Rajiv Awas Yojana scheme is targeted for improvement of slums in the city for the next five year time line, the EWS and LIG Housing projections made is considered (refer *table 6-1*) for calculating the financial requirement.

a. Housing

The Housing Investment requirement is calculated by considering the existing EWS and LIG Housing Shortage or housing demand in the city. As Muzaffarnagar is the administrative Headquarters of the district and a major agricultural, educational centre, it attracts large number of migrants from different parts of state. Taking this into account, an annual increase of 5 % in EWS and LIG housing is considered.

Table 6- 2: Year wise Costing Requirement for EWS and LIG housing

Year	EWS/LIG Housing Requirement	Estimated Cost (₹in Lakhs)
1st Year	363	1468.34
2nd Year	378	1605.37
3rd Year	393	1752.78
4th Year	409	1915.35
5th Year	425	2089.73
Total	**1968**	**8831.55**

For construction of **1968** EWS and LIG Dwelling Units with 5% annual increase in Dwelling unit cost total cost of **₹ 8831.55 Lakhs (₹ 88.32 Crores)** is estimated.

b. Other costs

The following table shows the estimated costs for additional components and other costs for Slum Prevention strategy which includes

- Operation and Maintenance costs (2% of Housing cost)
- Off site Cost (1% of Housing cost)
- Other Costs – Capacity Building, Cost Escalation and other costs (2% of Housing Cost)

Table 6-3: Proposed 'Other' Costs (₹ in Lakhs)

Year	O&M	Offsite costing	Other Costs	Total Cost
1st Year	29.37	14.68	29.37	73.42
2nd Year	32.11	16.05	32.11	80.27
3rd Year	35.06	17.53	35.06	87.64
4th Year	38.31	19.15	38.31	95.77
5th Year	41.79	20.90	41.79	104.49
Total	**176.63**	**88.32**	**176.63**	**441.58**

A total of **₹ 441.58 Lakhs** (**₹4.42 Crores**) has been estimated for the additional costs for the project under Slum Prevention strategy.

Housing + Other Costs = ₹ 8831.55 + ₹ 441.58

= ₹ 9273.13 Lakhs (₹92.73 Crores)

The total of **₹92.73 Crores** has been estimated tentatively for the proposed development.

CHAPTER -7 FINANCING STRATEGY

7.1 TOUCHSTONE PRINCIPLES

7.1.1 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 Clearance (or 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.

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

In case of Rajiv Awas Yojana, SUDA is the nodal agency at state level to implement surveys for the scheme. As per the directions of Government of India, Slum Survey started in Uttar Pradesh from the year 2009. 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.

SUDA as State level authority and DUDA as city level authority have been the Nodal agencies to monitor the quantity and quality of surveys performed by individual cities. DUDA is headed by Project Officer (PO) 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. Member of Community Development Societies (CDS), Self Help Groups constituted under SJSRY and other schemes have been involved in conducting surveys and a minimum qualification of SSC was taken as eligibility for selecting Enumerators to collect information and to fill up the survey forms. The various stakeholders involved in the survey process comprised of CDS, Nehru Yuva Kendra societies, NGO's working in the local areas. In addition, key stakeholders involved along with SUDA in the process of implementing RAY scheme comprises of City Commissioners, Regional Center for Urban and Environmental Studies (RCUES) Hyderabad, UP Remote Sensing Center, NHG's, NHC's, CDS and reputed NGO's working in the local areas.

7.1.2 Assessment of Implementation Options

The assessment for implementing a mode of development for any slum in Meerut 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.

7.2 INVESTMENT CREATION FOR CREATION OF NEW AFFORDABLE HOUSING INCLUDING RENTAL HOUSING

Earmarking land for the poor alone may not be sufficient guarantee that land /housing will be available to the poor. There will be need to help the poor access this land. This will require creating awareness among the poor on where the lands have been allocated, include their development in the Ward Plans, tap potential of local /small private builders for housing the poor, engage with local NGOs to increase the voice of poor in local area planning and access to city resources.

The ULB's has to strictly execute the mandatory reform of "Earmarking at least 20-25 percent of developed land in all housing projects (developed by public and private agencies) for Economically Weaker Section (EWS) and Lower Income Group (LIG) category with a system of cross subsidization."

Under the Community Participation Law, ULBs are expected to set up Ward and Area Sabhas with adequate representation of poor people. These may be used as opportunities to proactively disclose the upcoming housing projects for poor within the city. This would also fit in with the provisions of the Public Disclosure Law.

Apart from large Public Private Partnerships, cities must also forge 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

7.3 INVESTMENT REQUIREMNT AND FINANCING PLAN

In this category, the investment requirements for (i) the development strategies for all the prioritized slums framed under curative section and (ii) the supply of housing for urban poor estimated in the preventive section are collated.

7.3.1 Investment plan

The investment requirements to make the city slum free are categorized into two parts, curative and preventive. The main components included under curative while calculating the investment requirements are (i) Housing (ii) Physical Infrastructure (iii) Social infrastructure and (iv) Operation & Maintenance Costs. Under preventive strategy the investment requirement for the present and estimated urban poor i.e. BPL/EWS/LIG were calculated. The following tables indicate year wise requirements of slums as per the development options.

Table 7-1 : Detailed Investment plan for the In-Situ mode – Curative (in lakhs)

In-Situ development							
S. No	ITEM	Year (Rs. In Lakhs)					Total
		1st Year	2nd Year	3rd Year	4th Year	5th Year	
	No. of slums proposed for Intervention	2	0	0	0	0	2
A	**Land Cost**	NA					
B	**Infrastructure**						
(i)	Physical Infrastructure (Like water supply, sewer, storm water drainage, solid waste management, roads & drainage boundary walls & gare, street lights, etc,)	132.45	0.00	0.00	0.00	0.00	132.45
(ii)	Housing (Construction of Du's)	3015.55	0.00	0.00	0.00	0.00	3015.55
(iii)	Social Infrastructure (like community halls, Balwadi/school common toilet & bath etc. Market. Shopping play area/park and parking	4.76	0.00	0.00	0.00	0.00	4.76
	Sub Total B	**3152.76**	**0.00**	**0.00**	**0.00**	**0.00**	**3152.76**
C	**Other costs**						
(i)	Operation & maintenance (2%)	63.05	0.00	0.00	0.00	0.00	63.05
(ii)	Project Implementation (1%)	31.53	0.00	0.00	0.00	0.00	31.53
(iii)	DPR preparation (1%)	31.53	0.00	0.00	0.00	0.00	31.53
(iv)	Capacity Building (1%)	31.53	0.00	0.00	0.00	0.00	31.53
(v)	Off-site costing (1%)	31.53	0.00	0.00	0.00	0.00	31.53
	Subtotal C	**189.17**	**0.00**	**0.00**	**0.00**	**0.00**	**189.17**
D	**Total Investment Cost (A+B+C)**	**189.17**	**0.00**	**0.00**	**0.00**	**0.00**	**3341.93**

The numbers of slums proposed under In-situ mode of development in Muzaffarnagar city are two. Among these, development and rehabilitation process has to be handled during first year. The total investment requirement is 3341.93 lakhs of which housing component alone costs 3015.55 lakhs, Infrastructure (physical & social) is estimated to be 137.21 lakhs and other costs accounts for 189.17 lakhs.

Table 7-2 : Detailed Investment plan for Up-gradation mode – Curative (in lakhs)

Up-gradation							
S. No	ITEM	Year (Rs. In Lakhs)					Total
		1st Year	2nd Year	3rd Year	4th Year	5th Year	
	No. of slums proposed for Intervention	0	8	9	2	1	20
A	**Land Cost**	NA					
B	**Infrastructure**						
(i)	Physical Infrastructure (Like water supply, sewer, storm water drainage, solid waste management, roads & drainage boundary walls & gare, street lights, etc,)	0.00	694.10	635.56	51.85	33.29	1414.82
(ii)	Housing (Construction of Du's)	0.00	2433.53	1705.95	173.27	66.38	4379.16
(iii)	Social Infrastructure (like community halls, Balwadi/school common toilet & bath etc. Market. Shopping play area/park and parking	0.00	18.4	23.75	4.18	1.60	47.93
	Sub Total B	**0.00**	**3146.04**	**2365.26**	**229.3**	**101.26**	**5841.86**
C	**Other costs**						
(i)	Operation & maintenance (2%)	0.00	62.92	47.30	4.58	2.02	116.82
(ii)	Project Implementation (1%)	0.00	31.46	23.65	2.29	1.01	58.41
(iii)	DPR preparation (1%)	0.00	31.46	23.65	2.29	1.01	58.41
(iv)	Capacity building (1%)	0.00	31.46	23.65	2.29	1.01	58.41
(v)	Off-site costing (1%)	0.00	31.46	23.65	2.29	1.01	58.41
	Subtotal C	**0.00**	**188.76**	**141.92**	**13.76**	**6.08**	**350.46**
	Total Investment Cost (A+B+C+D)	**0.00**	**3334.80**	**2507.18**	**243.06**	**107.34**	**6192.37**

The total numbers of slums proposed under Upgradation mode of development in Muzaffarnagar city are 20. Among these, development and rehabilitation process has to be handled during the five years for no slum in first, 8 in second, 9 in third, 2 in fourth and one in fifth year of implementation phase. The total investment requirement is 6192.37 lakhs of which housing component alone costs 4379.16 lakhs, Infrastructure (physical & social) is estimated to be 1462.75 lakhs and other costs accounts for 350.46 lakhs.

