PARTICIPATORY MAPPING RESEARCH IN URBAN SLUM OF DELHI

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Under the guidance of
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INSTITUTE OF HEALTH
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This is to certify that **Dr. Garima Borwal**, student of MBA Hospital and Health Management from IIHMR University, Jaipur has undergone internship training at **TRIOs, Dwarka, New Delhi** from **12th February 2015 to 10th May 2015**.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements. I wish her all success in all her future endeavors.

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This is to certify that Dr. Garima Borwal has successfully completed three months of dissertation in our organisation from Feb 12, 2015 through May 10, 2015 under the guidance of Mr. Rajan Mahajan MBA, LLB, General Manager, TRIOs Development Support (P) Ltd, New Delhi. She has successfully completed her project on **Developing Slum Wise Micro-planning and Monitoring Mechanism in Delhi.**

During the internship period with us, we found her as a committed, sincere and diligent person who has a strong drive and zeal for learning.

We wish her all the success in her future studies and endeavours.

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Abstract

Participatory Mapping Research in Urban Slums of Delhi

Dr. Garima Borwal **(MBA Health Management)**

Key words: Participatory Learning Approach,Perception mapping,Transect Walk,Resource and Social mapping

Introduction: Participatory mapping is an interactive approach that draws on local people‟s knowledge, enabling participants to create visual and non-visual data to explore social problems, opportunities and solutions.PLA(Participatory Learning Approach) was used to conduct a qualitative survey in urban slums of Delhi. PLA involves local people and outsiders from different sectors and disciplines. Outsiders facilitate local people in collection and analyzing the information, practicing critical self-awareness, taking responsibility and sharing their knowledge of life and conditions to plan and to act. It is a way of learning from and with community members about their life and community as an integrated system.

Objectives: The main objective of this study was to assess the current scenario of Health, Water and Sanitation in the slums of North and South Delhi by using PLA tools and techniques.More specifically the objectives of the study were to:

- Identify overall health problems affecting men, women and children
- Identify barriers in accessing health care services
- Identify issues related to water and sanitation

Methodology: The study was based on qualitative analysis of the data which was collected from 30 slums based on PLA tools and techniques like Perception Mapping, Transect Walk, Resource and Social Mapping. Slum selected were the most vulnerable and issues related to Health, Water and Sanitation were deeper and pertinent. A PRA tool kit was prepared consisting of details about how to conduct PRA and having guiding questionnaires for Perception Mapping, Transect walk, Resource and Social Mapping.

Results: On analysis, it was found that the principal diseases affecting men,women and children were Tuberculosis,Leukorrhea and Diarrhea respectively.The people living in slums were facing more problems related to water and sanitation.The mother and children were utilizing the services provided by Anganwadi centers but there were some barriers in accessing the health care from hospitals.The poor behavior of staff ,unavailability of medicines and distance to health facility were some of the main reasons of not utilizing the health care services.

In some slums there was no water supply from Jal Board and people were mostly dependent on tankers and borewells compromising with the quality of water whereas in areas where the public stand points were available the problems of irregular supply and contaminated water were present.

The sanitation facilities were very poor.The slum populations had been forced to depend on public toilets to meet their sanitation needs. There were no toilets in some slums and if present, most of them were defunct. The conditions of functional toilets were miserable. Toilets were very few and those that existed were filthy, broken down and was not usable. Lack of cleanliness and unavailability of water in CTCs makes people of slums practice open defecation.

Conclusion: The participatory mapping helped in identifying existing issues related to Health,Water and Sanitation in urban slums of Delhi. Furthermore, a map produced in such a way can be used as a basis to take decisions in regard to sustainable project interventions e.g. which problems are the most important and require most attention. Information complied in such a way needs further research and complementary information in order to take a good decision where to start with implementation tools.

Acknowledgement

Any accomplishment requires efforts of many people and this project is no different. I have received munificent help from many quarters for developing this report, which I would like to put on record here with deep gratitude and immense pleasure.

First and foremost, I am glad to acknowledge my guide, Professor Anoop Khanna, IIHMR, University for incorporating right attitude in me towards learning and for helping and supporting whenever required.

It has been a proud privilege for me to work with TRIOs, New Delhi and I am highly obliged to Dr.Aravind Pullikal , Managing Director TRIOs for giving me the opportunity to work under his due guidance. I express my sincere gratitude to Dr.Keerti Jain, Project Coordinator to encroach upon her precious time from the very beginning of this work till the completion. Her expert guidance, affectionate encouragement and critical suggestions provided me necessary insight into the project and paved the way for meaningful ending of this report.

In addition I remain enormously thankful to all the Community Health Workers and Supervisors for their cooperation during the field visits and providing various data and information. Lastly, I am thankful to all the staff members of TRIOs who helped me during this project in any ways or means.

This project gave me an opportunity to learn about some very important aspects of Health, Nutrition, Water and Sanitation particularly in urban slums. I hope the lessons learnt by me while working on this project will help me in achieving a remarkable level in my future endeavours.

Dr.Garima Borwal

MBA Health Management

Table of Contents

Acknowledgement ..... **v**

List of Figures ..... **vii**

List of Tables ..... **viii**

Abbreviations and Acronyms ..... **ix**

Section A: Background **1**

Section B: Review of Literature **3**

Section C: Methodology **4**

1. Study Type 4
2. Study Area: 4
3. Study Population: 4
4. Data collection Tools: 5
5. Data Quality: 6
6. Approach: 10
7. Data Analysis: 22

Section D: Issues Identified **22**

Section E: Key Learnings and challenges **33**

Section F :Recommendations **35**

Annexure I: List of selected slum cluster **40**

Annexure II:Checklist for perception mapping **41**

Annexure III:Tool for transect walk **43**

Annexure IV:Resource and social mapping tool **44**

List of Figures

Figure No.	Description	Page No.
1	Source of water	34
2	Issues related to potable water	35
3	Water source per cluster (Okhla)	36
4	Water source per cluster (Govindpuri)	36
5	Reasons for open defecation	38
6	Availability of dustbins	40

List of Tables

Table No.	Description	Page No.
1	Factors to assess vulnerability of slums	32
2	Diseases in children(0-6) years	32
3	Diseases in women	33
4	Diseases in men	33
5	Barriers in accessing health care facilities	41

Abbreviations and Acronyms

ANM	Auxillary Nurse Midwife
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BCC	Behaviour Change Communication
CBO	Community Based Organization
CHV	Community Health Volunteer
CTC	Community Toilet Complex
IEC	Information Education Communication
MNCHN	Maternal, Neonatal and Child Health and Nutrition
PLA	Participatory Learning Action
PRA	Participatory Rural Appraisal
WASH	Water Sanitation and Hygiene

Section A: Background

The population landscape has been changing very fast the world over in last century. The industrial revolution, characterized with establishment of large industrial settlements triggered
large scale urbanization in India. According to Census 2011 and the Report of the Committee on Slum Statistics/Census (2010), the combined slum population of Delhi is approximately 32 lakhs. According to the NSS Report there are 1,058 notified slums and 2,075 non-notified slums in Delhi. As in the case of any other slum, the population in slum-clusters in Delhi too does not have access to civic facilities such as sanitation, street lights, health care centers, schooling facilities, roads, open space/parks, and markets. These inadequacies in slum areas result in worsening conditions in their livings with its growth. The lack of these services has both direct and indirect implications on the quality of life of slum dwellers, women and children in particular, as they spend most of their time in and around the unhygienic environment. The communities also have very limited access to and acceptability for Maternal Newborn Child Health and Nutrition services. This is due to lack of knowledge and awareness about healthy behaviors and practices. This situation leads to high rate of maternal and infant mortality in the urban areas and creates a vicious cycle of malnutrition and communicable diseases among them.

As highlighted by the 65th Round of the National Sample Survey (NSS 2008-09), nearly 88% of slums in Delhi largely depend on intermittent piped water supply; that 63% of slum-dwellers use tanks/ flush type latrine facilities for sanitation; that underground sewerage is found to exist only in around 23% of slums and around16% of the slums have no drainage system; local bodies collect garbage only from 66% of the slums whose frequencies vary from 43% on a daily basis to once in eight days and above in 20% of the slums. Above and beyond, nearly 24% of the slums do not have any regular mechanism for garbage disposal (Government of Delhi 2010).

There are various methods to assess the issues related to Health,Nutrition,Water and Sanitation prevalent in slums.One of the effective methods is Paricipatory mapping. It is an interactive approach that draws on local people‟s knowledge, enabling participants to create visual and non-visual data to explore social problems, opportunities and solutions. Participants work together to create a visual representation of their community using the tools and materials at their disposal. One of the strengths of participatory mapping as a research method is that it allows different features of a particular place, and the interplay between them, to be explored simultaneously. Physical and social geography, changes that have occurred over time, residents‟ personal and collective experiences, and their attitudes and perspectives on their environment are just a few of the subjects that can be explored through a mapping exercise. The approach explicitly recognizes local people as capable research collaborators, and it fosters empowerment in that it helps participants define and represent places and relationships that are important to them. Participatory mapping, can

therefore be more than a technical research exercise involving the extraction of data and information from the „subjects" of research: it can become a rich social encounter research participants and research facilitators.The process of mapping can contribute to building community cohesion, help to engage participants to be involved in resource and theme e.g. water, sanitation, nutrition related decision-making, raising awareness about pressing issues and ultimately contribute to empowering local communities and their members.

As an instrument of decision making in the planning process of participatory planning can be used to assure the incorporation of local perspectives and opinions, priorities and ideas.Participatory mapping allows getting an insight into a current situation, including the perception of the local stakeholders. This helps a planner to gain a deeper understanding of the local context. The map produced in such a way can serve as a basis for taking decisions how to change the local water, sanitation, nutrition and health situation.

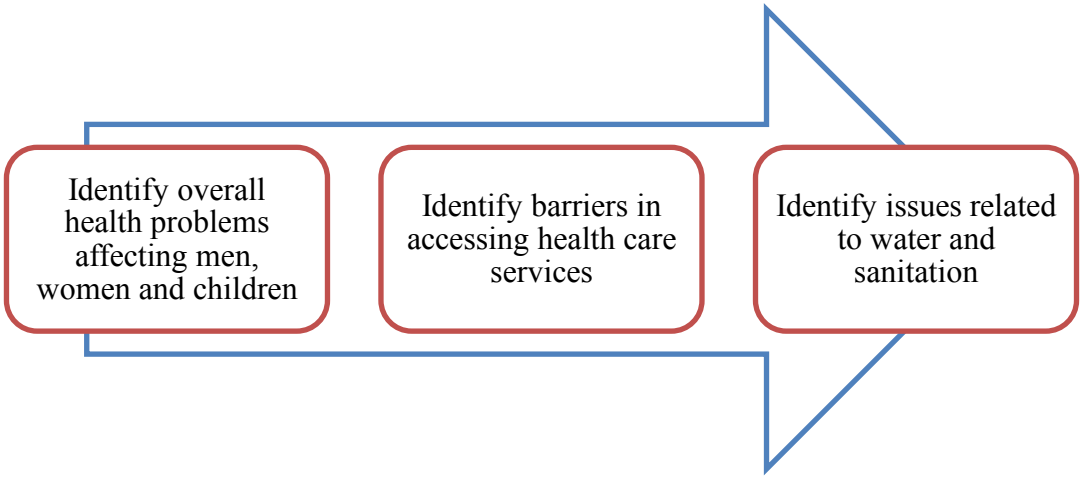
Furthermore, a map produced in such a way can be used as a basis to take decisions in regard to sustainable project interventions e.g. which problems are the most important and require most attention. Information complied in such a way needs further research and complementary information in order to take a good decision where to start with implementation tools.

The study used Participatory mapping research as an effective tool to assess the issues perevalent in slums of Delhi keeping in mind the following objectives.

Objectives of the assignment

- Overall Objective*:* The main objective of this study was to assess the current scenario of Health, Water and Sanitation in the slums of North and South Delhi by using PLA tools and techniques.

- Specific Objectives



Section B: Review of Literature

India is a part of the global trends where an increasing number of people live in urban areas. According to 2011 census, the share of urban population to total population has grown from 17.3 per cent in 1951 to 31.16 per cent in 2011.Urban Slum settlements – often referred to informal settlements without any formal title-represent the most visible manifestation of poverty in urban India. People living in urban slums lack basic services like access to water, access to sanitation, structural quality of housing, and security of tenure. The lack of these services has both direct and indirect implications on the quality of life of slum dwellers.

