FACILITATOR’S GUIDANCE NOTE

SLB CONNECT
Using Citizen Feedback for Improving Service Delivery
CONTENT

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ACKNOWLEDGEMENT

SLB Connect has been conceptualised and designed by the World Bank’s Water and Sanitation Program (WSP) under the aegis of the Service Level Benchmarks (SLB) program of the Ministry of Urban Development, Government of India. This Guidance Note has been prepared by Society for Participatory Research in Asia (PRIA) under a WSP program to implement scaling up of SLB Connect in Ajmer and Jhunjhunu (Rajasthan), Jabalpur (Madhya Pradesh) and Varanasi and Rae Bareli (Uttar Pradesh).

Team members from WSP consisted of consultants Nidhi Batra, Dr.Sita Shekhar, Kedar Dash and Kanak Tiwari, with Vandana Bhatnagar from WSP as project lead. The team from PRIA consisted of Dr.Kaustuv Bandyopadhyay, Dr.Anshuman Karol, Swathi Subramaniam, Sharmila Ray, Pranav Praveen and Anshu Singh.

Implementation of the scale up program was made possible by the support received from the Ministry of Urban Development, Government of India along with the Department of Urban Development of the Governments of Rajasthan, Madhya Pradesh and Uttar Pradesh. The ULB authorities in all the cities provided valuable comments and excellent support at various stages of the implementation. The members of the SLB Connect Advisory Committee provided valuable guidance in setting the strategic direction of this initiative.

The Guidance Note builds on previous work undertaken in the pilot phase of the SLB Connect project, which included contributions from partner agencies viz. Pimpri Chinchwad Municipal Corporation, Centre for Urban and Regional Excellence (CURE), Urban Management Centre and CEPT University. It also incorporates outputs from work undertaken by pManifold Business Systems to test alternate modes of citizen feedback viz. telephone survey and SMS polls. RMSI Pvt Ltd. developed the technology platform and provided technical support during implementation.

Field implementation during the scale up in five cities was undertaken by various partner organisations namely, Sahbhaghi Shikshan Kendra (SSK), Lokmitra, Samarthan, Society for Development of Humanity (SHODH), Shikshit Rojgar Kendra Prabandhak Samiti (SRKPS) and Gharib Nawaz Mahila Avam Bal Kalyan Samiti (GNMABKS).

Last but not the least, the initiative was made possible only as a result of the contributions of the thousands of citizens who participated in the survey and took out time to provide their valuable feedback and suggestions.
<table>
<thead>
<tr>
<th>ACRONYMS</th>
<th>Description</th>
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<tbody>
<tr>
<td>AGPS</td>
<td>Assisted Global Positioning System</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information System</td>
</tr>
<tr>
<td>GoI</td>
<td>Government of India</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>GUI</td>
<td>Graphical User Interface</td>
</tr>
<tr>
<td>HH</td>
<td>Household</td>
</tr>
<tr>
<td>ICT</td>
<td>Information &amp; Communication Technology</td>
</tr>
<tr>
<td>JNNURM</td>
<td>Jawaharlal Nehru National Urban Renewal Mission</td>
</tr>
<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>MoUD</td>
<td>Ministry of Urban Development</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisations</td>
</tr>
<tr>
<td>NRW</td>
<td>Non-Revenue Water</td>
</tr>
<tr>
<td>PCMC</td>
<td>Pimpri Chinchwad Municipal Corporation</td>
</tr>
<tr>
<td>PHED</td>
<td>Public Health and Engineering Department</td>
</tr>
<tr>
<td>PPS</td>
<td>Population Proportionate to Size</td>
</tr>
<tr>
<td>SLB</td>
<td>Service Level Benchmarks</td>
</tr>
<tr>
<td>SWM</td>
<td>Solid Waste Management</td>
</tr>
<tr>
<td>ULB</td>
<td>Urban Local Body</td>
</tr>
<tr>
<td>UWSS</td>
<td>Urban Water Supply and Sanitation</td>
</tr>
<tr>
<td>WDR</td>
<td>World Development Report</td>
</tr>
<tr>
<td>WSP</td>
<td>Water and Sanitation Program</td>
</tr>
<tr>
<td>PRIA</td>
<td>Society for Participatory Research in Asia</td>
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</table>
ABOUT THE GUIDANCE NOTE

The Facilitator’s Guidance Note on SLB Connect will be useful to anyone planning and implementing citizen feedback processes using the SLB Connect approach. It can be used by civil society groups, municipal officials, and service providing agencies who want to initiate such processes with the aim of understanding the current status service delivery, identifying gaps, and taking actions to improve service levels. The scope SLB Connect in this document is limited to water and sanitation services.