Table 7- 3 : Detailed Investment plan for Preventive Section (in lakhs)

Preventive							
S. No	ITEM	Year (Rs. In Lakhs)					Total
		1st Year	2nd Year	3rd Year	4th Year	5th Year	
	Number of HHs proposed	363	378	393	409	425	1968
A	**Housing Cost**	1468.34	1605.37	1752.78	1915.35	2089.73	8831.55
	Sub Total A	**1468.34**	**1605.37**	**1752.78**	**1915.35**	**2089.73**	**8831.55**
B	**Other costs**						
(i)	Operation & maintenance (2%)	29.37	32.11	35.06	38.31	41.79	176.63
(ii)	Off-site costing (1%)	14.68	16.05	17.53	19.15	20.90	88.31
(iii)	Capacity building (1%) & other escalations (1%)	29.37	32.11	35.06	38.31	41.79	176.64
	Subtotal B	**73.42**	**80.27**	**87.64**	**95.77**	**104.49**	**441.58**
C	**Total Investment Cost (A+B)**	**1541.76**	**1685.64**	**1840.41**	**2011.12**	**2194.2**	**9273.13**

The total numbers of Households estimated under Preventive section are 1968. Among these, construction and development has to be handled for 363 households in first, 378 in second, 393 in third, 409 in fourth and 425 in fifth year of implementation phase. The total investment requirement is 9273.13 lakhs of which housing component costs 8831.55 lakhs and other costs accounts for 441.58 lakhs.

7.3.2 Summary of Investments

Table 7- 4 : Summary Investments

Sector	Estimated costing for existing slums	Estimated costing for prevention of new slums	Total Project Cost
Housing	7394.68	8831.55	16226.23
Water Supply	186.47	0.00	186.47
Sanitation	933.03	0.00	933.03
Solid waste management	15.08	0.00	15.08
Roads	310.48	0.00	310.48
Street Lighting	102.18	0.00	102.18
Education	0.00	0.00	0.00
Health	0.00	0.00	0.00
Social development	52.69	0.00	52.69
Others	539.68	441.58	981.26
Total	**9534.30**	**9273.13**	**18807.43**

The present Plan of Action proposed the investment details in two segments:

i) **₹9534.30 Lakhs** towards Slum Rehabilitation and
ii) **₹9273.13 Lakhs** towards prevention of slums in future.

To make Muzaffarnagar city free from slums, the overall cost is estimated tentatively at a value of ₹**18807.43 Lakhs (₹188.07 Crores)**

For slum wise line estimates please refer **Annexure 2E**

7.3.3 Financing Structure

Implementing slum free city 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.

For the cities with population less than 5 lakhs, 75% of the total cost for Housing and Infrastructure provision in slums would be borne by the Centre (Government of India). Land cost will not be admissible for Central Government funding under the scheme. 15% of the project cost for provision of Housing and Infrastructure facilities would be contributed by State Government. The remaining 10% of the cost for provision of Infrastructure has to be contributed by the ULB. Funds available under MPLAD/MLALAD may be used as a substitute for ULB share. The ULB share can also be borne by the State or vice versa. In order to bring sense of ownership among beneficiaries, the remaining 10% of the share for Housing is proposed to be contributed by the beneficiaries. The beneficiary contributions provided at the minimum of 10% in the case of SC/ST/OBC/PH/single woman/other weaker and vulnerable sections and 12% in case of general category.

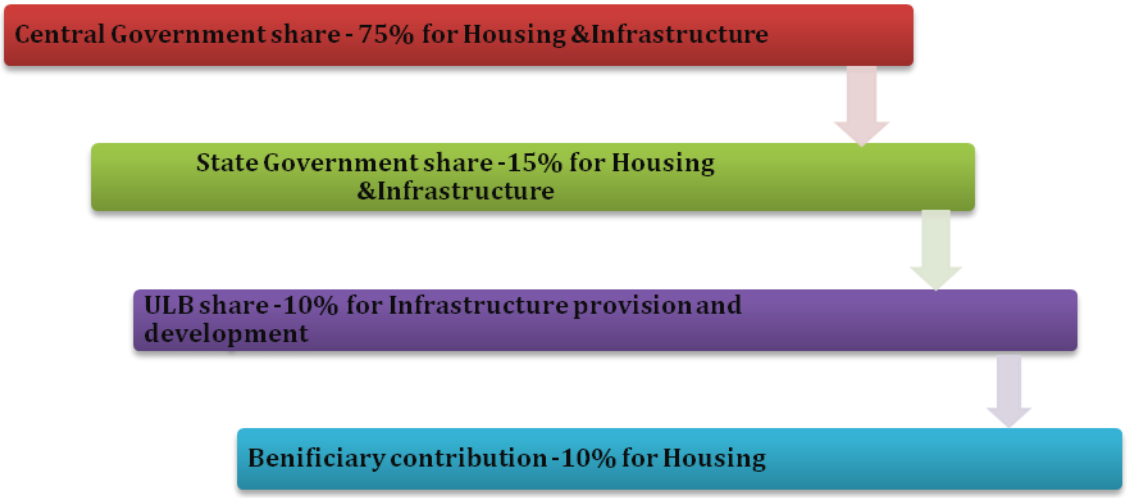


Chart 7 -1 : Financing Structure

The states / ULBs are encouraged 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.

Maintenance of the assets created under the scheme should preferably be carried out by the beneficiary or their association, if necessary, in partnership with ULBs. Upto 4% of the project cost is permissible as O&M fund under the scheme. Central Government will contribute one-time to this O&M fund in the applicable ratio for the city i.e. 75:25 for cities with population less than 5 lakh. 5% of the scheme allocation is earmarked for Capacity Building, Administrative & Other Expenses (A&OE) and IEC activities.

7.4 FUNDING & CREDIT OPTIONS

a. Central Government and Innovative Projects Fund

10% of the proposed RAY allocation will be earmarked for development/ redevelopment/ rehabilitation of slums on lands of Central Government/Central Government Undertakings/ Autonomous bodies created under Acts of Parliament and for Innovative/Special projects.

b. Projects for slums on Central Government Land

Slums located on the lands of Central Government / Central Government undertakings/Autonomous bodies created under the Act of Parliament are also eligible for funding. The land owning agencies will have the discretion to prepare DPR on its own or in partnership with States/UTs and concerned ULBs. In case, DPR is prepared by the land owning agency on its own and no State/UT share is envisaged, then DPR may be directly submitted for consideration to the Ministry.

c. Innovative Projects

States/UTs are encouraged to come up with innovative projects for which fund is earmarked. The key objective is to incentivize innovation and encourage new approaches and solutions to improve the quality and quantity of shelter and services for the urban poor/slum dwellers. The innovative approaches may include:

- Innovations in planning, demonstrating integrated livelihoods, shelter and services or convergence
- Innovative or cost effective and green building design and technologies
- Financial innovation in the delivery of city/state wide programmes (e.g. community fund, incremental savings etc.)
- Funding pattern and process involved would be similar to those applicable under RAY.

d. Affordable Housing in Partnership (AHP) Scheme

In order to increase affordable housing stock, as part of the preventive strategy, Affordable Housing in Partnership (AHP) will be implemented as part of the scheme. Central support will be provided at the rate of ₹ 75,000 per EWS/LIG DUs of size upto 40 Sq.m. for housing and internal development components in affordable housing projects taken up under various kinds of partnerships. A project size of minimum 250 dwelling units will be considered under the scheme. The DUs would be a mix of EWS/LIG-A/LIG-B/Higher Categories/Commercial of which at least 60 percent of the FAR/ FSI will be used for dwelling units of carpet area of not more than 60 Sq .m. Detailed Guidelines for AHP scheme are issued by MoHUPA separately.

e. Access to Credit

It is widely recognized that significant credit is not flowing from banks and financial institutions to the urban poor for housing. Following measures are undertaken to improve access to credit for EWS/LIG housing:

i. Rajiv Rinn Yojana (RRY)

The Interest Subsidy Scheme for Housing the Urban Poor (ISHUP) is proposed to be continued as a Central Sector Scheme and be called **Rajiv Rinn Yojana (RRY)** in the 12th Plan period. It will provide interest subsidy of 5% on long tenure loans of 15-20 years limited to ₹ 5 lakh borrowed by the EWS/LIG; with ceiling of ₹ 8 lakh loan for LIG making housing loan cheaper for this segment. Projects and beneficiaries getting assistance under RAY would also be eligible for assistance under RRY. Detailed Guidelines for RRY are issued by MoHUPA separately.

ii. Credit Risk Guarantee Fund (CRGF)

A Credit Risk Guarantee Fund has been created to guarantee the lending agencies for loans to new EWS/LIG borrowers in urban areas seeking individual housing loans not exceeding a sum of ₹ 5 lakh for a housing unit of size up to 430 sq.ft (40 Sq.m) carpet areas without any third party guarantee or collateral security. The fund is operated by National Housing Bank.