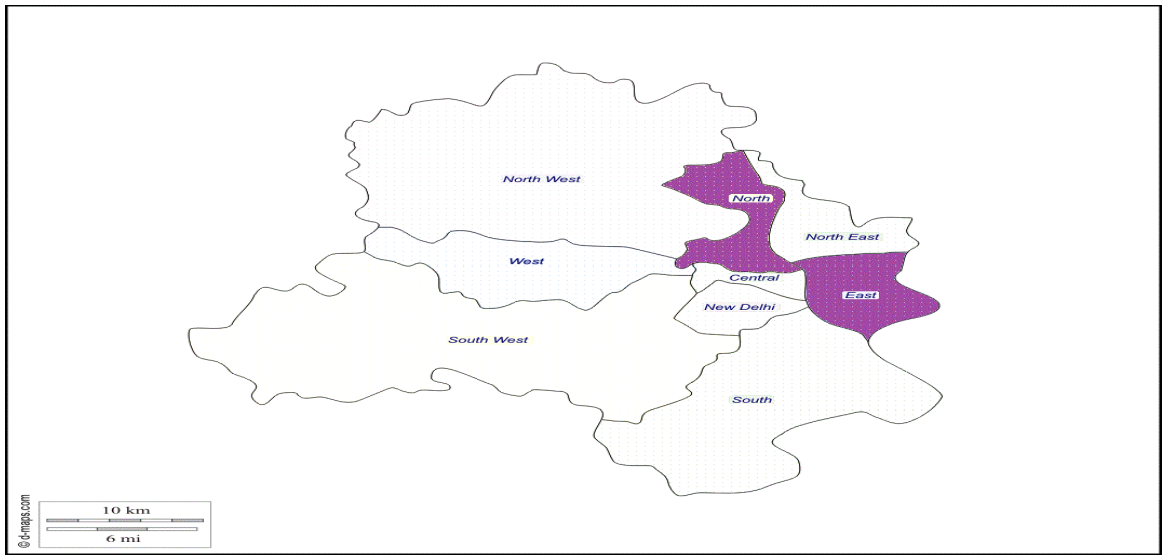
Maps prepared by community are a vital component to plan activities and interventions that can improve life of villagers/slum dwellers. Experience in over 100 villages in different states of India has shown that local people can map, diagram or model their village or community extremely accurately by using various PRA techniques. In Pune in 2011, a mapping project –***UTHAAN*** (meaning „rising from the bottom") was carried out by CHF International, Maharashtra Social Action and Housing League (MASHAL) and Urban Community Department (UCD) of the Pune Municipal Corporation, which aimed at strengthening urban planning processes by integrating the urban poor in city planning and development. It was a mapping project to create a database for Pune"s urban poor. The ***Utthan*** project did a comprehensive mapping of the slum dwellers, their needs and the socio-economic conditions. Women community workers were core to the mapping exercise and felt a sense of ownership in deciding development in their communities. The Utthan project showed how getting a community to map themselves is a great way to ensure that the focus is right, the community is engaged and the work gets done for the urban poor. Similarly in 2011, Gudhvan village in Maharashtra state used Participatory Rural Appraisal (PRA) tools to explore water problems of the village. The main objective was to understand the water scenario of the village and people„s perception about the Anjap-Sugave Multi-Village Scheme for drinking water.

A mapping project was started in 2010 as part of a larger child participation programme, supported by UNICEF and implemented by Prayasam, for both in school and out-of-school children in selected areas in Kolkata. The idea was to create a community map during a series of workshops on the UN Millennium Development Goals. At first, the children were trained to use traditional mapping tools. With the support of UNICEF and local non-governmental organization Prayasam, students created a colorful, hand-drawn map of their community. In Masindi District, Uganda in 2001, community participants were able to generate accurate maps of key community resources and used these maps in development planning, and successfully attracted funding for new community development initiatives. The information generated locally through participatory processes was used to strengthen local level decision making. The community database generated in this case study from use of PRA approaches proved useful for participatory rural development planning.

Section C: Methodology

1. **Study Type:** A qualitative study was conducted for the assessment in the intervened areas.

2. **Study Area:**



30 slum clusters were selected in North and South east area of New Delhi. Slum selected were the most vulnerable and issues related to Health,nutrition, Water and Sanitation were deeper and pertinent.
List of sampled slum cluster is attached as **Annexure-I**

3. **Study Population:**

	Area	No of slums	Population(apprx)
North Delhi	Jahangirpuri	5	50,000
	Bawana	5	50,000
South-East	Okhla	10	1,00,000
	Govindpuri	10	1,00,000

4. Data collection Tools:

A PRA tool kit was used consisting of details about how to conduct PRA and having guiding questionnaires for Perception Mapping, Transect walk, Resource and Social Mapping. PLA- PRA kit was especially designed for urban slum areas with a high proportion of low-income housing and thus the options presented under each question reflect this situation. It was also taken care of that community members will use the kit to implement the exercise that is why tool was designed to be more interactive, special care was taken to use easy language, so that community members could easily understand and comprehend the matter moreover colourful diagrams were also incorporated to make the kit more attractive and appealing. The tool kit was developed in English and was translated in Hindi also. This guide contains step-by-step training instructions on filling up of tools and methodology and process for Perception mapping, Transectwalk, Resource and social mapping.

PRA / PLA tool kit consisted of the following sections :

1) Overview of the assignment
2) Over view of Participatory Learning action (PLA)
3) Tools for PLA/PRA
Tool 1: Perception mapping/ Need assessment
Tool 2: Transect Walk
Tool 3: Resource Mapping
Tool 4: Social Mapping

Methods/ Tools used for PRA activity:

A. Perception Mapping:This tool is a visual method of identifying and representing perceptions of key institutions (formal and informal) and individuals inside and outside a community and their relationships and importance to different social groups.

This was done at the first stage to get a sense of the various issues of health, nutrition, water and sanitation in the slum and how the various issues are perceived and to identify the very vulnerable locations that would need special focus.
Tool attached as **annexure II**

B. Transect Walk: A transect walk is a systematic walk along a defined path (transect) across the community/project area together with the local people to explore the water and sanitation conditions by observing, asking, listening, looking and producing a transect diagram. The transect walk is normally conducted during the initial phase of the fieldwork. It is best to walk a route, which will cover the greatest diversity in terms of water resources and sanitation infrastructure. The transect walk is conducted by the research team and community members. The information collected during the walk is

used to draw a diagram or map based on which discussions are held amongst the participants.

Based on the perception mapping described above, a Transect Walk was organized in selected locations, especially in locations that are considered highly vulnerable. The Transect Walk complemented the Resource and Social Mapping and the perception mapping and became the basis for the mapping process.

Tool attached as **annexure III**

C. Resource Mapping:The resource map is a tool that helps us to learn about a community and its resource base. The primary concern is not to develop an accurate map but to get useful information about local perceptions of resources. The participants should develop the content of the map according to what is important to them.

It gave a visual representation of the slum area showing the available resources. In this particular instance, it was used to depict the households, the health facilities, the ICDS centers, public utilities like water pumps, toilets etc. and other facilities that have a bearing on the provision of Health, nutrition and water and sanitation services. Thus, it helped in identification of the areas where the intervention and program activities could be done; the resources available to enable this or, any additional resources that were needed to ensure effective implementation and who could be the potential partner to enable this.

D. Social Map: Derived from the resource map, it helped in indicating the issues of accessibility, availability, acceptability and utilization – how easy the locations are for the children, the mothers, the poor in urban slums, how many public utilities and facilities are available in the slums and other related areas. It helped in identification of vulnerable or difficult spots that needed special attention.

Tool attached as **Annexure IV**

5. Data Quality:

Pretesting of tools was done to determine the quality of tools . For pilot testing of tools, two days orientation was conducted at Slum vikas Kendra in program offices of *Navjyoti Development society*, one of the partner NGO.interview with respondents, a kind of mock exercise to come across the loopholes in the data collection tool.Tools were filled to know the quality and subsequently required changes were incorporated in the final tool before starting the actual survey.

The rationale behind the pretest the tool was to check its consistency, relevance and to point out any problems with the test instructions, instances where items are not clear, and formatting and other typographical errors and/or issues.To serve the purpose two days orientation included one day theoretical discussion and second day for field visit was planned.

On the first day, members from TRIOs & the client , along with partner NGO team and local Community Health Volunteers (CHV) participated.Orientation was initiated by TRIOs team commencing with informal introduction and interaction with the partner NGO members andcommunity members to break the ice.

After introduction,PRA Tool kit was thoroughly discussed with the members to know about their knowledge of prevailing issues related to Health,Nutrition,Water and Sanitation in their community and based on their knowledge they were explained how to draw a map of their area depicting the households, the health facilities, the Anganwadi centers, public utilities like water pumps, toilets etc. and other facilities that had a bearing on the provision of Health, nutrition and water and sanitation services and how this map would help in improving the present situation. The orientation on tools helped the community members to develop a clear understanding of the procedure to develop the map the very next day.

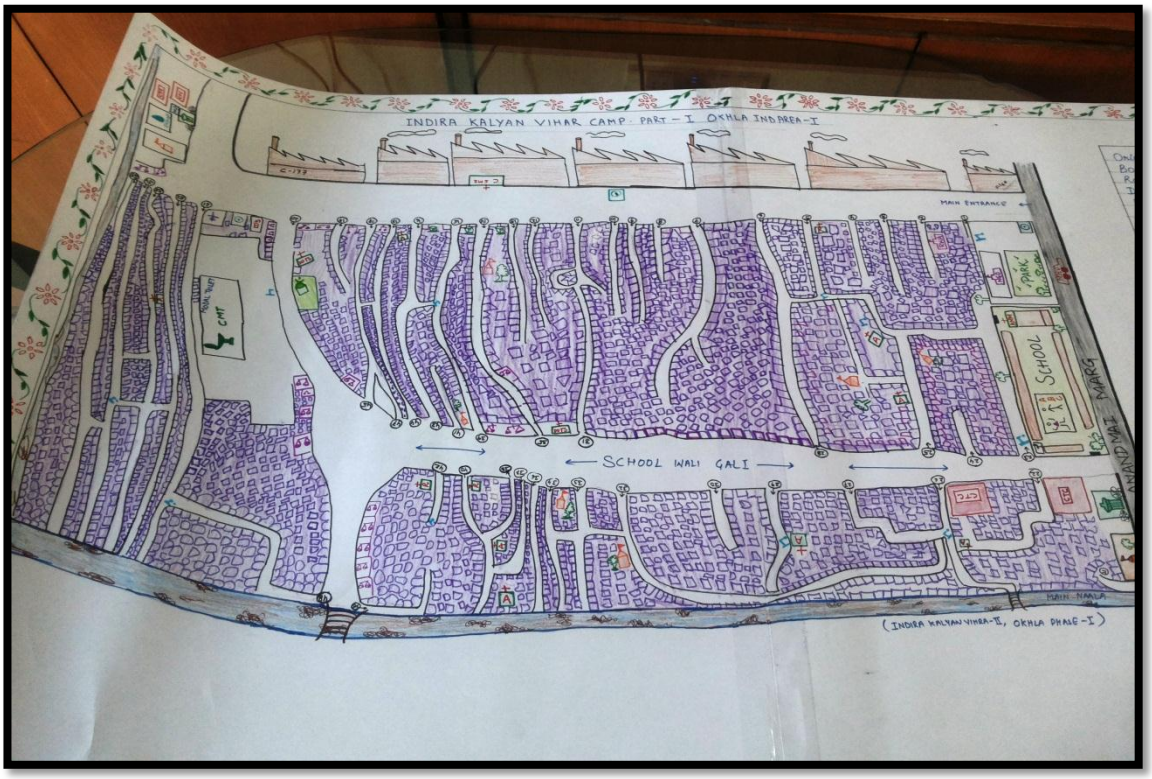
The second day of the workshop started with a reflection of the previous day‟s activities at **Indira Kalian Vihar,Okhla Phase-I** (Slum was selected for the pilot testing of tool),

For this process, community members from Resident and Welfare Association, slum Pradhan, Community health volunteers etc., joined the team. All the participants were oriented with the mechanics of the whole activity for the day. Then interaction started with community members and members of RWA to get a sense of various issues of health, nutrition, water and sanitation and how various issues are perceived and to identify the very vulnerable locations which needed special focus.This formed a basis of Perception mapping.