SLB Connect is a technology-enabled citizen feedback initiative, which collects user feedback on water and sanitation services in alignment with the Service Level Benchmarks (SLBs) framework formulated by the Ministry of Urban Development (MoUD). It is aimed at helping decision makers/stakeholders to undertake feedback collection processes with greater ease, accuracy and transparency, and also providing analysed outputs in form that can readily help inform decision making.

The initiative has been led by the World Bank’s Water and Sanitation Program (WSP) under the ambit of MoUD’s SLB programme, and implemented by Society for Participatory Research in Asia (PRIA) in its scale up phase.

This document summarises the rationale, approach, methods and tools used in SLB Connect. It provides guidance on implementing similar projects based on the lessons learnt from the scaled up implementation of the SLB Connect initiative in five Indian cities. Select inferences have also been incorporated from the pilot implementation phase and testing of additional modes of feedback. The Guidance Note provides useful tips on ways to engage citizens in providing feedback on water and sanitation services, leveraging mobile to web technologies, and a systematic approach to analysing the results and disseminating them to enable improved decision making and strengthening of accountability pressures on service providers.

In addition to providing useful tips on planning, developing and implementing the SLB Connect initiative, the document lists some of the challenges faced and the ways in which these were resolved by the team when planning and implementing the project. These instances have been illustrated in boxes.

The Guidance Note has been organised in to four sections, which provide details of the various implementation phases of the project. The structure of the document allows readers to go to the text relevant to their specific interest and requirement.

While the document attempts to provide overall guidance on how to engage with multiple stakeholders, this is not a definitive instruction document. It provides the experience from the scale up activity, with possible inferences for similar work in other locations. However, since no two stakeholder contexts are the same, and the engagement strategy would have to be adapted to suit the specific context,

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1Cities covered in scale up were Ajmer and Jhunjhunu in Rajasthan, Rae Bareli and Varanasi in Uttar Pradesh, Jabalpur in Madhya Pradesh. Cities covered in the pilot phase were Pimpri Chinchwad in Maharashtra, Mehsana in Gujarat, and two slum settlements of New Delhi.
SECTION 1: INTRODUCTION

1.1. Overview: Urban water and sanitation

Urbanisation in India is growing at an unprecedented pace. Currently over 400 million people live in India’s cities. By 2030, it is estimated that more than half of India’s population will be living in cities. Rapid urbanisation has led to unprecedented strain on civic services, in particular urban water supply and sanitation (UWSS) services. According to Census 2011, in urban areas 71 per cent households in India use tap water within the household premises as the major source of drinking water of which 62 per cent receive treated water. The gap in sanitation services is far greater with close to 12 per cent of urban households (Census 2011) not having access to any toilets. The burden of these service gaps is borne to a greater extent by the urban poor, living in slums and informal settlements.

Considering these challenges, the Government of India and various state governments have taken up a number of policy and programme initiatives in the last ten years. The Jawaharlal Nehru National Urban Renewal Mission (JnNURM) launched in 2005 was aimed at improving urban infrastructure, services and governance. The National Urban Sanitation Policy adopted in 2008 was further bolstered by the Swachh Bharat Mission (SBM) announced in 2014 which envisages access to sanitation, including toilets, as a prerequisite for transforming India’s cities into liveable habitats. The SBM guidelines require all municipalities to develop city-wide sanitation plans with participation from the community and civil society. More recent Government of India initiatives (launched in 2015) - Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and the Smart Cities Mission – acknowledge and stress the need for people-centric planning for delivery of urban services. They also recognise that any infrastructure creation should have a direct impact on the real needs of people through provision of better services. Underpinning the growing emphasis on service delivery is the need for improved tracking of service outcomes. To address this need, in 2009 the MoUD launched the Service Level Benchmarks (SLBs) which provide a framework of indicators and standards for four urban services, namely water supply, sewerage, solid waste and stormwater drainage. Further details on the SLB program are provided in later sections.

To streamline interface with citizens for service delivery, in recent years the Govt of India has also prioritised the use of Information and Communication Technology (ICT) as part of ambitious e-Governance and m-Governance programs. These initiatives accompanied by the rapid spread of mobile phones and internet access has also enhanced the potential for civic engagement on an unprecedented scale. This was actively witnessed in recent months, during the preparation of Smart City proposals by various cities, which extensively used a variety of ICT based platforms to solicit ideas, suggestions and undertake consultations with citizens.