The CRGF would enable the lending institutions to avail coverage upto 85% for loans from ₹ 2 lakhs to ₹ 5 lakhs and 90% in case of loans upto ₹ 2 lakhs. Further, it also benefits lending institutions by way of reduced risk weight age and provisioning norms as allowed by RBI for such loan guaranteed by the CRGF. The CRGF is expected to catalyse a flow of credit to the low income housing sector and create enabling environment for creation of affordable housing stock.

7.5 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.

7.5.1 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.

7.5.2 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.

7.5.3 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.

7.6 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.

7.7 REFORMS

RAY is a reform driven scheme. Apart from mandatory reforms, the scheme envisages to encourage optional reforms. In order to encourage States/UTs to take up optional reforms, a Reform Incentive Fund (RIF) has been constituted. RIF is constituted out of funds remaining unutilized by States/UTs against their allocation for initial three years from the date of approval of the scheme. States/UTs carrying out optional reforms successfully will be eligible to pose projects for funding under this fund after three years of implementation of the scheme.

RAY envisages reforms in urban governance by way of improving capacities, bringing in fiscal prudence, creation of land bank, simplified processes and procedures for creation of affordable housing stock, bringing in inclusive planning and providing security of tenure. Reforms are divided into mandatory reforms and optional reforms.

Major Policy Initiatives & Reforms initiated in order to unlock land, acquiring land and liberalizing building approval plans for EWS/LIG housing etc, credit options for urban poor under SUHP-1995 are as follows.

- Model Building Bye-laws-2000
- Land Use Conversion Policy-2001
- Model Zoning Regulations – 2002
- EWS & LIG Housing Policy-2011
- Land Acquisition Bill-2011

A draft slum free act has been already in place in state of Uttar Pradesh. 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

List of Participants attended to the Stakeholder Workshop / Meeting:

Stakeholder Workshop on Rajiv Awas Yojana (RAY)
Slum Free City Plan of Action – Muzaffarnagar city, Uttar Pradesh
28-09-2013 at

District urban Development Authority (DUDA) – Muzaffarnagar Nagar Palika Parishad – Regional Centre for Urban and Environmental Studies (RCUES), Hyderabad

S.No	Name	Designation	Phone no.	Signature
1-				
2-				
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
24-				
25-				
26-				
27				
28				
29.				

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

Annexure 1A

Sl. No	Name of Slum	Ward No	Status	Tenability	Ownership of land	Tenure status
1	MAHLUPURA	33	Non notified	Tenable	Private	Tenable
2	AABKARI	3	Non notified	Tenable	Private	Tenable
3	KALAPAAR KIDWAYI NAGAR	43 & 44	Non notified	Tenable	Private	Tenable
4	KIDWAYI NAGAR	43 & 44	Non notified	Tenable	Private	Tenable
5	INDRACOLONY	24	Non notified	Tenable	Private	Tenable
6	UTTARI SHIVAPURI	12	Non notified	Tenable	Private	Tenable
7	GAJAWALI	20	Non notified	Tenable	Private	Tenable
8	RAMPURI	5	Non notified	Tenable	Private	Tenable
9	RAMLEELA TILLA	15 & 18	Non notified	Tenable	Private	Tenable
10	KEVALPURI	28 & 40	Non notified	Tenable	Private	Tenable
11	TELGODAM	13	Non notified	Tenable	Private	Tenable
12	SARVAT	28	Non notified	Tenable	Private & Local Body (14 Katcha DU's are in Small Dry Pond	Tenable
13	LADHAWALA NORTH	31	Non notified	Tenable	Private	Tenable
14	KESHAVPURI / NUMASHEY CAMP	14	Non notified	Tenable	Private	Tenable
15	BHARATEEY COLONY / BALMIKI	10	Non notified	Tenable	Private	Tenable
16	PREMPURI	23	Non notified	Tenable	Private	Tenable
17	GEHRABAGH	26	Non notified	Tenable	Defense	Tenable
18	JAMIANAGAR	43 & 45	Non notified	Tenable	Private	Tenable
19	MAKKINAGAR	43 & 45	Non notified	Tenable	Private	Tenable
20	REHMANIA	18	Non notified	Tenable	Private	Tenable
21	JANAKPURI	19	Non notified	Tenable	Local body,Private& Red Cross Society	Tenable
22	MEHMOODNAGAR	30	Non notified	Tenable	private	Tenable

Annexure 1B

Sl. No	Name of Slum	Slum area (Sq.Meters)	Whether located in Core City/Town or Fringe area	Type of Area surrounding Slum	Physical Location of Slum	Whether the Slum is prone to flooding due to rains?	Dwelling Units				Dwelling Units with electricity			
							Pucca (No.)	Semi-Pucca (No)	Katcha (No.)	Total (No.)	Pucca (No.)	Semi-Pucca (No)	Katcha (No.)	Total (No.)
1	MAHLUPURA	9400.86	Core	Residential	Others (Non-Hazardous/Non-	Up to 15 days	184	8	0	192	184	8	0	192
2	AABKARI	23550.65	Core	Residential	Along Other Drains	Not Prone	465	16	0	481	465	16	0	481
3	KALAPAAR KIDWAYI NAGAR	73734.15	fringe	Residential	Others (Non-Hazardous/Non-	Not Prone	317	149	0	466	317	104	0	421
4	KIDWAYI NAGAR	9518.16	Core	Residential	Others (Non-Hazardous/Non-	Up to 15 days	104	25	0	129	104	19	0	123
5	INDRACOLONY	4774.67	fringe	Residential	Others (Non-Hazardous/Non-	Not Prone	122	9	0	131	122	9	0	131
6	UTTARI SHIVAPURI	5317.41	Core	Residential	Along Railway line	Not Prone	68	0	0	68	68	0	0	68
7	GAJAWALI	9666.71	Core	Residential	Along Other Drains	Not Prone	101	18	0	119	101	18	0	119
8	RAMPURI	8579.67	Core	Residential	Others (Non-Hazardous/Non-	Not Prone	176	61	4	241	176	40	0	216
9	RAMLEELA TILLA	15405.60	Core	Residential	Others (Non-Hazardous/Non-	Not Prone	151	17	0	168	151	17	0	168
10	KEVALPURI	8712.64	Core	Residential	Others (Non-Hazardous/Non-	Not Prone	94	0	0	94	94	0	0	94
11	TELGODAM	5550.00	Core	Residential	Others (Non-Hazardous/Non-	Not Prone	68	10	0	78	68	10	0	78
12	SARVAT	33961.10	fringe	Residential	Others (Non-Hazardous/Non-	Not Prone	180	7	14	201	180	7	0	187
13	LADHAWALA NORTH	4807.47	Core	Residential	Along Other Drains	Not Prone	64	3	0	67	64	3	0	67
14	KESHAVPURI / NUMASHEY CAMP	6361.32	Core	Residential	Others (Non-Hazardous/Non-	Not Prone	60	2	0	62	60	2	0	62
15	BHARATEEY COLONY / BALMIKI	3947.70	Core	Residential	Others (Non-Hazardous/Non-	Not Prone	84	0	0	84	84	0	0	84
16	PREMPURI	4518.19	fringe	Residential	Along River/Water Body bank	Not Prone	77	0	0	77	77	0	0	77

Annexure 1B

Sl. No	Name of Slum	Slum area (Sq.Meters)	Whether located in Core City/Town or Fringe area	Type of Area surrounding Slum	Physical Location of Slum	Whether the Slum is prone to flooding due to rains?	Dwelling Units				Dwelling Units with electricity			
							Pucca (No.)	Semi-Pucca (No)	Katcha (No.)	Total (No.)	Pucca (No.)	Semi-Pucca (No)	Katcha (No.)	Total (No.)
17	GEHRABAGH	19970.59	Core	Residential	Others (Non-Hazardous/Non-	Up to 15 days	0	313	148	461	0	62	0	62
18	JAMIANAGAR	10995.01	fringe	Residential	Along River/Water Body bank	Up to 15 days	54	17	0	71	54	13	0	67
19	MAKKINAGAR	34372.84	fringe	Residential	Along River/Water Body bank	Up to 15 days	91	42	7	140	91	26	0	117
20	REHMANIA	57433.46	fringe	Residential	Others (Non-Hazardous/Non-	Not Prone	481	114	19	614	481	103	0	584
21	JANAKPURI	7435.00	fringe	Residential	Along Major Transport Alignment	Up to 15 days	16	72	161	249	16	29	0	45
22	MEHMOODNAGAR	60009.13	fringe	Residential	Others (Non-Hazardous/Non-	Up to 15 days	106	146	67	319	106	102	0	208
							3063	1029	420	4512	3063	588	0	3651