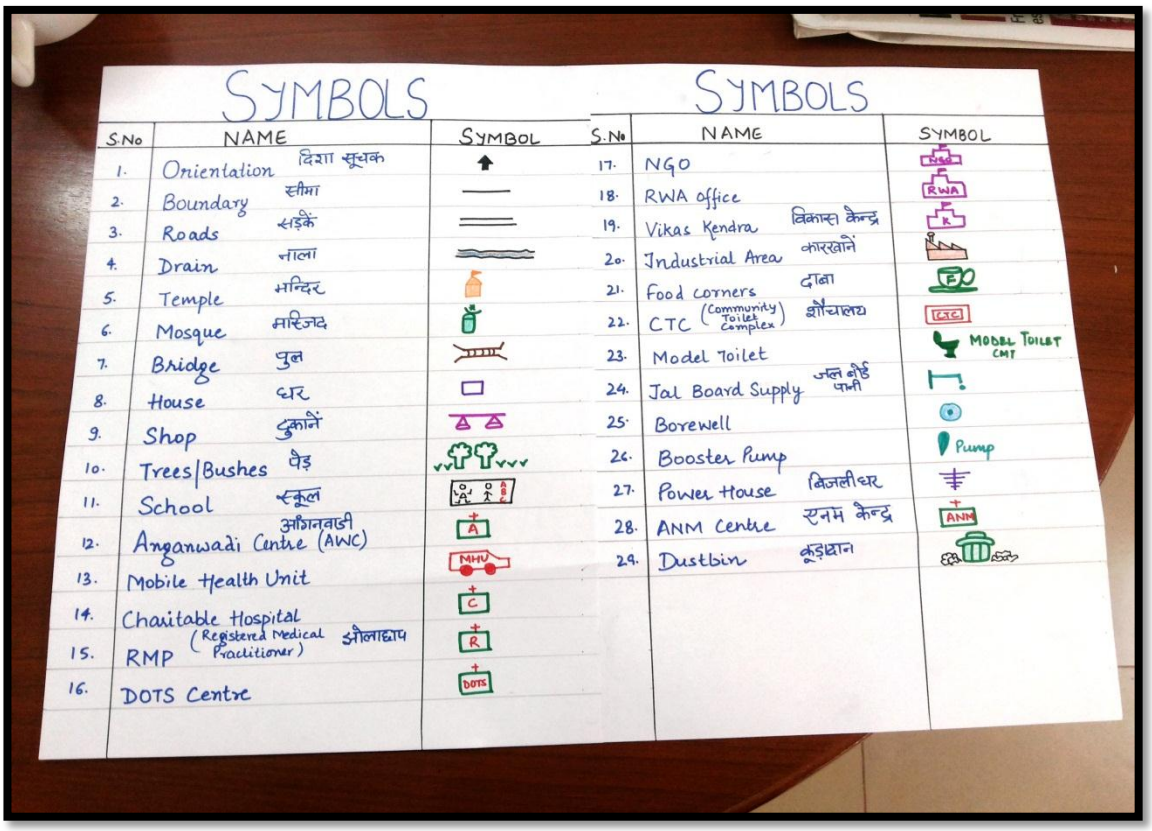
Based on perception mapping, it was decided to go for Transect walk in selected areas of the slum, especially in locations that were considered highly vulnerable. The Transect walk was marked on a chart paper and one of the members recorded the discussions as the walk progressed. The pictures of some areas were also clicked. Following the walk, the map was validated by discussions with some local persons.Through the use of PRA tools diversified information regarding Health, water supply and sanitation was collected. First of all some basic information regarding population of the slum, migrants, health facilities, water and sanitation facilities were discussed. Then characteristics of Health facilities, water and sanitation facilities, and causes behindpoor water sanitation condition were identified.After the completion of Transect Walk, the mapping process started.

The community members participated enthusiastically in drawing the map of their area.At the end of the whole day session the participants were able to produce their 1st base map of the**Indira Kalyan Vihar**under the guidance of TRIOs team.The map gave a

visual representation of the slum area showing the available resources and depicted the households, the health facilities, the ICDS centres, public utilities like water pumps, toilets etc.The map helped in identification of the areas where the intervention and program activities could be done; the resources available to enable this or, any additional resources that would be needed to ensure effective implementation and who could be the potential partner to enable this.



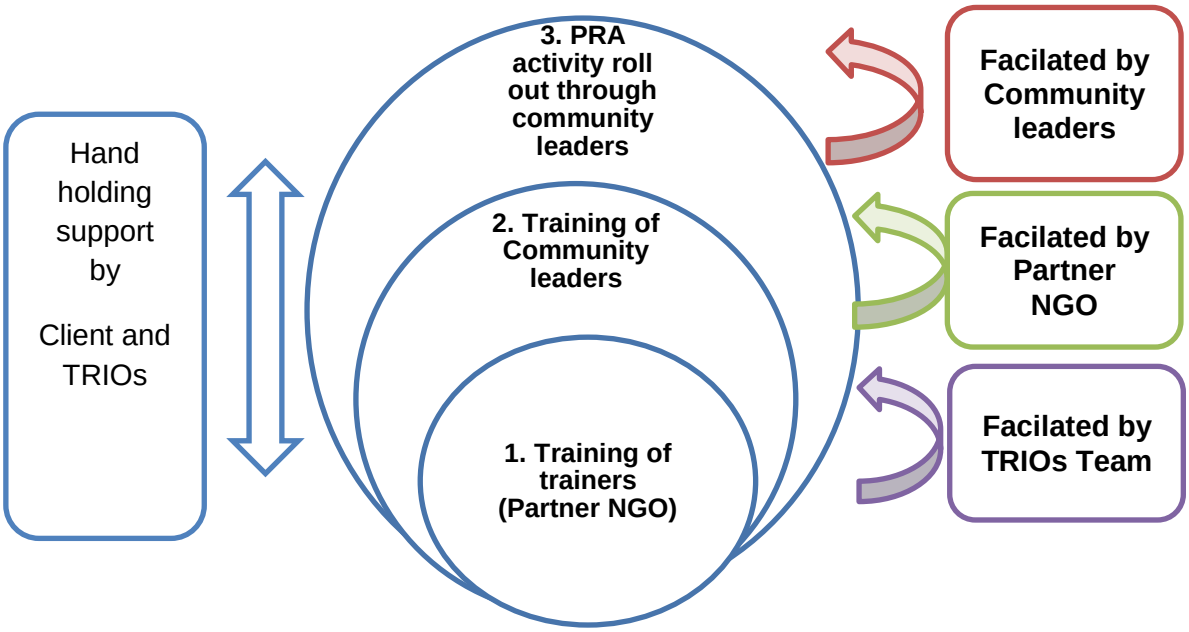
Map of Indira Kalyan Vihar Phase-I



Symbols used in drawing maps

6. Approach:

The broad approach and tasks for the project undertaken was given below.



Training of trainers is the practical component of the assignment. It entails bringing together all the partner NGO teams to plan and implement exercise that uses some of the tools of PRA. Approaches learned during the workshop in collecting data were used to conduct the training for the community member.

The training programme on PRA was designed to develop the master trainers for developing a micro plan of selected slums in North and South Delhi .The Master trainers further trained the community in Participatory Rural Appraisal (PRA) methodology during community trainings to collect required information from the slums and also to take people participation (and their perceptions) into consideration in developing a Micro plan of the slum.

1. Training of trainers:

Purpose:

The training of trainers (TOT) workshop was conducted for capacity building of the program staff of implementing partners on the use of tools for mapping exercise and further how to mobilize and orient community for the filling up of tools and drawing the maps.

Since the partner NGO staff was the core implementers for the social mapping and participatory micro planning exercise, they were trained about the planning and monitoring framework and how to do planned activities using the tools.
This was a lucid way to propagate the right planning and monitoring approach to community and promotes community led initiatives for dealing with health and WASH issues.

Objectives:

The TOT had following objectives to:

- Train 16 to 20 professional Partner NGO staff skills and knowledge for PLA techniques and effective community mapping and planning and completion of their activities in a timely and successful manner, so that they further act as resource person for community training.
- Lay the basis of field activity roll out.

Preparation: Selection of suitable venue, which have functional audio and visual aids like LCD, flip charts and writing board and have suitable and comfortable seatingarrangements with all basis requirments

Participants and Methodology

- Four members each form four implementing NGOs from selected 30 slums

The Training approach was based on **adult learning** style, taping on the participants experience and skills through group work and mock sessions. Training methodology covered both classroom discussions and field practice. Apart from the theoretical introductions, practical PRA fieldwork was also conducted during the training, so that participants were also given an opportunity to understand it better.

Proceedings:

After that the brief introduction about TRIOs and overview of the meeting was given. Once the session was opened, it was continued by giving the objectives of the training, a brief about micro planning followed by the participants,, expectations from the training. A leveling of expectations between the participants and training team was done to check the appropriateness of training design, to ensure the timeliness of the of the schedule and the acceptability of the training methods. Two volunteered participants were identified to chair the training session.

The following were few expectations of the participants:

- Purpose of community mapping
- Differentiation of PRA in Rural and Urban Context
- Micro planning for what and its extension?
- Gaps in implementing micro planning tools
- How to avoid past experiences of failure of micro planning?

The expectations of participants were noted down on flipcharts and were pasted on the wall to be discussed in detail at the end of the session.
The session was taken forward by assigning group work to the participants from each NGO.

Participants were asked to discuss the following questions:

- Key limitations of the project done earlier related to Health, Nutrition and WASH?
- What are the suggested activities, if given chance to curb those limitations?
- How would you plan those activities?

The group work was to enable participants to share their experiences, challenges that they had faced as they have worked on different projects related to Health, Nutrition and WASH.The participants also made presentations of their projects; and plenary comments were provided. Group work was presented in plenary with discussions from the floor and further explanations. This helped narrow the group‟s focus and interest for this Training - primarily, Health, Nutrition, Water and Sanitation Related Information. Facilitators make maximum use of two-way communication by inviting commentsand queries from the trainees and sharing views with them.
The afternoon session was devoted to the understanding and proper reading of Tools. For this, first the demo was given on “how to facilitate the session?” and then the mock sessions were conducted to practice all the tools of PRA. Two members from each team were asked to act as facilitator and a note taker. Facilitator asked the questions and note taker was listing down the responses. This exercise helped the participants in understanding the way they are going to ask to the community about their different issues.

Key Messages:

- **Purpose of mapping:** -Participatory maps provide a valuable visible representation of what a community perceives as its place and the significant features within it. The process of mapping can contribute to building community cohesion, help to engage participants to be involved in resource and theme e.g. water, sanitation, nutrition related decision-making, raising awareness about pressing issues and ultimately contribute to empowering local communities and their members

- **Ascertain the effective participation of community mobilization:**Community participation is the key to success of PRA. Participants were told how to ascertain the effective participation of community, by thoroughly reviewing their free time and availability.

Result: The training provided program staff a clear idea about various features of the tools and how to use them while doing micro planning with the participation of community. Various issues related to community mobilization, motivation, aspects of community led campaigns, participatory planning and monitoring and other relevant topics were tapped during the sessions.

Day 2: In the reflections by participants on the previous daysthe participants were taken to the field to practice the tools and to draw a community map. Areas selected for field visit were **Jeevan Jyoti camp** and **Janta Jeewan Camp**. The participants were randomly divided into two groups and were sent to two different slums. The field work component gives training participants an exposure on how to undertake assignment that ultimately helped them to obtain information that enabled them to understand the slum dynamics, linkages and opportunities better. Fieldwork strengthened the overall impact of the training through **learning by doing.**

The fieldwork aimed to expose participants to converse with the community that helped them to obtain information on various issues related to Health, Nutrition, Water and Sanitation. Fieldwork will strengthen the overall impact of the training through learning by doing.

During the PRA fieldwork participants used different tools to collect information and to conduct PRA exercise. At the end of the day, each group presented their maps and shared their mapping experiences in the area. Facilitators from TRIOs and Save the children also commented on the performance of each group and in addition to that, they were also told about the shortcomings to perform PRA.

Overall feedback:
Finally concluding the day activity overall feedback was taken from all the participants. From the comments, received from the participants, it could be elucidated that this group felt that for them it was excellent as a learning experience. Most of them appreciated the comprehensiveness and relevance of the tool. Few candidates suggested that more tool for PRA should be included, to capture the more information. Few of the candidate suggested that the duration of the workshop was insufficient for the scope foreseen.

2. Community trainings-

Purpose:
It was conducted for capacity building of the community group members and leaders on the use of tools for mapping exercise and further how to mobilize and orient community for the filling up of tools and drawing the maps.