1.2 Institutional mechanisms for delivering UWSS services

Institutional arrangements related to delivery of urban water and sanitation services vary across states and cities. As per the Constitutional Amendment of 1993, these services have been made the responsibility of the third tier of government i.e. urban local bodies. However, several states are yet to effect this transfer of responsibility and associated resources. Accordingly, while in some states water supply and sanitation services have been made a municipal responsibility, in others these continue to be performed by state departments/ para statal agencies. Partial transfer of responsibilities is also common wherein water supply
remains a state responsibility while sanitation is transferred to local bodies; or planning/ capital works are performed by state agencies, while operation and maintenance is undertaken by local bodies; or the responsibility for service delivery is transferred to local bodies, but without transfer for requisite decision making powers and resources. The diffused and often unclear allocation of roles and responsibilities results in weak accountability for outcomes. There is lack of coordination between the various agencies at the planning and implementation stage, resulting in development of infrastructure which is often not in alignment with local needs and priorities.

Where functions have been transferred to the ULB level, the Mayor, Commissioner (or Chief Officer) have overall responsibility for delivery of services. At the ward level the elected representatives also intervene to advocate for specific interventions, or act as a grievance redressal channel for residents.

Details of the institutional arrangements in the five cities covered under the SLB Connect scale up project are provided in Table 1 below.

Table 1: Institutions responsible for delivering UWSS services in Rajasthan, Uttar Pradesh and Madhya Pradesh

<table>
<thead>
<tr>
<th>States</th>
<th>Water</th>
<th>Sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rajasthan (Relevant for all except seven cities)</td>
<td>State Dept - Public Health Engineering Department (PHED): All water related services including planning, maintenance, operations, official grievance redressal, tariff collection</td>
<td>ULB Dept: All sanitation related services including planning, maintenance, operations and official grievance redressal</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>ULB (Water Department): All water related services including planning, maintenance, operations, official grievance redressal, tariff collection</td>
<td>ULB (Sanitation Department): All water related services including planning, maintenance, operations, official grievance redressal, tariff collection</td>
</tr>
</tbody>
</table>

Figure 1. below provides an overview of the accountability mechanisms that should operate on urban local bodies for ensuring delivery of services and efficiency at required standards. Given the diffused responsibility structures, absence of competition, weak performance incentives and regulatory arrangements, these accountability mechanisms tend to be not very effective (see Box 1).
Arbox 1: Challenges faced by ULBs due to multiple accountability lines

- Lack of clear accountability lines between the state government and the ULB on water supply and sanitation service delivery.
- Lack of internal accountability and lack of performance incentives for the ULB’s staff members.
- Targets set out in the Service Level Benchmarks (SLBs) are not monitored regularly.
- Inadequate awareness regarding municipal functions and institutional delivery mechanisms and therefore downward accountability is hampered.

1.3 Service Level Benchmarks (SLBs)

Lack of availability of information related to service delivery levels is one of the key bottlenecks in planning for improvement in services. Recognising this gap, in 2009 the MoUD launched the Handbook of Service Level Benchmarks which for the first time provided a framework of indicators (see Annex 1) for tracking performance and proposed service benchmarks in four service areas viz. water supply, sanitation, solid waste management and stormwater drainage. The indicators address three broad aspects, namely,

- Quality of service delivery
- Financial efficiency and
- Operational efficiency.

The objective of SLBs was to enable service improvements by:

- helping decision-makers in the cities identify gaps, plan and prioritise improvement measures;
- enabling the identification and transfer of best practices;
- enhancing accountability to citizens for improved service delivery;
- providing a framework which would strengthen contracts/agreements with service providers;
- making it possible to link decision-making on financial allocations to service outcomes.

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2 Accountability and incentives for improving performance in urban water supply and sanitation in India, Mehta and Mehta, p.5, fig 3
Since their adoption, reporting on SLB indicators has been incorporated in the recommendations of the 13th and the 14th Finance Commissions. Notification of performance data as per the SLB indicators, has been made a pre-requisite for transfer of performance grants to urban local bodies.

SLB reporting by the cities covered under SLB Connect shows wide variations in the regularity of reporting and quality of data reported. Annex.2 provides the SLB data reported by these cities for water supply and sanitation services.

1.4 Need for citizen feedback

While the introduction of SLBs has helped improve the focus on service outcomes and monitoring of these, there remain significant challenges in the quality of data reported by cities. Importantly, citizens have largely remained unaware of SLB data reported by ULBs and it has therefore not helped foster dialogue between citizens and urban local bodies on issues related to service delivery. In other words, the SLB program in its current form does not involve citizens and only gives the service provider’s point of view. In order to make UWSS services robust, it is important to have not just standardised reporting by service providers but also ensure that the citizen feedback is adequately captured in the monitoring process. Knowledge of the citizens’ experiences, levels of satisfaction and priorities are necessary for improvement in services.