Annexure 1C

Sl. No	Name of Slum	Total Slum Population	BPL Population	No of HHs	No of BPL HHs	Density
1	MAHLUPURA	1317	358	262	72	Low density
2	AABKARI	3037	920	612	185	Low density
3	KALAPAAR KIDWAYI NAGAR	2917	887	495	148	Low density
4	KIDWAYI NAGAR	710	202	129	37	Low density
5	INDRACOLONY	717	193	144	39	Low density
6	UTTARI SHIVAPURI	460	110	92	22	Low density
7	GAJAWALI	656	184	131	37	Low density
8	RAMPURI	1895	546	323	93	Low density
9	RAMLEELA TILLA	1259	304	254	62	Low density
10	KEVALPURI	637	165	128	33	Low density
11	TELGODAM	477	125	96	25	Low density
12	SARVAT	1071	258	214	52	Low density
13	LADHAWALA NORTH	474	126	79	21	Low density
14	KESHAVPURI / NUMASHEY CAMP	366	95	73	19	Low density
15	BHARATEEY COLONY / BALMIKI	443	114	89	23	Low density
16	PREMPURI	396	105	80	21	Low density
17	GEHRABAGH	2296	686	461	137	Low density
18	JAMIANAGAR	420	128	71	22	Low density
19	MAKKINAGAR	771	223	140	41	Low density
20	REHMANIA	3370	1040	614	189	Low density
21	JANAKPURI	1487	341	249	72	Low density
22	MEHMOODNAGAR	1924	619	349	103	Low density

Annexure 1D

Sl. No	Name of Slum	Monthly income No of HHs							Occupational status No of HHs					
		Less than Rs.500	Rs.500 - Rs.1000	Rs.1000 - Rs.1500	Rs.1500 - Rs.2000	Rs.2000 - Rs.3000	More than Rs.3000	Total	Self-employed	Salaried	Regular wage	Casual labour	Others	Total
1	MAHLUPURA	0	0	0	70	106	86	262	65	17	71	109	0	262
2	AABKARI	0	0	0	189	227	196	612	164	130	151	167	0	612
3	KALAPAAR KIDWAYI NAGAR	0	0	0	198	205	92	495	89	8	195	203	0	495
4	KIDWAYI NAGAR	0	0	0	83	27	19	129	13	11	19	86	0	129
5	INDRACOLONY	0	0	0	84	54	6	144	19	22	14	89	0	144
6	UTTARI SHIVAPURI	0	0	0	24	38	30	92	15	16	34	27	0	92
7	GAJAWALI	0	0	0	42	59	30	131	24	31	30	46	0	131
8	RAMPURI	0	0	0	84	142	97	323	91	42	61	129	0	323
9	RAMLEELA TILLA	0	0	0	64	102	88	254	70	30	69	85	0	254
10	KEVALPURI	0	0	0	35	49	44	128	30	12	46	40	0	128
11	TELGODAM	0	0	0	27	39	30	96	20	16	30	30	0	96
12	SARVAT	0	0	0	53	103	58	214	98	42	16	58	0	214
13	LADHAWALA NORTH	0	0	0	23	30	26	79	24	2	26	27	0	79
14	KESHAVPURI / NUMASHEY CAMP	0	0	0	21	28	24	73	9	7	23	34	0	73
15	BHARATEEY COLONY / BALMIKI	0	0	0	26	32	31	89	24	21	16	28	0	89
16	PREMPURI	0	0	0	23	30	27	80	12	23	15	30	0	80
17	GEHRABAGH	0	0	24	143	283	11	461	198	0	94	169	0	461
18	JAMIANAGAR	0	0	0	39	30	2	71	14	3	27	27	0	71
19	MAKKINAGAR	0	0	0	44	57	39	140	47	9	42	42	0	140
20	REHMANIA	0	0	0	194	248	172	614	174	130	109	201	0	614
21	JANAKPURI	0	0	0	162	65	22	249	39	0	36	174	0	249
22	MEHMOODNAGAR	0	0	0	84	187	78	349	104	48	104	93	0	349
	Total	**0**	**0**	**24**	**1712**	**2141**	**1208**	**5085**	**1343**	**620**	**1228**	**1894**	**0**	**5085**

Annexure 1E

Sl. No	Name of Slum	Source of Drinking water								Existing Situation				Drainage and Sewerage facility				
		Individual tap	Public tap	Tubewell/ Borewell/ HandPump	Open well	Tank/ Pond	River/ Canal/ Lake/ Spring	Water Tanker	Others	No. of individual taps	No. of public taps	No. of tube wells / bore wells/ hand pumps	Duration of water supply	Connectivity to City-wide Water Supply System_	Storm water Drainage_No .of HHs having access to	Not Connected to Sewer or Digester	Connected to City wide Sewerage system	Connected to City wide Storm water Drainage system
1	MAHLUPURA	192	30	40	0	0	0	0	0	192	2	23	1 -2 hrs Daily	Fully Connected	202	60	Not Connected	Prtially Connected
2	AABKARI	466	60	86	0	0	0	0	0	466	3	24	1 -2 hrs Daily	Fully Connected	612	0	Not Connected	Fully Connected
3	KALAPAAR KIDWAYI NAGAR	466	0	29	0	0	0	0	0	424	0	2	1 -2 hrs Daily	Fully Connected	495	0	Not Connected	Fully Connected
4	KIDWAYI NAGAR	129	0	0	0	0	0	0	0	129	0	0	1 -2 hrs Daily	Prtially Connected	98	31	Not Connected	Prtially Connected
5	INDRACOLONY	131	13	0	0	0	0	0	0	131	1	0	1 -2 hrs Daily	Fully Connected	87	57	Not Connected	Fully Connected
6	UTTARI SHIVAPURI	68	20	4	0	0	0	0	0	68	2	1	1 -2 hrs Daily	Fully Connected	69	23	Not Connected	Fully Connected
7	GAJAWALI	106	12	13	0	0	0	0	0	106	2	2	1 -2 hrs Daily	Fully Connected	131	0	Not Connected	Fully Connected
8	RAMPURI	235	40	48	0	0	0	0	0	235	3	21	1 -2 hrs Daily	Fully Connected	221	102	Not Connected	Fully Connected
9	RAMLEELA TILLA	212	19	23	0	0	0	0	0	168	2	2	1 -2 hrs Daily	Fully Connected	190	64	Not Connected	Fully Connected
10	KEVALPURI	94	12	22	0	0	0	0	0	94	1	2	1 -2 hrs Daily	Fully Connected	108	20	Not Connected	Fully Connected
11	TELGODAM	78	8	10	0	0	0	0	0	78	2	3	1 -2 hrs Daily	Fully Connected	81	15	Not Connected	Fully Connected
12	SARVAT	147	0	14	0	0	0	0	53	147	0	1	1 -2 hrs Daily	Fully Connected	188	26	Not Connected	Fully Connected

Annexure 1E

Sl. No	Name of Slum	Source of Drinking water								Existing Situation				Drainage and Sewerage facility				
		Individual tap	Public tap	Tubewell/ Borewell/ HandPump	Open well	Tank/ Pond	River/ Canal/ Lake/ Spring	Water Tanker	Others	No. of individual taps	No. of public taps	No. of tube wells / bore wells/ hand pumps	Duration of water supply	Connectivity to City-wide Water Supply System_	Storm water Drainage_No .of HHs having access to	Not Connected to Sewer or Digester	Connected to City wide Sewerage system	Connected to City wide Storm water Drainage system
13	LADHAWALA NORTH	79	0	0	0	0	0	0	0	67	0	0	1 -2 hrs Daily	Fully Connected	79	0	Not Connected	Fully Connected
14	KESHAVPURI / NUMASHEY CAMP	62	5	6	0	0	0	0	0	62	2	3	1 -2 hrs Daily	Fully Connected	73	0	Not Connected	Fully Connected
15	BHARATEEY COLONY / BALMIKI	61	12	16	0	0	0	0	0	61	2	3	1 -2 hrs Daily	Fully Connected	89	0	Not Connected	Fully Connected
16	PREMPURI	57	12	11	0	0	0	0	0	57	1	1	1 -2 hrs Daily	Fully Connected	80	0	Not Connected	Fully Connected
17	GEHRABAGH	0	70	391	0	0	0	0	0	0	2	10	No supply	Not Connected	0	461	Not Connected	Prtially Connected
18	JAMIANAGAR	21	0	50	0	0	0	0	0	21	0	21	No supply	Fully Connected	52	19	Not Connected	Prtially Connected
19	MAKKINAGAR	0	0	140	0	0	0	0	0	0	0	98	No supply	Fully Connected	0	140	Not Connected	Prtially Connected
20	REHMANIA	0	0	614	0	0	0	0	0	0	0	376	No supply	Fully Connected	251	363	Not Connected	Fully Connected
21	JANAKPURI	16	98	135	0	0	0	0	0	16	6	8	1 -2 hrs Daily	Fully Connected	0	249	Not Connected	Prtially Connected
22	MEHMOODNAGAR	217	49	83	0	0	0	0	0	187	3	27	1 -2 hrs Daily	Fully Connected	142	207	Not Connected	Prtially Connected
		2837	460	1735	0	0	0	0	53	2709	34	628			3248	1837		