Objectives: Train 20- 30 community group members or leaders on the skills and knowledge for PLA techniques and effective community mapping and planning and completion of their activites in a timely and successful manner, so that they further conduct the PRA

Preparation:
- Preparation of the quality assessment checklist for quality of training
- The schedule of Community training was prepared to provide sufficient time for each implementing partner.NGOs having 10 slums were given 2 days of training.To enable the trainers to provide training to CHWs and community, PRA tool kit was also translated into Hindi. This guide contains step-by-step training instructions on filling up of tools and methodology and process for Perception mapping,Transectwalk,Resource and social mapping. The PRA tool kit was distributed to all participants and they were oriented on how to use each section.

- The selection of training venues and division of participants for all the batches were done keeping in mind the accessibility and proximity concerns. This rational approach contributed in ascertaining maximum participation of the community

Team

- The trained program staff acted as co trainers for conducting capacity building

Participants and Methodology

- 4-6 community group members/leaders from each slum who were selected by Partner NGOs for this exercise

The Training approach was based on **adult learning** style, taping on the participants experience and skills through group work and mock sessions.Training methodology covered both classroom discussions and field practice. Apart from the theoretical introductions, practical PRA fieldwork was also conducted during the training, so that participants were also given an opportunity to understand it better

Proceedings:

For the fieldwork in the training course the facilitators formed four (4) interdisciplinary teams. Each team chose its own team leader and a note taker. TRIOs team members monitoredthe activities in all the areas so as to refine it as the need arises. One or two facilitators were assigned to each sub-group to provide technical backstopping.

After a brief introduction of the participants and a description of the purpose of the programwas narrated, the facilitators sought the resident‟s views on issues pertinent to the slum.The group voiced concerns on sanitation and cleanliness, limited access to welfare schemes, and the cost of health care. The facilitator attempted to shift the group‟s focus towards issues that are most critical, and especially those where community members could take the initiative with minimal outside support and contribute on their own to improving the basti. The discussion eventually focused on good health as the outcome of any activity whether it was improving sanitation or getting access to benefit schemes. The group members reached a consensus that water and sanitation facilities were of critical importance to them.

All the teams had detailed discussions on

- How to approach the community,
- The steps to be followed in collecting data, different tools that can be used for collecting data from the slum community, and the lessons learned. Each group ensured that data collection did not become an end in itself. It was also stressed that participants should realize that communities have a better understanding of their issues and have the capacity to solve their own problems, with outsiders acting as facilitators and catalysts.

Local solutions, it was emphasized, solve local problems best. The need for unlearning that we outsiders know everything was the central theme of this learning exercise.

- Various tools to be used and types of interview techniques to be adopted for information collection by a walk through session with the tools and mock session so that the community members become entirely conversant with the formats
- How to facilitate the session and planning of the slum visits was undertaken.

Session was concluded and the planning of the field visits were done.

3. Field roll out activities-

The field activities were carried out in 30 slums of North and South Delhi. TRIOs program team provided a hand holding support in carrying out all the activities.

Work Plan of the activity:

The work plan of all the activities was shared by all the implementing NGOs before leaving to the field. However, after the community trainings were conducted by the NGOs on the first day of the PRA activity, it was realized that the time for the field activity had to be revised due to different practical constraints such as availability of the community members in different slums. There was an attempt to schedule the events with the aim of gaining maximum people,,s participation. Most of the field activities were planned to start at 11 am when women get free from their household chores.

Proceedings of field activity followed for all the slums:

Community mobilization was the first step in starting the field activity. It was very important to encourage community members to talk about the issues related to health, nutrition, water and sanitation in their respective slums. A mixed group consisting of men, women and children of all age groups were involved in the activities so that their experiences are known directly rather than from other informants who may not be as familiar with their issues and practices. For eg the issue related to school toilets can be best answered by the school going children. They can easily tell all the problems that they encounter daily in schools related to sanitation. Others can just give an idea but not the real problems. In the field, tools related to Perception mapping,Transect walk, Resource and Social mapping were used while conducting field activities.

i. **Perception Mapping**: This tool is a visual method of identifying and representing perceptions of key institutions (formal and informal) and individuals inside and outside a community and their relationships and importance to different social groups.

Steps followed while conducting Perception Mapping:

Step 1: Selection of community members: Trained community group member and leaders identified the groups of local people to talk about their perceptions of their local institutions/ facilities and local issues in the area related to health, nutrition and WASH.

Step 2: Introduction and Discussion: Started with the introduction of all the participants the facilitators provided a clear explanation of objectives of the discussion. The discussion started with the people to get a sense of the various issues of health, nutrition, water and sanitation in the slum and how the various issues are perceived by the community.

Step3: Method used: The facilitators used one sheet of paper/chart with one question form checklist for perception mapping on each page. Community members replied for each question which was noted down by the note taker and then facilitators asked the people to raisehands for the responses they gave while answering the question. The number of hands raised for each response was counted and then color coding was done for each option as per prevalence or severity.

For example, the facilitator asked the principal health problems affecting children in age group of 0-6 years. Out of 20 people, 18 said that Diarrhoea is the most common disease affecting the children in age group of 0-6 followed by Cough/cold and pneumonia. Now diseases were prioritized based on the rating and red color was marked for diarrhea with maximum number of respondents.

S. no	Question	Response	Number of people responded	Rating of issues identified
1.	What are the principal health problems affecting children under six years of age in this community?	Diarrhea	18	BAD
		Cough/cold	16	BAD
		Fever	14	NEUTRAL
		ART	10	GOOD
		Pneumonia	15	BAD

This was a very important tool to get a sense of various issues related to health; nutrition and wash as the condition of all the slums are not same. People living in slums perceive the issues in their own way. In some slums children suffer mostly from pneumonia and not diarrhoea .In this way, Perception mapping helped a lot to prioritize the activities to be done for different slums.

ii. Transect Walk:

A transect walk is a systematic walk along a defined path (transect) across the community/project area together with the local people to explore the water and sanitation conditions by observing, asking, listening, looking and producing a transect diagram. It is best to walk a route, which will cover the greatest diversity in terms of water resources and sanitation infrastructure. The transect walk was conducted by the NGO members and people from the community. The information collected during the walk was used to draw a map based on which discussions held amongst the participants during perception mapping.

Steps followed while conducting Transect Walk:

Step 1: Selection of community health volunteers, and set a time: Members of the community were selected by the NGO members who were knowledgeable about each area to be covered and with a variety of opinions and experiences, who were interested in conducting the transect walk, as well as those interested in analysing the results of the walk. Time was also set to complete the walk so as to avoid wastage of time and to start with social and resource mapping on time.

Step 2: Introductions and Explanations: When working with the group, it was explained carefully and clearly the objectives of the walk and discussion.

Step 3: Analysis of criteria for observation: Parameters to be observed were already decided and were explained to the observers to be used for recording observations. Local definitions of these parameters were already explored during discussions. Five or six parameters were covered and recorded at maximum because trying to collect too much information would have resulted in confusion. The observerwas asked to lookfor:

- Location of health facilities (government, private)
- Anganwadi centres
- Sanitation (e.g. water, sewerage, garbage collection and blockage points)
- Contaminated spaces

Step 4: Conducting Transect Walk :

Local informants selected the route especially in locations that are considered highly vulnerable.Walk was started from a common point and was marked in the rough map by the

note taker. As the walk progressed, when any of the key resources were found it was recorded based on the parameters. All analysts examined the area for the observation criteria and also talked to talk with residents in the area who would like to contribute their opinions as well.

All the details were observed and recorded as the walk progressed. Sketches were also made by some of the observers where necessary. The team was walking slowly with the local informants to understand the physical features in the village from different perspectives. People were also interviewed who were met along the way to obtain their perspectives about those resources. After the transect walk was over the team came back to the venue where the perception mapping took place with the local informants to discuss and record the information and data collected and then prepared an illustrative diagram of the transect walk using the information.

Step 5: Analysis of a Transect Diagram. Questions were discussed with the observers about the information gathered during the transect walk, using toll for transect walk
The transect diagram was analyzed to make a simple record of resources and issues in a community.

iii. **Resource and Social Mapping:**

Resource map gives a visual representation of the slum area showing the available resources. In field activities, it was used to depict the households, the health facilities, the ICDScentres, public utilities like water pumps, toilets etc. and other facilities that have a bearing on the provision of Health, nutrition and water and sanitation services. Thus, it helped in identification of the areas where the intervention and program activities could be done; the resources available to enable this or, any additional resources that were needed to ensure effective implementation and who could be the potential partner to enable this.

Derived from the resource map, social map helped in indicating the issues of accessibility, availability, acceptability and utilization – how easy the locations are for the children, the mothers, the poor in urban slums, how many public utilities and facilities are available in the slums and other related areas. It helped in identification of vulnerable or difficult spots that needed special attention.

The resource and social map prepared by the community helped to learn about a community and its resource base. The primary concern was not to develop an accurate map but to get useful information about local perceptions of resources. The participants developed the content of the map according to what is important to them.

Steps followed while conducting Resource and Social Mapping:

Step 1: Selection of Local Informants. A group of five to ten people was selected to talk to about their local resources.

Step 2: Drawing a Community Resource Map: The community people in a group started preparing a map under the guidance of the facilitators. The symbols used were similar to one used while preparing a base map during pilot testing.There was a little confusion among the villagers in the beginning, how to do the mapping and the facilitators were helping them all the time. The base map drawn during pilot testing and the list of legends were very helpful in explaining the process to them.After this initial push from the side of facilitator, there was an active participation from the part of villagers and the entire mapping was done by them. People from all age

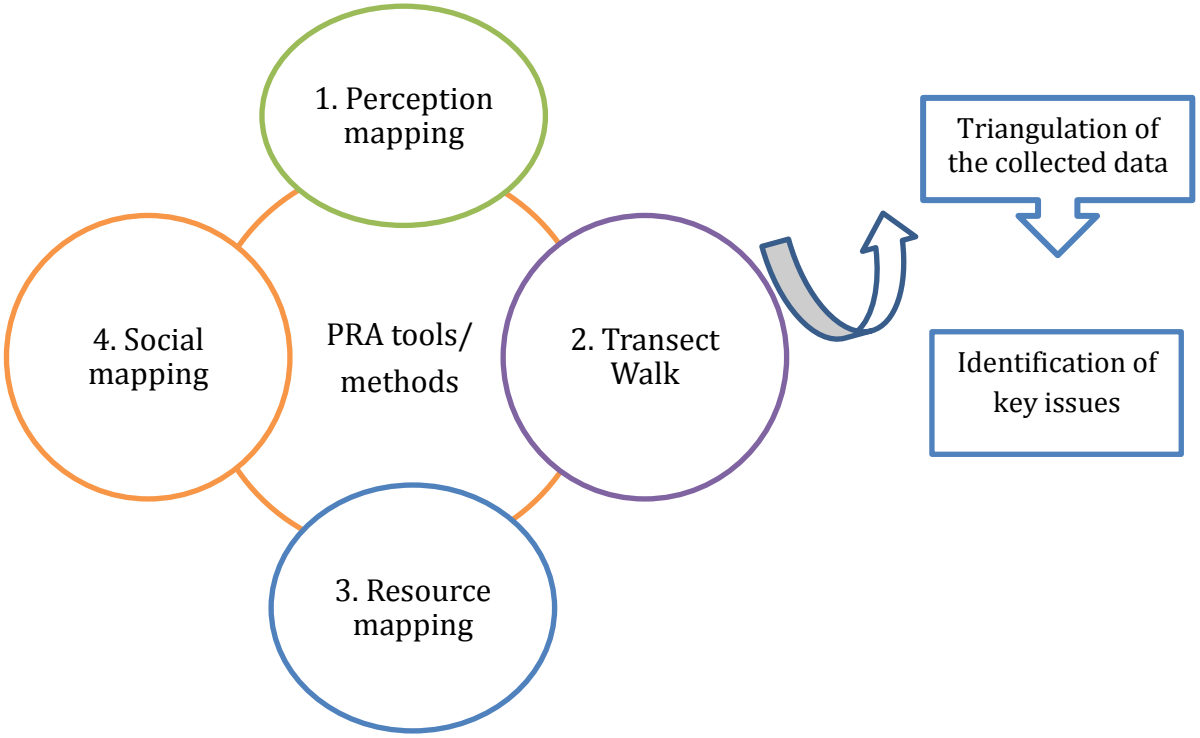
groups contributed equally. Maps were started by preparing the outline or boundary of the map. Landmarks were also marked on the maps that are important.

The map depicted households, the health facilities, the ICDScentres, public utilities like water pumps, toilets etc. and other facilities that have a bearing on the provision of Health, nutrition and water and sanitation service.While one person was marking the boundaries and making streets, the other people were drawing the shops, households and other resource centres. Some of the landmarks such as temples and some streets were introduced by the people randomly, for their own better understanding of direction and position. But this did not affect the flow of the process.

Step 3: Analysis of Resource Map. Once the map was completed, it formed a basis for conducting semi structured interviews on topics from tool or for collecting more statistical data. Information was collected from the community people on issues of accessibility, availability, acceptability and utilization of the resources they have drawn on the map.How easy the locations are for the children, the mothers, the poor in urban slums, how many public utilities and facilities are available in the slums and other related areas.
The discussions were noted down and recorded.
.A total of 30 maps were prepared along with a list of all the issues identified.

7. Data Analysis:

Triangulation of data gathered from various tools was done along with the analysis of maps prepared by the community to get a comprehensive list of issues related to Health,Water and Sanitation.



Section D: Issues Identified

The issues identified during field visits in 30 slums of North and South Delhi were the lack of basic services like safe drinking water, clean toilets, bathing units, health services garbage disposal. These basic services were found missing or inadequate in the slums. Lack of these services pose series of threats to the health of community, women and children in particular, as they spend most of their time in and around the unhygienic environment

An approach for assessing vulnerability of urban slums was developed based on the factors mentioned below:

Table 1: Factors for assessing vulnerability of urban slums

Factors	Situation affecting health Vulnerability in slums
Health and disease	• High prevalence of diarrhea, fever and cough among children • High prevalence of Leukorrhea and anemia among women
Living environment	• CTCs were not clean and maintained and in some slums people practice open defecation • Some slums have no access to water • Overcrowding & Poor housing • Irregular visits of MCD trucks to collect garbage • Water Logging and no sewage system
Social conditions	• Widespread alcoholism • Drug addiction • Eve Teasing • Gender inequity • Poor educational status
Access and use of public health services	• Lack of access to primary health care services • Poor quality of health services • Long queues and waiting hours • Impolite behavior of doctors and staff • Unavailability of medicines • Cost of travel to health facilities is high

1. Health Problems:

Based on perception mapping,diseases affecting men,women and children were identified.The population sufferd from many health problems but there were some principal problems affecting them.List of such diseases has been prepared along with their proximate causes and is mentioned in tables below:

Table 2: Diseases in children 0-6 years of age

Sno	Nature of Disease	Proximate causes
1	Diarrhoea	Bad quality of drinking water,Unhygienic living conditions
2	Pneumonia	Seasonal
3	Cough/Cold	Seasonal
4	Jaundice	Bad quality of drinking water
4	Fever	Associated with other health problems

5	Malaria/Dengue	Open garbage dumps/Dirty open drains/Stagnant water
6	Abdominal Pain	Infection

In almost all the slums people felt that the principal disease affecting most children in the age group of 0-6 years was **diarrhea**.Some responded that lack of safe drinking water leads to diarrrhoea while others had a view that children while playing in dirt put their hands in their mouths leading to diarrhoea..Children play in the premises of CTCs and therefore diarrhoea is closely linked to lack of proper sanitation system especially identified by respondents. The respondents felt that the children were more vulnerable as they could not lock their children in the houses even though they understood the dangers of them playing outside.

Table 3: Diseases affecting women

Sno	Nature of Disease	Proximate causes
1	Leukorrhea(White Discharge)	RTI infection,Complication in pre-post pregnancy stage
2	Urinary tract infection/Reproductive tract infection	Poor personal hygiene ,Lack of Bathing units and toilets for daily use
3	Anemia	Poverty, lower literacy, poor living condition, repeated births, and limited access to health care facilities
4	Acute tiredness,Weakness	Inadequate food intake, heavy work load
5	Severe back aches	Work related both household and other
6	Headaches	Inadequate food intake/work environment and overall living conditions

Based on perception mapping ,it was found that the main disease affecting women of almost all the slums was **Leukorrhea(White discharge)**.Some women also complained of menstrual problems like excessive bleeding,irregular periods.Other health problems included Urinary tract infections ,tiredness, backache, headache and pains in legs,feeling dizziness, loss of weight, low vision, obesity, back pain, weakness etc

Table 4: Diseases affecting men

Sno	Nature of Disease	Proximate causes
1	Tuberculosis	Smoking,Unhygienic living conditions
2	Gastric problems	Improper food habits,indigestion
3	Chronic diseases (Hypertension,Diabetes)	Poverty, poor socio-economic conditions, lack of awareness, stress due to urbanization,lack of adequate medical services

5	Chest pain	Smoking,Chronic diseases
6	Asthma	Overcrowding,Housing near factories and busy roadways

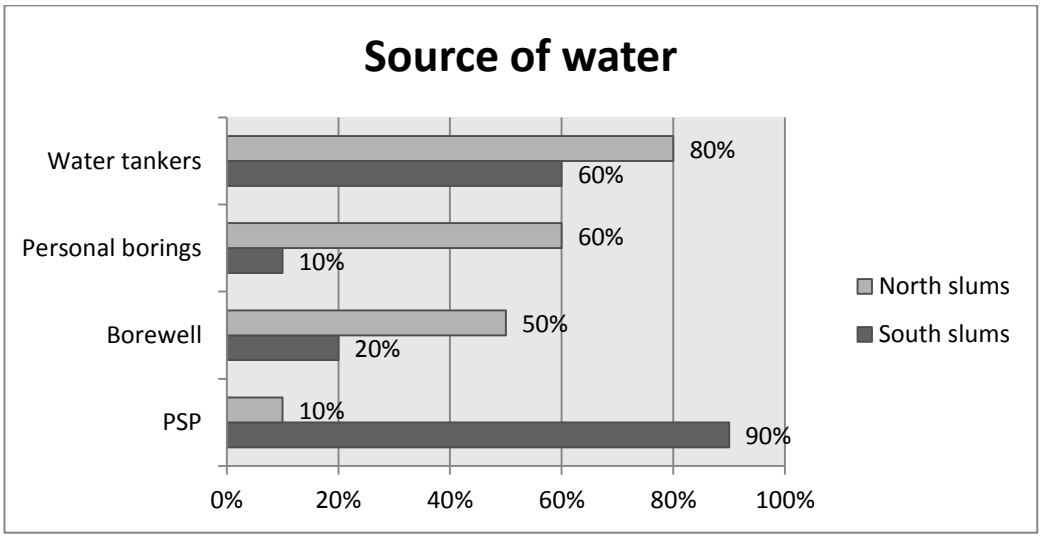
The most common disease affecting men in all the slums was **Tuberculosis** followed by gastric problems**.** The men in slums were also vulnerable to diabetes and hypertension due to poverty, poor socio-economic conditions, lack of awareness and stress due to urbanisation. Lack of adequate medical services in un-organised slums compounds the problem since people remain un-diagnosed and continue to suffer silently from these chronic diseases.

2. Water:

A. Source of water :

The slums under study didn"t have an access to safe drinking water.The people used different sources of water like PSPs,borewells,personal borings and supply from water tankers.

Figure -1: Source of water in slums

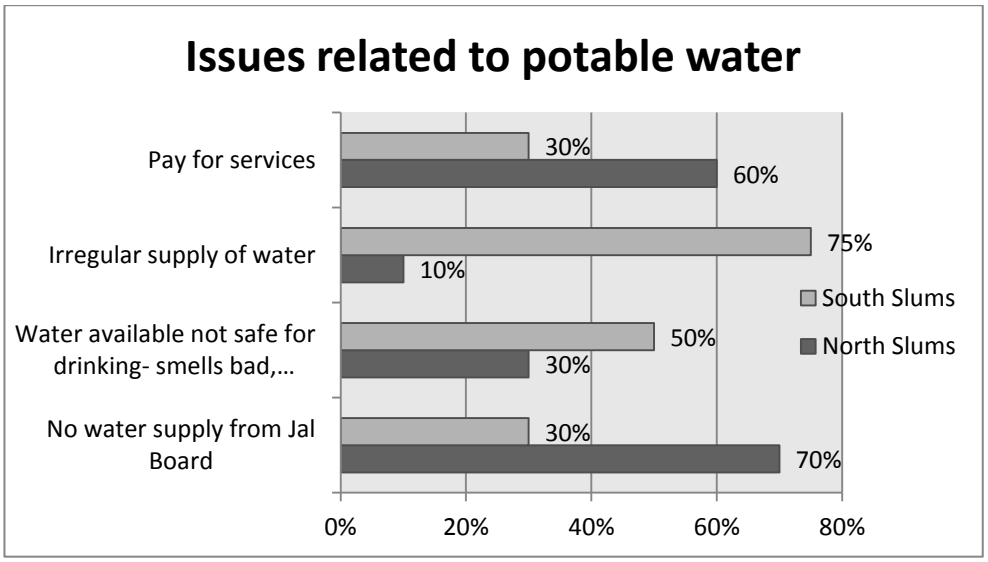


90% of the slums of South delhi (specially **Okhla** area) had an access to public stand pipes located in various parts of the slum while only 10% slums in North Delhi used PSPs.This was mainly because of the reason as the process of laying of water pipelines by Jal Board is still in process in **Bawana** and **Jahangirpuri** areas of North Delhi. So 80% of the slums in these areas were largely dependent on water from tankers and 60% slums used their personal borings and also sell water to others.

B. Issues related to potable water:

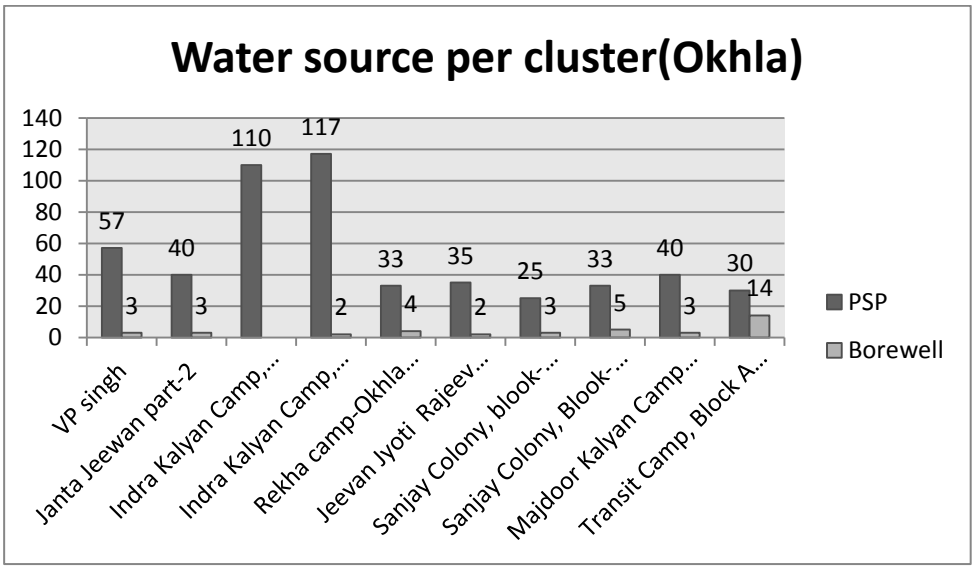
In slums of both North and South Delhi ,the access to potable water is limited.In some slums there was no supply of water and the areas where **PSPs were available (Okhla area) water supply was irregular and taps were located very near to drains**.Water was released in these taps at different times of the day for couple of hours at a time There was no option but to collect water whenever it is released .This led to quarrels among people.