Annexure 1E

Sl. No	Name of Slum	Sanitation										Solid Waste management		
		Public-Septic tank/ Flush	Public-Service Latrine	Public-Pit	Shared-Septic tank/ Flush	Shared-Service Latrine	Shared-Pit	Own-Septic tank/ Flush	Own-Service Latrine	Own-Pit	Open defecation	Arrangement of Garbage Disposal	Frequency of Disposal	Frequency of Clearence of Open drains
1	MAHLUPURA	0	0	0	8	0	0	254	0	0	0	Municipal Contractor	Once in a week	Once in a week
2	AABKARI	0	0	0	72	0	0	540	0	0	0	Municipal Contractor	Once in a week	Once in a week
3	KALAPAAR KIDWAYI NAGAR	0	0	0	29	0	0	466	0	0	0	Municipal Contractor	Once in a week	Once in a week
4	KIDWAYI NAGAR	0	0	0	0	0	0	129	0	0	0	Municipal Contractor	Once in a week	Once in a week
5	INDRACOLONY	0	0	0	13	0	0	131	0	0	0	Municipal Contractor	Once in a week	Once in a week
6	UTTARI SHIVAPURI	0	0	0	24	0	0	68	0	0	0	Municipal Contractor	Once in a week	Once in a week
7	GAJAWALI	24	0	0	1	0	0	106	0	0	0	Municipal Contractor	Once in a week	Once in a week
8	RAMPURI	0	0	0	82	0	0	241	0	0	0	Municipal Contractor	Once in a week	Once in a week
9	RAMLEELA TILLA	0	0	0	43	0	0	211	0	0	0	Municipal Contractor	Once in a week	Once in a week
10	KEVALPURI	0	0	0	7	0	0	121	0	0	0	Municipal Contractor	Once in a week	Once in a week
11	TELGODAM	0	0	0	10	0	0	86	0	0	0	Municipal Contractor	Once in a week	Once in a week
12	SARVAT	0	0	0	9	0	0	191	0	0	14	Municipal Contractor	Once in a week	Once in a week

Annexure 1E

Sl. No	Name of Slum	Sanitation										Solid Waste management		
		Public-Septic tank/ Flush	Public-Service Latrine	Public-Pit	Shared-Septic tank/ Flush	Shared-Service Latrine	Shared-Pit	Own-Septic tank/ Flush	Own-Service Latrine	Own-Pit	Open defecation	Arrangement of Garbage Disposal	Frequency of Disposal	Frequency of Clearence of Open drains
13	LADHAWALA NORTH	0	0	0	6	0	0	73	0	0	0	Municipal Contractor	Once in a week	Once in a week
14	KESHAVPURI / NUMASHEY CAMP	0	0	0	2	0	0	71	0	0	0	Municipal Contractor	Once in a week	Once in a week
15	BHARATEEY COLONY / BALMIKI	0	0	0	5	0	0	84	0	0	0	Municipal Contractor	Once in a week	Once in a week
16	PREMPURI	0	0	0	0	0	0	80	0	0	0	Municipal Contractor	Once in a week	Once in a week
17	GEHRABAGH	0	0	0	0	0	0	0	313	0	148	Municipal Contractor	Once in 15 days	Once in 15 days
18	JAMIANAGAR	0	0	0	0	0	0	71	0	0	0	Municipal Contractor	Once in a week	Once in a week
19	MAKKINAGAR	0	0	0	0	0	0	133	0	0	7	Municipal Contractor	Once in a week	Once in a week
20	REHMANIA	0	0	0	0	0	0	597	17	0	0	Municipal Contractor	Once in 15 days	No Clearence
21	JANAKPURI	0	0	0	0	0	0	16	42	0	191	Residents themselves	Once in 2 days	Daily
22	MEHMOODNAGAR	0	0	0	0	0	0	335	14	0	0	Residents themselves	Once in 2 days	Daily
		24	0	0	311	0	0	4004	386	0	360			

Annexure 1F

Sl. No	Name of Slum		Roads			Availability of Street light	Educational facilites									Health Facilities						
			Approach Road/Lane/Constructed Path to the Slum	Distance from the nearest Motorable Road	Internal road		Pre-primary School_Anganwadi under ICDS	Pre-primary School_Municipal Pre-School	Pre-primary School_Private Pre-School	Primary School_Municipal	Primary School_State Government	Primary School_Private	High School_Municipal	High School_State Government	High School_Private	Urban Health Post	Primary Health Centre	Government Hospital	Maternity Centre	Private Clinic	Registered Medical Practitioner (RMP)	Ayurvedic Doctor/ Vaidhya
1	MAHLUPURA	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	With in the slum area	NA	less than 0.5 km	0.5km to 1.0 kms	Less than 0.5.0 kms	less than 0.5 km	0.5km to 1.0 kms	0.5km to 1.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	With in the slum area	With in the slum area	1.0 kms to 2.0 kms
2	AABKARI	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	With in the slum area	NA	less than 0.5 km	With in the slum area	Less than 0.5.0 kms	less than 0.5 km	Less than 0.5.0 kms	Less than 0.5.0 kms	Less than 0.5 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	With in the slum area	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms
3	KALAPAAR KIDWAYI NAGAR	1	Motorable Kutcha	Less than 0.5 kms	Motorable pucca	No	With in the slum area	NA	0.5km to 1.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	With in the slum area	2.0 km to 5.0 km	1.0 kms to 2.0 kms	0.5km to 1.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	With in the slum area	With in the slum area	2.0 km to 5.0 km
4	KIDWAYI NAGAR	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	With in the slum area	NA	0.5km to 1.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	less than 0.5 km	more than 5.0 km	1.0 kms to 2.0 kms	1.0 km to 2.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	With in the slum area	Less than 0.5 kms	2.0 km to 5.0 km
5	INDRACOLONY	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	more than 5.0 km	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	0.5km to 1.0 kms	1.0 km to 2.0 km	1.0 kms to 2.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	1.0 kms to 2.0 kms
6	UTTARI SHIVAPURI	3	Motorable pucca	Less than 0.5 kms	Non-Motorable Pucca	Yes	more than 5.0 km	NA	0.5km to 1.0 kms	1.0 Kms to 2.0 kms	Less than 0.5.0 kms	less than 0.5 km	1.0 km to 2.0 km	Less than 0.5.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	1.0 kms to 2.0 kms

Annexure 1F

Sl. No	Name of Slum		Roads			Availability of Street light	Educational facilites									Health Facilities						
			Approach Road/Lane/Constructed Path to the Slum	Distance from the nearest Motorable Road	Internal road		Pre-primary School_Anganwadi under ICDS	Pre-primary School_Municipal Pre-School	Pre-primary School_Private Pre-School	Primary School_Municipal	Primary School_State Government	Primary School_Private	High School_Municipal	High School_State Government	High School_Private	Urban Health Post	Primary Health Centre	Government Hospital	Maternity Centre	Private Clinic	Registered Medical Practitioner (RMP)	Ayurvedic Doctor/ Vaidhya
7	GAJAWALI	3	Motorable pucca	Less than 0.5 kms	Non-Motorable Pucca	Yes	more than 5.0 km	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	less than 0.5 km	1.0 km to 2.0 km	1.0 kms to 2.0 kms	Less than 0.5 kms	less than 0.5 km	Less than 0.5 kms	Less than 0.5 kms	Less than 0.5 kms	Less than 0.5 kms	Less than 0.5 kms	with in the slum area
8	RAMPURI	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	With in the slum area	NA	less than 0.5 km	1.0 Kms to 2.0 kms	0.5km to 1.0 kms	less than 0.5 km	1.0 km to 2.0 km	1.0 kms to 2.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	With in the slum area	Less than 0.5 kms	1.0 kms to 2.0 kms
9	RAMLEELA TILLA	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	more than 5.0 km	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	less than 0.5 km	1.0 km to 2.0 km	0.5km to 1.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	With in the slum area	1.0 kms to 2.0 kms
10	KEVALPURI	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	more than 5.0 km	NA	With in the slum area	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	less than 0.5 km	1.0 km to 2.0 km	Less than 0.5.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	With in the slum area	Less than 0.5 kms	1.0 kms to 2.0 kms
11	TELGODAM	3	Motorable pucca	Less than 0.5 kms	Non-Motorable Pucca	Yes	With in the slum area	NA	less than 0.5 km	Less than 0.5 kms	0.5km to 1.0 kms	With in the slum area	1.0 km to 2.0 km	0.5km to 1.0 kms	With in the slum area	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	1.0 kms to 2.0 kms
12	SARVAT	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	more than 5.0 km	NA	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	Less than 0.5.0 kms	less than 0.5 km	1.0 km to 2.0 km	0.5km to 1.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	With in the slum area	Less than 0.5 kms	1.0 kms to 2.0 kms