Figure 2: Issues related to potable water in slums



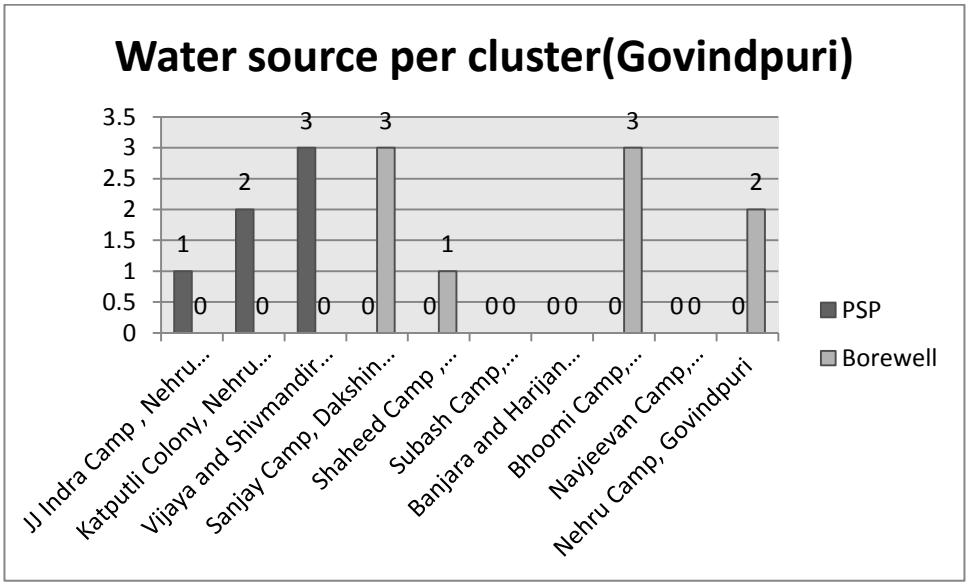
In North Delhi, **Bawana** and **Shahabad Diary** areas ,70 % of the slums didnt have piped water supply as the process of laying of pipe water lines by Jal Board is still in process from last 3-4 months.Most of the houses used water from their personal borewells which provided them non potable water for washing and other uses but the quality of water was very poor and was not used for drinking. So tankers were pressed into service to make up for the shortfall.60% slums of North Delhi were paying for potable water. In case of slums of South Delhi 75% slums mainly suffered from the problem of irregular supply of water as water came once in 2-3 days and 50 % slums complained of poor quality of water available for drinking.

Figure 3: Water source per cluster in Okhla



The graphs above and below shows the water source per cluster in **Okhla and Govindpuri** areas. There are around **520** Public stand points(PSP) in 10 clusters of Okhla area for a population of 1 lakh(apprx) whereas the number is just **15** in 10 clusters of **Govindpuri area** with same population.People in Govindpuri slums were largely dependent on water supply from borewell and from tankers.

Figure 4: Water source per cluster in Govindpuri



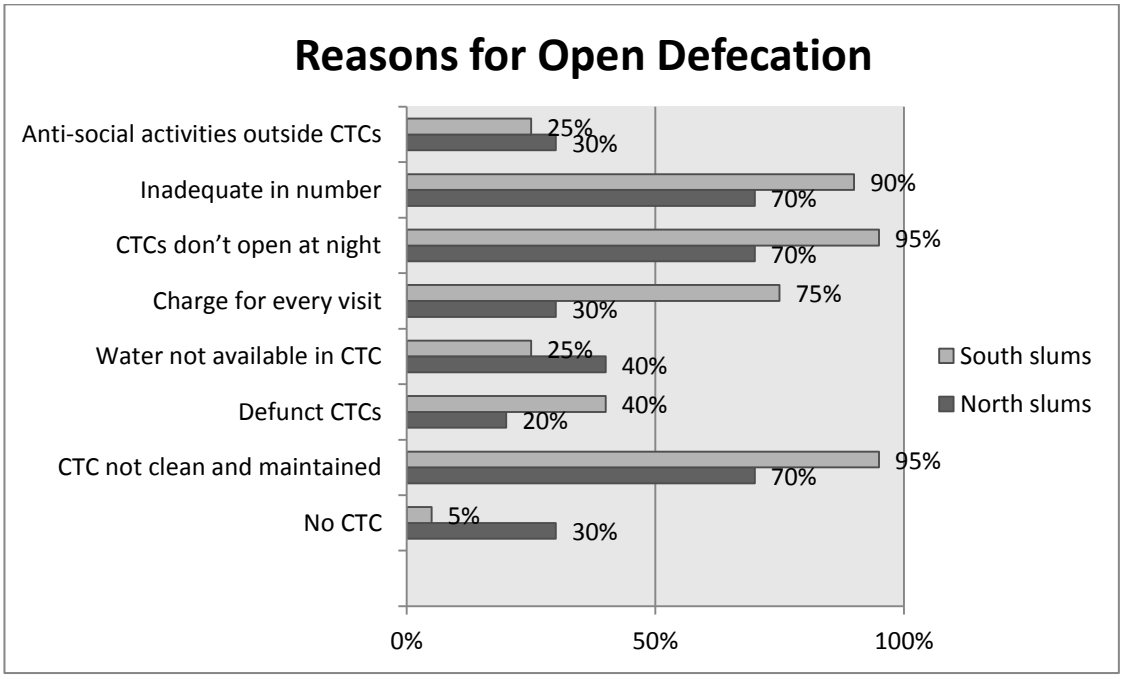
3. Sanitation:

Most of the people living in slums didn"t have an access to toilets and sewerage system. Very high housing densities, coupled with narrow and winding lanes, pose formidable impediments to the planning and provision of wastewater collection systems. Thus, slum populations had been forced to depend on public toilets to meet their sanitation needs. There were no toilets in some slums and if present, most of them were defunct. The conditions of functional toilets were miserable. Toilets were very few and those that existed were filthy, broken down and was not usable. Lack of cleanliness and unavailability of water in CTCs makes people of slums practice open defecation.Also people were charged to use the toilets so they prefered to go in open. At night, toilets get closed, so people left with no other alternative than to defecate in open. In a limited number of cases, individual household latrines have been connected to septic tanks or are discharged into open drains.All this contributes to the contamination of water and land within cities as well as many of the waterborne diseases is prevalent in slums. All the slums lack sewerage system. In a limited number of cases, individual household latrines have been connected to septic tanks or are discharged into open drains. Overall, the city has not been able to cope with the existing sanitation needs of the slum communities, posing serious public health and environmental risks for the entire city"s population.

Inadequate number and maintenance of CTCs (Community Toilet Complex) were the major contributors to the poor sanitary conditions of the slum population. Sanitation systems were identified as problematic three main levels: availability, access, and maintenance. Most of the people said that they do not have access to toilets mainly because

the number of toilets is inadequate to cater for them all. Community toilets (Pay and Use) were not being maintained properly ostensibly due to „lack of sewerage facilities". The people were charged for every visit and in slums of South Delhi even children below the age of 11 years were forced to pay. This also stops the slum people to use community toilets. The situation is so bad such that the people have resorted to several coping strategies. So they defecate in open and children are often allowed defecating anywhere.

Figure 5 : Reasons for open defecation



In around 95 % of the slums of South Delhi people practiced open defecation because of lack of cleanliness in the CTCs(Community Toilet Complex) whereas in 90% of slums people defecate in open because of inadequate number of CTCs in their area.The people in 75 % slums avoid payment to use toilets and defecate in open . The other main reason for

defecating in open in 95% of slums was that CTCs close at 8pm and people left with no other option other than defecating in open .

Similarly,In 70% of slums of North Delhi, people practiced open defecation because of lack of cleanliness. In 30% slums there were no CTCs and in 20% of the slums toilets were defunct.People in some slums (specially in **Lalbagh –II**) complained of anti social activities like playing cards and eve teasing in the premises of CTCs so women and girls usually avoid to use toilets. A new CTC has been built in Lalbagh-II especially for women but it is not use. Very few households have their own individual household toilets.

Drainage System:

Almost all the slums have open drains and people usually throw all their household wastes in these open drains so drains get blocked. The MCD workers were irregular and clean the drains once in 3-4 days therefore the people themselves clean the drains. The drainage system was worse in South Delhi slums. Slums bear the brunt of overflows and backflows into their houses every rainy season. In slums of Bawana, the situation was slightly better with the drains being pucca and cleaned regularly.

Problems with water and sanitation facilities in schools in slums:

School going children in slums faced a lot of problems related to water and sanitation facilities in their schools.The main points have been mentioned as under:

- Water tanks were not clean and maintained. So children used to take water from their homes
- Toilet facilities were not available in most of the schools
- In some schools where toilets were there,they were not clean and mainatained
- In most of the schools hand washing facilities were not placed in a proper place. Soaps and water were not available in toilets for hand washing
- The lack of safe drinking water and sanitation facilities make children more prone to diarrhea
- Due to the the lack of toilets in schools, girls were not going to schools

Solid waste management:

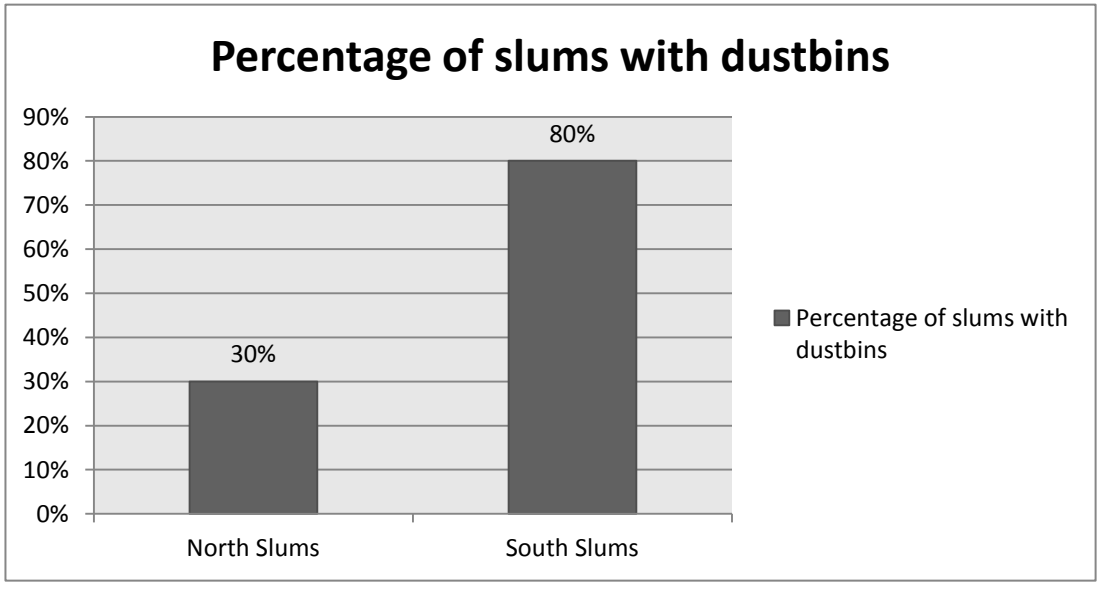
The garbage is an eyesore in the slums and is a source of diseases. The slum people were asked about the options available to them for disposing the household waste. Almost all the households dispose their wastes on roads or in drains, with the accompanying environmental consequences. The main reason behind throwing the wastes in open was non availability of dustbins or dustbins are placed at far distance from households. On asking about the collection service provided by Nagar Nigam, most of them responded negatively. They said that they do not come regularly. In slums of Bawana, people are forced to pay money to get their garbage collected by the MCD. Non availability of dust bins, irregular

visits of municipal vans for household waste collection and lack of knowledge regarding importance of segregation of waste were observed to be the principal problems in the practice of solid waste disposal by urban slum families.

Reasons for improper disposal of solid waste:

- Non Availability of dustbins
- Dustbins placed far off
- Non Availability of municipal vehicle/Irregular visits
- lack of knowledge regarding importance of segregation of waste

Figure 6: Percentage of slums with dustbins



Based on Resource mapping,it was found that only 30% of slums in North Delhi were having garbage bins to dispose off their wastes so all the households threw their wastes on roads or in drains while in South Delhi slums, number was comparatively large.In around 80% of slums of south delhi ,dustbins were available.Besides having dustbins in their

area,people used to throw wastes in drains or in open as dustbins were placed at a distance from their homes.Most of the times dustbins were overfilled because of irregular visits of Municipal Corporation trucks to collect garbage.

Barriers to access health care facilities:

Access to health care has four dimensions: Availability, accessibility, affordability, and acceptability. Health care delivery should be evaluated against these objectives. This has been referred to as effective coverage. Access may be defined as easy availability (physical access in vicinity) of acceptable (social access) and affordable (economic access) services. Slums with low access to health services are likely to be more vulnerable. A comparative analysis of North and South Delhi slums on barriers to health care facilities as perceived by the people is shown in the table below:

Table -5: Barriers to access health care facilities

S no	Reasons for not availing health care facilities	North Delhi slums (10)	South Delhi slums (20)
1	Poor behavior of doctor/staff	3	2
2	Lack of conveyance	1	2
3	Cost of travel	1	3
4	Distance to health facility is more	2	6
5	Long waiting time	2	0
6	Overcrowding in the hospital	1	0
7	Unavailability of medicines	3	2
8	Lack of knowledge of health schemes	0	1

In North Delhi , **poor behavior of staff** and **unavailability of medicines** were the most important reasons for not utilizing health services. If we look at the supply side, appropriate

health services were not available in the urban slums. Lack of availability is the root of the problem in many instances even though many effective interventions are not prohibitively expensive. Others reasons were the lack of a nearby facility, and excessive waiting times at health facilities .

In South Delhi people said that the nearest government health facility was the **distance** as the nearest health facility was at a distance 5 km from their house and it took them more than 1 hour to reach the health facility. On the demand side, economic constraints also suppressd utilization, even if benefits are recognized as people didn‟t go to hospitals as cost of travel was high ,around 300 Rs for round trips. Aside from these three reasons,some people also mentioned that they seek treatment from RMPs because they are perceived to be providing better and more convenient services than government service providers

Section E: Key Learnings and challenges

- Commonplace of PRA experience is that slum people can do much that outsiders have thought they could not do, and often that they themselves have not known they could do. One by one the domains have fallen as they have shown that they can map, model, rank, score, estimate, diagram and analyze more and better than expected. Often, too, they have done these better than outsiders. The working rule has become to assume that local people are capable of something until it is proved otherwise. Challenge is development and spread of participatory approaches and methods through local people : Traditional mind sets and attitudes which were difficult to change because there were many people involved in the project, the progress was slower than anticipated

- It is important to reach out to different segments of a slum, especially when the slum has a very heterogeneous composition. The perceptions and practices of any one segment cannot be generalized to others. In a slum where there are more than one ethnic/social group, it is important to interact with each separately. Transect walks help identify the different groups of people in the slum, and interactions with different segments in separate groups help facilitators understand the different perspectives.

- The slum houses on the main streets, which are the ones, facilitators often interact with first, are usually not the representative of the more vulnerable sections.

- During the first few interactions with a large group, it is usually the more vocal people who express their opinions, while others remain quiet and still others are not even present. It is important to get input from those who are not outspoken and those who do not attend meetings to get a more complete picture of the varying extent of deprivation within the slum.

- Participants in the meetings should be a mixed group so that their experiences are known directly rather than from other informants who may not be as familiar with their issues and practices. Community members tend to open up readily when facilitators approach them in a friendly manner, with an obvious desire to learn and not as authority figures.

- All participants should be involved in the process; if the group is too large then form subgroups to engage all the participants. In a large group if subgroups are not formed promptly or if equal attention is not provided to all participants, then there is a tendency for the group to disperse or lose focus and engage in other discussions.

- Begin the enquiry with a general discussion to generate people‟s attention and interest, and only after rapport has been established, should you proceed to more specific issues. A socio-demographic profile of the slum is a good way to initiate discussions.

- Often community women (and even men) may take a few minutes to understand a question or statement and not respond right away. Continue to use nonverbal communication (eye contact, smiling) and let people take time to think. Often this pause is vital and may be followed by very useful information; note also that the response after the pause, whether verbal or only nonverbal, may be quite revealing.

- Finally, the facilitators should always remember that participatory approaches are intended to be flexible and should be modified based on the local situation and circumstances. Facilitators should not go into an enquiry with rigid notions about how to proceed; the process should evolve as the community desires without deviating from the overall objectives of the enquiry.

- Major challenges during community mobilization:People were not ready to participate during their working hours.

- The community mobilization process raised expectations as well as creates demand for health services; if facilities do not have the capacity to cope with demand, this can create discouragement and disenchantment.

- Because the trainings were conducted in slums only there was lack of space so it was difficult to adjust more people in small room. .

- The project had a specific schedule, including a fixed end-date and rigid reporting requirements. The implementing partners also had some or the other work at the same time. The Inflexible planning cannot adapt to events that are highly important to community members.

Section F :Recommendations

Analysis and Key Highlights for Guiding Interventions- In the light of the situation analysis carried out in the delhi slums, interventions to improve the health and WASH status of the urban poor should consider the following issues to enhance effectiveness and achieve optimal impact.

- **All Slums are not equal:** Need for targeting the vulnerable. During the study it was revealed that all slums are not alike and that some slums are needier than the others. It is therefore necessary to target resources and efforts at the more vulnerable slums for more effective health programming.

- **Prevalence of diarrhea** is found in all the slums affecting most of the children in age group of 0-6 years. Strategic input for the BCC strategy will centre on interpersonal communication and community level BCC activities. The effective implementation of strategic BCC inputs is dependent on partnerships, coordination and collaboration with development partners, NGOs and CBOs. Awareness campaign can be organized at Anganwdi centres to educate mother of children of age group 0-6 yrs regarding cause, symptom complication and prevention of diarrhea. IEC could be displayed in the local area to educate people how to keep their surroundings clean and to use water safe for drinking.

- **Improving Sanitation and Environmental living conditions**: The poor sanitation and environmental conditions in the urban poor habitations are the result of the lack of

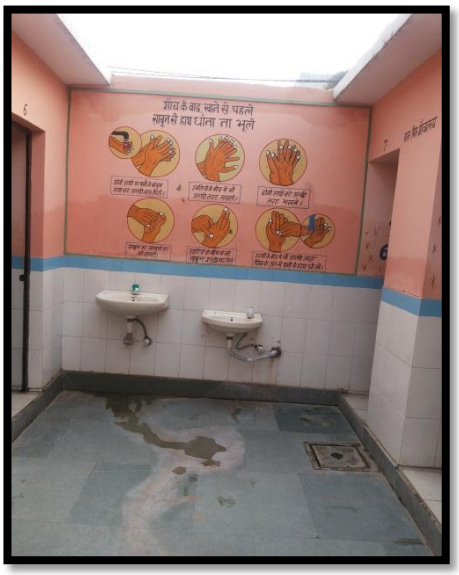
effective coordination among various government departments and the urban local body also. In order to improve coordination and leverage resources as per the vulnerability a multi stakeholder task force can be formed at the zone level. Improving Inter-Sectoral Coordination at District / Zonal Level

- **Status of community toilet** in terms of its infrastructure, operation and maintenance, uses and payment of user charges is not satisfactory. The community toilets can be well maintained when users are paying for charges and also feel a sense of ownership. The chances of success of this are more when women are actively involved.Managing toilets leads to empowerment of women with many positive impacts in terms of personal and community development. After initial reluctance, communities do pay for using toilets and bathing and washing facilities and these services can be provided at affordable costs. Therefore, a system based on empowerment of users, owning, operation & maintenance and collection of service charges by user groups seems to be a sustainable solution for rehabilitation of defunct community toilets and also for the construction of new ones.

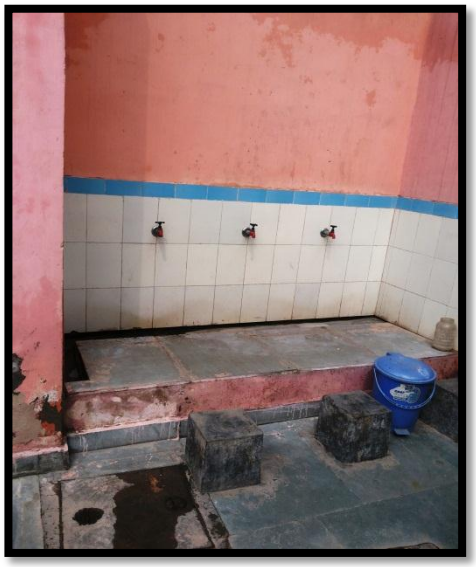
- **Ensuring sufficient and affordable water supply in all CTCs** could be a concrete step that authorities need to take to maintain hygiene standards and ensure that bathing and clothes washing facilities can also be provided. The water and sanitation crisis can be tackled by building all urban reform efforts around accelerating water connections to slum communities and ensuring sanitation services and developing credible action plans with ambitious targets, timelines and financing sources

- ***Indira KalyanVihar ,Okhla,Phase –I*** **shows that CTCs and bathing complexes provide a model that can work in other slums also when supported by MCD authorities and NGOs.**These toilets now have seats for men and for women, child-friendly and disabled-friendly seats and facilities for hygienic disposal of cloth used as sanitary pads during menstruation. These toilets built by Save the Children and are spacious, clean and green. The review of CTCs and bathing complexes of this area has shown that achieving clean and healthy slums does not require huge financial investment. However, what it does require is a MCD authority sensitive to the problems faced by slum communities and supportive of community action, dedication of communities and their support NGOs. It has been proved that communities can manage their own toilet units and when they do this, the toilets are much cleaner than when managed by municipal authorities. There have been cases where the entire community can be declared open defecation free.

IEC messages painted in CTCs premises



Child Friendly Toilets



Women Friendly Toilets

- In order to provide primary health care to the most vulnerable slum population of Delhi which do not have access to primary health care services, the Delhi government provides services through the **mobile health scheme**. This takes the health care to the door step of the people and reduces the work load on the hospitals.

General Recommendations

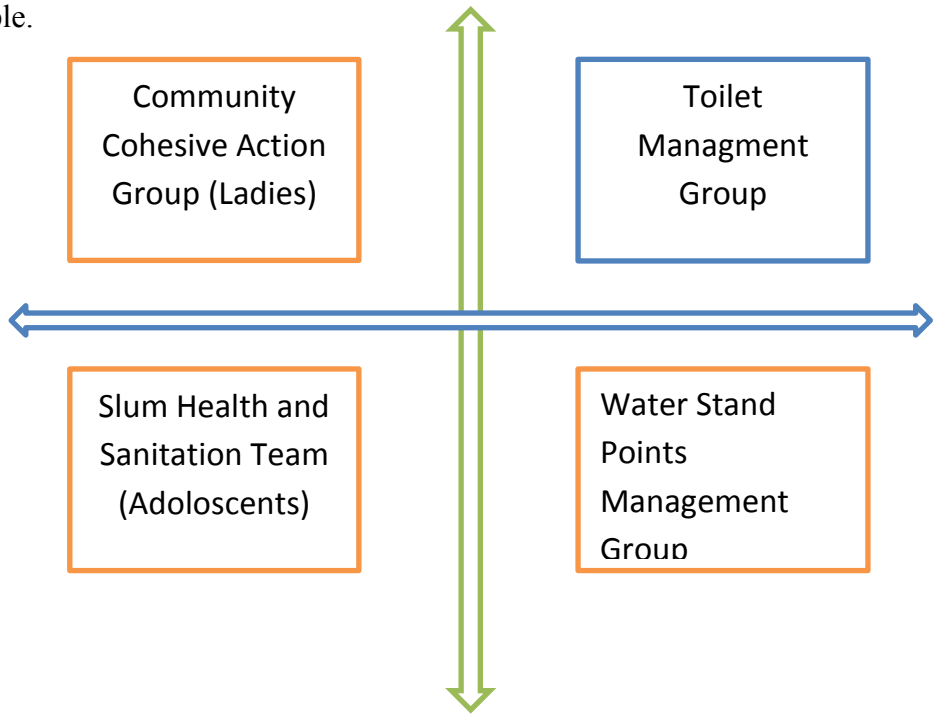
1. **Improving service delivery**: Available health infrastructure is inadequate and quality of preventive and curative services is weak due to increasing population load on existing resources. Improving service coverage involves improvement of health service delivery through:

- ✓ Integrating the existing first tier health care services under different government departments and local bodies
- ✓ Establishing new urban health centers in areas which are un-served n Relocation of heatlh facilities where there is duplication of health facilities of different agencies
- ✓ Increasing the availability of the staff as per the norms on contractual basis
- ✓ Ensure regular outreach services to vulnerable urban poor habitations
- ✓ Streamlining the referral systems to optimize load at secondary and teritiary facilities.
- ✓ Making the timings of health facilities more convenient as the poor bear a high opportunity cost in accessing government health facilities. The government should consider opening facilities in the evenings which is more convenient to the poor.

2. **Partnership with the formal private sector and informal providersto rapidly expand reach of services to the** Partnership with the private sector is an effective strategy to rapidly expand health services to the underserved. It is essential to the health facilities of MCD, GoNCTD and other agencies are aligned to cover all vulnerable clusters in Delhi.
   Augment urban health infrastructure and services in order to increase access of primary health care services to the urban poor. Partnerships with the private sector is an effective way to improve access to health services in urban slums.

3. **Improve linkages with the community and promote demand and awareness about health services**. Linkages and coordination between community and providers and among the providers themselves to improve service regularity and coverage e.g. strengthening linkages between ANM and AWW; and between traditional birth attendants and maternity services.The first tier could implement a community health promotion strategy, by way of promoting community-provider linkages through the link volunteers and MahilaAarogyaSamitis promoted at the slum level . Strengthen community networks such as self-help groups and women‟s health groups and their linkages with health providers. Such groups can generate awareness, increase demand and negotiate for better services. Promote community managed health funds which serve as a risk pooling measure ensure that vulnerable slum communities are able to meet health exigencies and reduce the burden of easily preventable morbidities and mortality.