Annexure 1F

Sl. No	Name of Slum		Roads			Availability of Street light	Educational facilites									Health Facilities						
			Approach Road/Lane/Constructed Path to the Slum	Distance from the nearest Motorable Road	Internal road		Pre-primary School_Anganwadi under ICDS	Pre-primary School_Municipal Pre-School	Pre-primary School_Private Pre-School	Primary School_Municipal	Primary School_State Government	Primary School_Private	High School_Municipal	High School_State Government	High School_Private	Urban Health Post	Primary Health Centre	Government Hospital	Maternity Centre	Private Clinic	Registered Medical Practitioner (RMP)	Ayurvedic Doctor/ Vaidhya
13	LADHAWALA NORTH	2	Motorable pucca	Less than 0.5 kms	Motorable kutcha	Yes	more than 5.0 km	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	Less than 0.5 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	0.5km to 1.0 kms	Less than 0.5 kms	Less than 0.5 kms	0.5km to 1.0 kms
14	KESHAVPURI / NUMASHEY CAMP	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	With in the slum area	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	less than 0.5 km	1.0 km to 2.0 km	1.0 kms to 2.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	With in the slum area	With in the slum area	1.0 kms to 2.0 kms
15	BHARATEEY COLONY / BALMIKI	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	more than 5.0 km	NA	0.5km to 1.0 kms	1.0 Kms to 2.0 kms	Less than 0.5.0 kms	less than 0.5 km	Less than 0.5.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	0.5km to 1.0 kms	More than 5.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	More than 5.0 kms
16	PREMPURI	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	Yes	more than 5.0 km	NA	1.0 Kms to 2.0 kms	Less than 0.5 kms	Less than 0.5.0 kms	less than 0.5 km	Less than 0.5.0 kms	Less than 0.5.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	1.0 kms to 2.0 kms
17	GEHRABAGH	4	Motorable pucca	Less than 0.5 kms	Non-Motorable Kutcha	No	With in the slum area	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	less than 0.5 km	1.0 km to 2.0 km	1.0 kms to 2.0 kms	Less than 0.5 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	1.0 kms to 2.0 kms
18	JAMIANAGAR	2	Motorable pucca	Less than 0.5 kms	Motorable kutcha	No	more than 5.0 km	NA	0.5km to 1.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	0.5km to 1.0 kms	2.0 km to 5.0 km	1.0 kms to 2.0 kms	0.5km to 1.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	Less than 0.5 kms	Less than 0.5 kms	2.0 km to 5.0 km

Annexure 1F

Sl. No	Name of Slum		Roads			Availability of Street light	Educational facilites									Health Facilities						
			Approach Road/Lane/Constructed Path to the Slum	Distance from the nearest Motorable Road	Internal road		Pre-primary School_Anganwadi under ICDS	Pre-primary School_Municipal Pre-School	Pre-primary School_Private Pre-School	Primary School_Municipal	Primary School_State Government	Primary School_Private	High School_Municipal	High School_State Government	High School_Private	Urban Health Post	Primary Health Centre	Government Hospital	Maternity Centre	Private Clinic	Registered Medical Practitioner (RMP)	Ayurvedic Doctor/ Vaidhya
19	MAKKINAGAR	2	Motorable pucca	Less than 0.5 kms	Motorable kutcha	No	more than 5.0 km	NA	1.0 Kms to 2.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	0.5km to 1.0 kms	2.0 km to 5.0 km	2.0 km to 5.0 km	1.0 km to 2.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	Less than 0.5 kms	Less than 0.5 kms	2.0 km to 5.0 km
20	REHMANIA	4	Motorable pucca	Less than 0.5 kms	Non-Motorable Kutcha	No	With in the slum area	NA	less than 0.5 km	1.0 Kms to 2.0 kms	1.0 Kms to 2.0 kms	less than 0.5 km	1.0 km to 2.0 km	1.0 kms to 2.0 kms	1.0 km to 2.0 km	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	1.0 kms to 2.0 kms	Less than 0.5 kms	Less than 0.5 kms	1.0 kms to 2.0 kms
21	JANAKPURI	1	Motorable pucca	Less than 0.5 kms	Motorable pucca	No	less than 0.5 km	NA	more than 5.0 km	more than 5.0 km	more than 5.0 km	more than 5.0 km	more than 5.0 km	more than 5.0 km	more than 5.0 km	1.0 kms to 2.0 kms	1.0km to 2.0 km	1.0 kms to 2.0 kms	with in the slum area	Less than 0.5 kms	1.0 kms to 2.0 kms	More than 5.0 kms
22	MEHMOODNAGAR	1	Motorable pucca	0.5 km to 1.0 km	Motorable pucca	No	With in the slum area	NA	more than 5.0 km	more than 5.0 km	With in the slum area	more than 5.0 km	more than 5.0 km	more than 5.0 km	more than 5.0 km	more than 5.0 km	2.0 km to 5.0 km	2.0 km to 5.0 km	with in the slum area	With in the slum area	2.0 km to 5.0 km	More than 5.0 kms

Annexure 1F

Sl. No	Name of Slum	Social Development/ welfare														
		Availability of facilities within slum						Pensions and Insurances								
		Community hall (No. covered)	livelihood / production Centre (No. covered)	Vocational Training / Training - cum production centre (No. covered)	Street Children Rehabilitation Centre (No. covered)	Night Shelter (No. covered)	Old age home (No. of Holders)	Old age pensions (No. of Holders)	Widow pensions (No. of Holders)	Disabled pensions (No. covered)	general Insurance (No. covered)	Health Insurance (No. covered)	Self Help Groups/DWCUA Groups in Slum	Thrift and Credit Societies in Slum	Slum-dwellers Association (Yes- 01, No- 02)	Youth Associations (No. covered)	Women's Associations/Mahila Samithis (No. covered)
1	MAHLUPURA	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0
2	AABKARI	0	0	0	0	0	0	9	2	0	0	0	0	0	2	0	0
3	KALAPAAR KIDWAYI NAGAR	0	0	0	0	0	0	9	2	0	0	0	0	0	2	0	0
4	KIDWAYI NAGAR	0	0	0	0	0	0	4	3	0	0	0	0	0	2	0	0
5	INDRACOLONY	0	0	0	0	0	0	1	4	0	0	0	0	0	2	0	0
6	UTTARI SHIVAPURI	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0

Annexure 1F

Sl. No	Name of Slum	Social Development/ welfare														
		Availability of facilities within slum						Pensions and Insurances								
		Community hall (No. covered)	livelihood / production Centre (No. covered)	Vocational Training / Training - cum production centre (No. covered)	Street Children Rehabilitation Centre (No. covered)	Night Shelter (No. covered)	Old age home (No. of Holders)	Old age pensions (No. of Holders)	Widow pensions (No. of Holders)	Disabled pensions (No. covered)	general Insurance (No. covered)	Health Insurance (No. covered)	Self Help Groups/DWCUA Groups in Slum	Thrift and Credit Societies in Slum	Slum-dwellers Association (Yes- 01, No- 02)	Youth Associations (No. covered)	Women's Associations/Mahila Samithis (No. covered)
7	GAJAWALI	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0
8	RAMPURI	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
9	RAMLEELA TILLA	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
10	KEVALPURI	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
11	TELGODAM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
12	SARVAT	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0

Annexure 1F

Sl. No	Name of Slum	Social Development/ welfare														
		Availability of facilities within slum						Pensions and Insurances								
		Community hall (No. covered)	livelihood / production Centre (No. covered)	Vocational Training / Training - cum production centre (No. covered)	Street Children Rehabilitation Centre (No. covered)	Night Shelter (No. covered)	Old age home (No. of Holders)	Old age pensions (No. of Holders)	Widow pensions (No. of Holders)	Disabled pensions (No. covered)	general Insurance (No. covered)	Health Insurance (No. covered)	Self Help Groups/DWCUA Groups in Slum	Thrift and Credit Societies in Slum	Slum-dwellers Association (Yes- 01, No- 02)	Youth Associations (No. covered)	Women's Associations/Mahila Samithis (No. covered)
13	LADHAWALA NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
14	KESHAVPURI / NUMASHEY CAMP	1	0	0	0	0	0	4	3	0	0	0	0	0	2	0	0
15	BHARATEEY COLONY / BALMIKI	0	0	0	0	0	0	0	3	2	0	0	0	0	2	0	0
16	PREMPURI	0	0	0	0	0	0	6	4	0	0	0	0	0	2	0	0
17	GEHRABAGH	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
18	JAMIANAGAR	0	0	0	0	0	0	2	1	0	0	0	0	0	2	0	0

Annexure 1F

Sl. No	Name of Slum	Social Development/ welfare														
		Availability of facilities within slum						Pensions and Insurances								
		Community hall (No. covered)	livelihood / production Centre (No. covered)	Vocational Training / Training - cum production centre (No. covered)	Street Children Rehabilitation Centre (No. covered)	Night Shelter (No. covered)	Old age home (No. of Holders)	Old age pensions (No. of Holders)	Widow pensions (No. of Holders)	Disabled pensions (No. covered)	general Insurance (No. covered)	Health Insurance (No. covered)	Self Help Groups/DWCUA Groups in Slum	Thrift and Credit Societies in Slum	Slum-dwellers Association (Yes- 01, No- 02)	Youth Associations (No. covered)	Women's Associations/Mahila Samithis (No. covered)
19	MAKKINAGAR	0	0	0	0	0	0	7	2	0	0	0	0	0	2	0	0
20	REHMANIA	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
21	JANAKPURI	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0
22	MEHMOODNAGAR	0	0	0	0	0	14	17	0	0	0	1	0	2	0	1	0