4. **Formation of community groups f**or assuring sustainable change in health, nutrition, water and sanitation conditions of Delhi‟s slums. This assures participation of community for confronting the health nutrition water and sanitation issue in their area. The idea is to form a group of proactive people from the community who can effectively propagate the behaviour change communication among the other community people.



- The technical upgrading of slums can be done by writing the street number outside each street**.**This step has already been taken in Indira Kalyan Vihar. Street naming and house numbering establish physical addresses andlocations, enabling residents to gain an address and postal code, the first steps in gaining citizenship rights. This will in turn bring an enhanced sense of security and orderly development. Unplanned and haphazard land occupation of settlements should be discouraged.

Annexure I: List of selected slum cluster

S.No.	Districts	Name of the Slums
1	North	D-Jhuggi Block, Shahbad Diary
2		E-Jhuggi Block, Shahbad Diary
3		A Block, J.J. colony Bawana
4		B Block, J.J. colony Bawana
5		C & H Block, J.J. colony Bawana
1	South East	V.P. Singh Camp
2		Janta Jeewan Camp part 2 Okhla - II/ Chawla camp
3		Indra Kalyan Camp, block- E Okhla area-I
4		Indra Kalyan Camp, block- D Okhla area-I
5		Rekha camp-Okhla phase-I
6		Jeevan Jyoti Rajeev Camp, Okhla Industrial area-II
7		Sanjay Colony, blook- H, Okhla Industrial area-II
8		Sanjay Colony, Blook-S, Okhla Industrial area-II

9		Majdoor Kalyan Camp part 2 Okhla Phase -II/ W block Majddoor Kalyan Camp

Identifying Information	
District	
Name of the location	
Date (**dd/mm/yyyy)**	☐☐ ☐☐ ☐☐☐☐

10		Transit Camp, Block A & B
1	North	K-Bock (MIG Flat), Jahangir Puri
2		Bharola (Near Adarash Nagar Metro Station) GTK Road
3		Sarai (near Adarash Nagar Metro Station)
4		Lal Bag –I, Azadpur
5		Lal Bag –II Azadpur
1	South East	JJ Indra Camp , Nehru Nagar
2		Katputli Colony, Nehru Nagar
3		Vijaya and Shivmandir Camp,Nehru Nagar
4		Sanjay Camp, Dakshin Puri
5		Shaheed Camp , Dakshinpuri
6		Subash Camp, Dakshinpuri
7		Banjara and Harijan Camp, Dakshinpuri
8		Bhoomiheen Camp, Govindpuri
9		Navjeevan Camp, Govindpuri
10		Nehru Camp, Govindpuri

Annexure II:Checklist for perception mapping

Approximate population	
Name of the facilitator	
Total number of participants	
Total number of men	
Total number of women	

S. no	Question	Response	No of people responded	Rating of issues identified	Remarks
1.	What are the principal health problems affecting children under six years of age in this community?				
2.	What are the principal *nutrition-related health problems* affecting children under six years of age in this community?				
3.	What are the principal health problems affecting adult men in this community?				
4.	What are the principal health problems affecting adult women in this community?				
5.	What are the problems with the accessing maternal health care facilities				
6.	What are the problems with the accessing health care facilities?				
7.	What are the problems with the accessing health care facilities for children (immunization				

S. no	Question	Response	No of people responded	Rating of issues identified	Remarks
	etc.)?				
8.	What are the two main problems with the potable water?				
9.	What are the issue related to availability of drinking water in school?				
10.	What are the issue related to toilet facility available in school?				
11.	What are the main problems with the public sewage system in this community?				
12.	What are the main problems with the community toilets?				
13.	What are the main problems with the solid & liquid waste management?				
14.	Who is responsible for these problems?				
15.	Are there good examples related to health nutrition, & WASH?				

Annexure III:Tool for transect walk

Identifying Information	
District	
Name of the location	
Date (**dd/mm/yyyy)**	☐☐ ☐☐ ☐☐☐☐

Approximate population	
Name of the facilitator	
Total number of participants	
Total number of men	
Total number of women	

Categories[1] **Observation**					
Type of category					
Location					
Accessibility					
Acceptability					
Good point					
Major issues					
Recommendations/ Suggestions					
Comments					

Annexure IV:Resource and social mapping tool

Identifying Information	
District	

[1] Examples of categories could be health facility, AWC, Sewage, Community toilets etc.

Name of the location	
Date (**dd/mm/yyyy)**	☐☐ ☐☐ ☐☐☐☐
Approximate population	
Name of the facilitator	
Total number of participants	
Total number of men	
Total number of women	

Sr.no	Question	Response	
1.	How do you define this slum/ area/ neighbourhood? ***(Probe on geographical boundaries, place names, and other reference point.)***		
2.	Where are the main streets/roads?		
3.	Where are the main temples, churches, mosque situated?		
4.	Where are the main Bank branch office / cooperative situated?		
5.	Where is the main parks/play areas situated?		
6.	Where is the main supermarket or big shops situated?		
7.	What all health facilities are available in your slum?	Private multispecialty hospital	
		Private clinic	
		District Hospital	
		Community Health Centre (CHC)	
		Primary Health Centre (PHC)	
		Sub centre	
		Anganwadi centre	
		Mobile Health unit	
		Any other	
8.	Where are the listed facilities available?		
9.	Who all are available in your community	Government Doctors	
		Private Doctors	
		Nurses	
		Dias	
		Rural medical practitioners	
		Lab technician	
		Pharmacist	

Sr.no	Question	Response		
		AWW/ ASHA/USHA		
		PRI/ Ward member		
		Local leaders		
		Community based groups		
		SHGs		
		Adolescent or Sabla group		
		Other NGOs (please name)		
		Mandals (Yuvak , yuvaki etc)		
		MAS members		
		Water sanitation committee		
		Gender resource centre volunteers		
		Any other		
10.	What is the most common mode of transportation to travel from the nearest health center?	Walk		1
		Bicycle		2
		Private vehicle		3
		Bus/ minibus		4
		Train		5
		Taxi		6
		Any Other (Specify)		**98**
11.	How much does it cost to travel to the nearest health centre using this mode of transportation?	***(in Rs)***		
12.	How long does it take to travel to the nearest health centre using this mode of transportation? ***(one way trip)***	**HH: MM** ☐☐		
13.	If you approached the PHC with a health problem, what / who would you expect to generally be available			
		Yes, most of the time	Yes, sometimes	No
14.	Doctor	1	2	3
15.	Auxiliary staff	1	2	3
16.	Medicines	1	2	3
17.	Simple diagnostic tests (Blood, urine, stool, etc.)	1	2	3
18.	Is there an Anganwadi center in this slum?	Yes		1
		No		2 → Skip to 23
19.	How many days in the past 30 days was the center operating?	☐☐		
20.	Is the anganwadi worker from the Block?	Yes		1
		No		2
21.	Has she received any training in the last 12 months?			
22.	What services are available today to children and mothers?	Food supplements		1
		Pre-school education		2
		Growth monitoring		3

Sr.no	Question	Response			
		Health check-ups			4
		Maternal care			5
		Any other			**98**
23.	Few questions on availability of services in public n private hospital	Public centre		Private centre	
		Yes	No	Yes	No
	Does the facility have electric power?	1	2	1	2
	Does the facility have a separate latrine and bathing area?	1	2	1	2
	Is there a registration fee for service at the facility?	1	2	1	2
	What is the registration fee charged?	1	2	1	2
	Does the facility have a laboratory?	1	2	1	2
	Which of the following tests does the laboratory perform?				
	Blood tests	1	2	1	2
	Urine analysis	1	2	1	2
	Stool analysis	1	2	1	2
	Mantoux test (TB)	1	2	1	2
24.	What are the principal health problems affecting children under six years of age in this community?				
25.	What are the principal *nutrition-related health problems* affecting children under six years of age in this community?				
26.	What are the principal health problems affecting adult men in this community?				
27.	What are the principal health problems affecting adult women in this community?				
28.	What fraction of the pregnant women in community is receiving 3 ANC check-ups?	All pregnant women			1
		Most of the pregnant women			2
		About half the pregnant women			3
		No pregnant women			4
29.	What fraction of the pregnant and lactating mother‟s utilizing/receiving supplementary nutrition supplements from AWCs?	All pregnant and lactating mother‟s			1
		Most of the pregnant and lactating mother‟s			2
		About half the pregnant and lactating mother‟s			3
		No pregnant and lactating mother‟s			4
30.	What fraction of the pregnant mother‟s receiving 100 IFA tablets?	All pregnant women			1
		Most of the pregnant women			2
		About half the pregnant women			3
		No pregnant women			4
31.	What fraction of the pregnant mother‟s receiving full	All pregnant women			1
		Most of the pregnant women			2

Sr.no	Question	Response	
	immunization? (TT injections)	About half the pregnant women	3
		No pregnant women	4
32.	What fraction of the pregnant mother‟s receiving maternal care education from AWW / ASA or any field level worker?	All pregnant women	1
		Most of the pregnant women	2
		About half the pregnant women	3
		No pregnant women	4
33.	What fractions of the children are in exclusive breast feed till 6 months of their age?	All Children of age below 6 months	1
		Most of the Children of age below 6 months	2
		About half the Children of age below 6 months	3
		No Children of age below 6 months	4
34.	What fractions of the institutional deliveries are conducted?	All deliveries	1
		Most of the deliveries	2
		About half the deliveries	3
		Only home deliveries	4
35.	What fraction of the mother are being visited by AWW / ASA or any field level worker	All mother‟s	1
		Most of the mother‟s	2
		About half the mother‟s	3
		No mother‟s	4
36.	What fractions of the children are fully immunized as per appropriate age?	All children	1
		Most of the children	2
		About half the children	3
		No children	4
37.	What fractions of the children are malnourished?	All children	1
		Most of the children	2
		About half the children	3
		No children	4
38.	Where the Primary schools (if present) are situated?		
39.	Where the Secondary schools (if present) are situated?		
40.	What are the main sources of drinking water are there in this slum?	Piped water into dwelling	1
		Piped water to yard/plot	2
		Public tap/ standpipe	3
		Tubewell/borehole	4
		Protected dug well	5
		Unprotected dug well	6
		Protected spring	7
		Unprotected spring	8
		Rainwater	9
		Bottled water	10
		Cart with small tank/drum	11
		Tanker-truck	12
		From neighbour hood	13

Sr.no	Question	Response	
		Other	98
41.	What is the distance in meters from your home to this source?		
42.	How long does it take to get water from the source (round trip including waiting time)	**HH: MM** ☐☐	
43.	Who typically collects water from this source? (household member)		
44.	What part of the community has pipe-borne water?	The entire community	1
		Most of the community	2
		About half the community	3
		No one in the community	4
45.	What part of the community has access to public standpipes?	The entire community	1
		Most of the community	2
		About half the community	3
		No one in the community	4
46.	What part of community use proper water handling practises (eg storage of water at elevated place and use handles jug, etc.)	The entire community	1
		Most of the community	2
		About half the community	3
		No one in the community	4
47.	What are the two main problems with the potable water?		
48.	What kind of toilet facility does community uses?	Toilets at home	1
		Community/Public toilets	2
		Field/bush/ open	3
		Other	4
49.	In case of open defecation, what is the reason?	Toilet not available	1
		Water facility is not available	2
		Like to defecate in open	3
		It is more convenient	4
		Any other (specify)	5
50.	Does community/Public toilet system working properly?	Yes	1
		No, there are backups or smell	2
		No, insufficient water supply for flushing	3
		No, does not work at all	4
		No, other specify	5
51.	What fraction of the community is served by a public sewage system?	The entire community	1
		Most of the community	2
		About half the community	3
		No one in the community	4
52.	What are the main problems with the public sewage system in this community?		
53.	Do the streets of this community have sufficient sewers and drains	Yes	1

Sr.no	Question	Response	
	to handle excess water and prevent flooding when it rains	No	2
54.	What other sewage and waste water systems are used in this Community?	Latrine	1
		Septic tanks	2
		River	3
		Any other	4
55.	What other sewage and waste water systems are used in this Community?		
56.	How do households disposed of their garbage in this community?	Private collection service	
		City collection service	
		Bring it to a collection point	
		Burn it	
		Bury it	
		Dump it in own yard	
		Dump it in river/pond/gully	
		Dump it in other place	
		Any other (specify)	
57.	Who provides the collection service?	City/public collection service	
		Private service	
58.	How many times was your garbage collected during the last month?		
59.	How many times a week usually community members go to this collection point?		