Annexure 2A

S.No	Name of Slum	Dwelling Units					
		Pucca (No.)	Semi-Pucca (No)	Katcha (No.)	Total (No.)	Proposed Dwelling Units	HOUSING COST
1	MAHLUPURA	184	8	0	192	78	330.04
2	AABKARI	465	16	0	481	147	590.33
3	KALAPAAR KIDWAYI NAGAR	317	149	0	466	178	461.61
4	KIDWAYI NAGAR	104	25	0	129	25	55.75
5	INDRACOLONY	122	9	0	131	22	78.05
6	UTTARI SHIVAPURI	68	0	0	68	24	101.93
7	GAJAWALI	101	18	0	119	30	93.66
8	RAMPURI	176	61	4	241	147	494.78
9	RAMLEELA TILLA	151	17	0	168	103	421.47
10	KEVALPURI	94	0	0	94	34	159.22
11	TELGODAM	68	10	0	78	28	102.58
12	SARVAT	180	7	14	201	34	129.53
13	LADHAWALA NORTH	64	3	0	67	15	66.38
14	KESHAVPURI / NUMASHEY CAMP	60	2	0	62	13	50.96
15	BHARATEEY COLONY / BALMIKI	84	0	0	84	5	21.24
16	PREMPURI	77	0	0	77	3	14.05
17	GEHRABAGH	0	313	148	461	461	1957.98
18	JAMIANAGAR	54	17	0	71	17	37.91
19	MAKKINAGAR	91	42	7	140	49	124.88
20	REHMANIA	481	114	19	614	133	322.77
21	JANAKPURI	16	72	161	249	249	1057.57
22	MEHMOODNAGAR	106	146	67	319	243	721.99
	Total	**3063**	**1029**	**420**	**4512**	**2038**	**7394.68**

Annexure 2B

S.No	Name of Slum	Water supply (Proposed)							sanitation						SWM			Roads (proposed)				
		Existing Running length of Sub line (Meters)	Proposed Running length of Sub line (Meters)	Existing Taps	Proposed Taps	Raising main (Meters)	Overhead tanks	WATER SUPPLY Total Cost	Proposed Length of sewer line (meters)	Existing Length of Strom water drain(meters)	Proposed Length of Strom water drain(meters)	Existing Toilets	Proposed Toilets	SANITATION Total Cost	Existing Bins	Proposed Bins	Total Cost	Existing length of Approch roads	Proposed length of Approch roads	Existing length of Internal roads	Proposed length of Internal roads	Total cost
1	MAHLUPURA	560	811.30	192	70	210.00	0	**3.80**	1142.28	1120	22.28	254	8	20.43	0	9	0.83	28.56	0.00	700	0.00	0.00
2	AABKARI	1238	1677.30	466	146	438.00	1	**24.03**	2428.41	1000.00	1428.41	540	72	69.96	0	20	1.76	60.71	0.00	1548	0.00	0.00
3	KALAPAAR KIDWAYI NAGAR	1185	3421.43	424	71	213.00	1	**32.05**	3837.09	0.00	3837.09	466	29	131.62	0	17	1.57	95.93	95.93	1485	0.00	4.50
4	KIDWAYI NAGAR	288	1046.07	129	0	0.00	0	**4.36**	1111.26	576	535.26	129	0	27.45	0	4	0.37	27.78	0.00	369	0.00	0.00
5	INDRACOLONY	291	530.22	131	13	39.00	0	**2.29**	684.06	0.00	684.06	131	13	24.46	0	5	0.46	17.10	0.00	362	0.00	0.00
6	UTTARI SHIVAPURI	187	772.06	68	24	72.00	0	**3.20**	798.88	374.00	424.88	68	24	22.34	0	3	0.26	19.97	0.00	233	745.63	19.73
7	GAJAWALI	266	1067.53	106	25	75.00	0	**4.60**	1110.81	216.00	894.81	106	25	36.62	0	4	0.37	27.77	0.00	333	1027.74	28.55
8	RAMPURI	770	365.22	235	88	264.00	0	**1.96**	945.62	1541	0.00	241	82	24.96	0	11	0.97	23.64	0.00	963	0.00	0.00
9	RAMLEELA TILLA	512	1524.09	168	86	258.00	0	**6.87**	1696.03	416.00	1280.03	211	43	55.09	0	8	0.74	42.40	0.00	640	0.00	0.00
10	KEVALPURI	260	880.17	94	34	102.00	0	**4.07**	949.75	518.00	431.75	121	7	25.12	0	4	0.39	23.74	0.00	322	0.00	0.00
11	TELGODAM	194	471.47	78	18	54.00	0	**2.07**	554.33	157.00	397.33	86	10	17.14	0	3	0.28	13.86	0.00	245	434.05	12.06
12	SARVAT	435	2782.40	147	67	201.00	0	**11.43**	2680.05	870.00	1810.05	191	23	74.07	0	7	0.62	67.00	0.00	543	0.00	0.00
13	LADHAWALA NORTH	193	449.75	67	12	36.00	0	**2.15**	535.40	157.00	378.40	73	6	17.64	0	3	0.31	13.39	0.00	242	413.87	11.09
14	KESHAVPURI / NUMASHEY CAMP	128	843.53	62	11	33.00	0	**3.41**	809.27	104.00	705.27	71	2	24.29	0	2	0.18	20.23	0.00	160	0.00	0.00

Annexure 2B

S.No	Name of Slum	Water supply (Proposed)							sanitation						SWM			Roads (proposed)				
		Existing Running length of Sub line (Meters)	Proposed Running length of Sub line (Meters)	Existing Taps	Proposed Taps	Raising main (Meters)	Overhead tanks	WATER SUPPLY Total Cost	Proposed Length of sewer line (meters)	Existing Length of Strom water drain(meters)	Proposed Length of Strom water drain(meters)	Existing Toilets	Proposed Toilets	SANITATION Total Cost	Existing Bins	Proposed Bins	Total Cost	Existing length of Approch roads	Proposed length of Approch roads	Existing length of Internal roads	Proposed length of Internal roads	Total cost
15	BHARATEEY COLONY / BALMIKI	180	509.51	61	28	84.00	0	**2.18**	574.35	360.00	214.35	84	5	13.13	0	3	0.26	14.36	0.00	224	0.00	0.00
16	PREMPURI	161	431.44	57	23	69.00	0	**2.03**	493.49	130.00	363.49	80	0	15.00	0	3	0.29	12.34	0.00	200	0.00	0.00
17	GEHRABAGH	0	2020.07	0	461	1383.00	0	**10.16**	1682.69	0.00	1682.69	313	0	50.88	0	15	1.26	42.07	0.00	0	2061.29	51.94
18	JAMIANAGAR	0	950.81	21	50	150.00	0	**4.26**	792.01	0.00	792.01	71	0	26.41	0	2	0.19	19.80	0.00	0	970.22	23.59
19	MAKKINAGAR	0	2098.41	0	140	420.00	0	**9.59**	1747.95	0.00	1747.95	133	7	59.17	0	5	0.46	43.70	0.00	0	2141.24	52.05
20	REHMANIA	342	4038.20	0	614	1842.00	1	**36.10**	3648.65	684.00	2964.65	614	0	104.99	0	20	1.76	91.22	0.00	427	4042.59	106.97
21	JANAKPURI	604	110.06	16	249	747.00	0	**1.78**	590.83	1208.00	0.00	58	0	8.93	0	8	0.67	9.91	0.00	755	0.00	0.00
22	MEHMOODNAGAR	781	3308.51	187	162	486.00	0	**14.06**	3406.50	1563	1843.50	349	0	83.35	0	12	1.06	85.16	0.00	976	0.00	0.00
	Total	8575	30109.53	2709	2392	7176.00	3	186.47	32219.71	10994	22438.26	4390	356	933.03	0	168	15.08	800.64	95.93	10727	11836.6	310.48

Annexure 2C

S.No	Name of Slum	Street lights				Education Facilities							Health Facilities			Social Welfare			Parks		
		Condition of Street lights	Existing Street lights	Proposed Street lights	COST	Existing Pre - primary schools	Proposed Schools	Existing Pimary schools	proposed primary	Existing High schools	proposed High schools	TOTAL EDUCATIONAL FACILITIES	Existing Primary Health Centre	Proposed PHC	Cost	Existing Community halls	Proposed Community halls	Cost	Existing	Proposed	Cost
1	MAHLUPURA	Available	4	28	**3.57**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	940.1	**2.83**
2	AABKARI	Available	9	58	**7.03**	1	0	1	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	1000.0	**2.87**
3	KALAPAAR KIDWAYI NAGAR	Available	9	95	**12.10**	1	0	0	0	0	0	**0.00**	0	0	**0.00**	0	0	**0.00**	0	1000.0	**3.01**
4	KIDWAYI NAGAR	Available	3	28	**3.57**	1	0	0	0	0	0	**0.00**	0	0	**0.00**	0	0	**0.00**	0	951.8	**2.86**
5	INDRACOLONY	Available	2	17	**2.16**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	477.5	**1.44**
6	UTTARI SHIVAPURI	Available	2	20	**2.43**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	531.7	**1.52**
7	GAJAWALI	Available	2	29	**3.69**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	966.7	**2.91**
8	RAMPURI	Available	6	20	**2.43**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	858.0	**2.46**
9	RAMLEELA TILLA	Available	4	43	**5.48**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	1000.0	**3.01**
10	KEVALPURI	Available	2	24	**3.21**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	871.3	**2.75**
11	TELGODAM	Available	2	13	**1.66**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	555.0	**1.67**
12	SARVAT	Available	4	70	**8.49**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	1000.0	**2.87**
13	LADHAWALA NORTH	Available	0	15	**2.11**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	480.7	**1.60**
14	KESHAVPURI / NUMASHEY CAMP	Available	1	21	**2.55**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	1	0	**0.00**	0	636.1	**1.82**
15	BHARATEEY COLONY / BALMIKI	Available	1	15	**1.82**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	394.8	**1.13**
16	PREMPURI	Available	1	13	**1.74**	0	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	451.8	**1.43**
17	GEHRABAGH	Not Available	0	47	**5.43**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0	1000.0	**2.73**
18	JAMIANAGAR	Not Available	0	22	**2.80**	0	0	0	0	0	0	**0.00**	0	0	**0.00**	0	0	**0.00**	0	1000.0	**3.01**
19	MAKKINAGAR	Not Available	0	49	**6.24**	0	0	0	0	0	0	**0.00**	0	0	**0.00**	0	0	**0.00**	0.0	1000.0	**3.01**
20	REHMANIA	Not Available	1	95	**11.52**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0.0	1000.0	**2.87**
21	JANAKPURI	Not Available	4	12	**1.39**	1	0	0	0	0	0	**0.00**	1	0	**0.00**	0	0	**0.00**	0.0	743.5	**2.03**
22	MEHMOODNAGAR	Not Available	6	89	**10.79**	1	0	0	0	0	0	**0.00**	0	0	**0.00**	0	0	**0.00**	0.0	1000.0	**2.87**
	Total		63	823	102.18	11	0	1	0	0	0	0.00	17	0	0.00	1	0	0.00	0.0	17859.0	52.69

Annexure 2D

S.No	Name of Slum	Mode of Development	Ownership of land	Density	Year Wise	Final housing _Code	Infrastructure_Code	Tenure status
1	MAHLUPURA	Upgradation	Private	Low density	3	Best	Average	Secure
2	AABKARI	Upgradation	Private	Low density	2	average	Average	Secure
3	KALAPAAR KIDWAYI NAGAR	Upgradation	Private	Low density	3	Best	Best	Secure
4	KIDWAYI NAGAR	Upgradation	Private	Low density	3	Best	Best	Secure
5	INDRACOLONY	Upgradation	Private	Low density	3	Best	Best	Secure
6	UTTARI SHIVAPURI	Upgradation	Private	Low density	2	average	Average	Secure
7	GAJAWALI	Upgradation	Private	Low density	3	worst	Best	Secure
8	RAMPURI	Upgradation	Private	Low density	2	average	Average	Secure
9	RAMLEELA TILLA	Upgradation	Private	Low density	3	Best	Average	Secure
10	KEVALPURI	Upgradation	Private	Low density	4	Best	Average	Secure
11	TELGODAM	Upgradation	Private	Low density	3	average	Best	Secure
12	SARVAT	Upgradation	Private & Local Body (14 Katcha DU's are in Small Dry Pond	Low density	2	average	Average	Secure
13	LADHAWALA NORTH	Upgradation	Private	Low density	5	Best	Best	Secure
14	KESHAVPURI / NUMASHEY CAMP	Upgradation	Private	Low density	2	worst	Best	Secure
15	BHARATEEY COLONY / BALMIKI	Upgradation	Private	Low density	2	worst	Average	Secure
16	PREMPURI	Upgradation	Private	Low density	4	Best	Average	Secure
17	GEHRABAGH	Insitu	Defense	Low density	1	worst	Worst	Insecure

Annexure 2D

S.No	Name of Slum	Mode of Development	Ownership of land	Density	Year Wise	Final housing _Code	Infrastructure_Code	Tenure status
18	JAMIANAGAR	Upgradation	Private	Low density	3	Best	Average	Secure
19	MAKKINAGAR	Upgradation	Private	Low density	3	Best	Average	Secure
20	REHMANIA	Upgradation	Private	Low density	2	Best	Worst	Secure
21	JANAKPURI	Insitu	Local body,Private& Red Cross Society	Low density	1	worst	Worst	Insecure
22	MEHMOODNAGAR	Upgradation	private	Low density	2	average	Average	Secure

Proposed budget for Slum free Muzaffarnagar

ANNEXURE -2E - Line Estimates in Lakhs

Sl.No.	Slum name	Ownership of land	Mode of Development	Housing Cost (Lakhs)	Physical Infrastructure					Social Infrastructure				Others	GRAND TOTAL (Lakhs)
					Water supply	Sanitation	Solid waste manage	Roads	Street lights	Educational facilities	Health facilities	Community halls	Recreational spaces		
1	MAHLUPURA	Private	Upgradation	330.04	3.80	20.43	0.83	0.00	3.57	0.00	0.00	0.00	2.83	21.69	383.19
2	AABKARI	Private	Upgradation	590.33	24.03	69.96	1.76	0.00	7.03	0.00	0.00	0.00	2.87	41.76	737.75
3	KALAPAAR KIDWAYI NAGAR	Private	Upgradation	461.61	32.05	131.62	1.57	4.50	12.10	0.00	0.00	0.00	3.01	38.79	685.25
4	KIDWAYI NAGAR	Private	Upgradation	55.75	4.36	27.45	0.37	0.00	3.57	0.00	0.00	0.00	2.86	5.66	100.02
5	INDRACOLONY	Private	Upgradation	78.05	2.29	24.46	0.46	0.00	2.16	0.00	0.00	0.00	1.44	6.53	115.40
6	UTTARI SHIVAPURI	Private	Upgradation	101.93	3.20	22.34	0.26	19.73	2.43	0.00	0.00	0.00	1.52	9.08	160.50
7	GAJAWALI	Private	Upgradation	93.66	4.60	36.62	0.37	28.55	3.69	0.00	0.00	0.00	2.91	10.22	180.63
8	RAMPURI	Private	Upgradation	494.78	1.96	24.96	0.97	0.00	2.43	0.00	0.00	0.00	2.46	31.65	559.20
9	RAMLEELA TILLA	Private	Upgradation	421.47	6.87	55.09	0.74	0.00	5.48	0.00	0.00	0.00	3.01	29.56	522.21
10	KEVALPURI	Private	Upgradation	159.22	4.07	25.12	0.39	0.00	3.21	0.00	0.00	0.00	2.75	11.69	206.44
11	TELGODAM	Private	Upgradation	102.58	2.07	17.14	0.28	12.06	1.66	0.00	0.00	0.00	1.67	8.25	145.70
12	SARVAT	Private & Local Body (14 Katcha DU's are in Small Dry Pond	Upgradation	129.53	11.43	74.07	0.62	0.00	8.49	0.00	0.00	0.00	2.87	13.62	240.63
13	LADHAWALA NORTH	Private	Upgradation	66.38	2.15	17.64	0.31	11.09	2.11	0.00	0.00	0.00	1.60	6.08	107.34
14	KESHAVPURI / NUMASHEY CAMP	Private	Upgradation	50.96	3.41	24.29	0.18	0.00	2.55	0.00	0.00	0.00	1.82	4.99	88.20
15	BHARATEEY COLONY / BALMIKI	Private	Upgradation	21.24	2.18	13.13	0.26	0.00	1.82	0.00	0.00	0.00	1.13	2.39	42.15
16	PREMPURI	Private	Upgradation	14.05	2.03	15.00	0.29	0.00	1.74	0.00	0.00	0.00	1.43	2.07	36.61
17	GEHRABAGH	Defense	Insitu	1957.98	10.16	50.88	1.26	51.94	5.43	0.00	0.00	0.00	2.73	124.82	2205.22
18	JAMIANAGAR	Private	Upgradation	37.91	4.26	26.41	0.19	23.59	2.80	0.00	0.00	0.00	3.01	5.89	104.05
19	MAKKINAGAR	Private	Upgradation	124.88	9.59	59.17	0.46	52.05	6.24	0.00	0.00	0.00	3.01	15.32	270.73
20	REHMANIA	Private	Upgradation	322.77	36.10	104.99	1.76	106.97	11.52	0.00	0.00	0.00	2.87	35.22	622.20
21	JANAKPURI	Private& Red C	Insitu	1057.57	1.78	8.93	0.67	0.00	1.39	0.00	0.00	0.00	2.03	64.34	1136.71
22	MEHMOODNAGAR	private	Upgradation	721.99	14.06	83.35	1.06	0.00	10.79	0.00	0.00	0.00	2.87	50.05	884.17
	Total			**7394.68**	**186.47**	**933.03**	**15.08**	**310.48**	**102.2**	**0.00**	**0.00**	**0.00**	**52.69**	**539.68**	**9534.30**