Box 3: How citizen feedback can help improve UWSS service delivery

- Helps ULB managers to better understand users’ experiences and expectations, which can be incorporated into service assessments and improvement planning.
- Helps put in place checks and balances for performance reporting by service providers.
- Collating and analysing citizen feedback enables demand responsive allocation of financial resources for public services.
- When citizens are engaged in service monitoring and assessment, citizens become more aware of their service entitlement leading to better social accountability of services.
- Publicly available feedback information helps empower citizens to demand better services.
- When the government/service provider engage citizens in assessing and understanding service levels it becomes easier to get their consent on more contentious issues such as tariff increase or metering; and also elicit their cooperation for demand management strategies (e.g. minimising losses, wastage)
SECTION 2: ABOUT SLB CONNECT

2.1 Concept and approach

SLB Connect aims at collecting and analysing citizen feedback on service delivery using innovative mobile and ICT enabled tools. It builds on the service-metrics model established by SLBs but is designed to facilitate citizen engagement in assessing service levels. The overall goal is to help strengthen accountability pressures for improving UWSS services with special focus on poor and marginalised citizens.

SLB Connect contributes to the overall goals of the SLB programme in the following ways.

- Provides a ‘reality check’ on service levels from the citizens’ standpoint
- Provides city managers with more ‘granular’ data at the sub-city level (ward/zone) which could facilitate improved monitoring and problem solving (evidence based policy making).
- Provides citizen feedback inputs into project planning processes (transition to citizen centric service planning and provisioning).

Through the above processes, SLB Connect aims to create pressures for improved data quality under the SLB program and facilitate use of performance data in planning processes.

Most importantly, through the above, SLB Connect provides a platform to engage citizens in performance monitoring processes and encourages them to demand better service, thus bringing in greater social accountability in service provisioning of UWSS services (or other public services).

Given the large urban population living in informal settlements in Indian cities, and the inequities commonly prevalent in service provision, SLB Connect also provides for explicit tracking of service delivery in slums including public facilities (e.g. public stand posts, community toilets, etc.). Feedback from citizens is obtained not only on satisfaction levels but also on their experience of services; performance aspects surveyed are in alignment with the SLB framework.

Figure 3: Accountability equation between demand and supply sides

SLB Connect was initiated in early 2012 by the Water and Sanitaiton Project (WSP) in consultation with the MoUD. The mobile to web system was developed and implemented in Pimpri Chinchwad Municipal Corporation (PCMC). In its pilot stage 5200 households were surveyed. The selection of households was
made through randomised sampling and population proportionate to size (PPS) method to ensure a representative sample. The units of analysis in PCMC were the water zones and administrative zones. The pilot was received well by the PCMC and it showed keen interest in taking this initiative forward and integrating it with their planning and operational processes. The PCMC pilot was subsequently replicated in Mehsana, Gujarat in 2013.

In 2014, WSP in partnership with the Centre for Urban and Regional Excellence (CURE) piloted SLB Connect in some selected slum settlements of Delhi. The objective was to enable poor households to connect with the city service providers for monitoring and providing feedback to improve services in the area. Two slum habitations namely, Safeda and Nursery Basti, located to the east of the Yamuna River near Geeta Colony, were selected for this purpose.

SLB Connect involves capture of citizen feedback, analysis of feedback, disseminating results, and advocating for its use in service delivery processes. It is implemented in close collaboration with the ULBs and service providers, and aims to improve dialogue with the community for their greater engagement. ICT tools are used for conduct of door-to-door surveys using the SLB Connect mobile to web system.

Figure 4: Key processes of SLB Connect

2.2 Scaling up

The pilots informed the critical steps to be followed in the planning and implementation of SLB Connect. The following steps were identified as critical in the scaling up phase in five cities.

Conducting surveys in five cities using features in the existing mobile application and web based monitoring and analysis systems

- Find the right partners at the national, state and city levels.
- Formalise partnerships with ULB and UWSS service providers.
- Conduct a scoping study to identify critical contextual, institutional and service-related issues.
Identify options and alternatives proposed in existing survey questionnaires relevant for a particular city.

Procure relevant demographic and spatial data to develop a scientific and representative sampling plan for the city.

Identify and assess the existing citizen outreach strategies and tools, if any, deployed by the ULBs.

Test out questionnaires to understand the required customisations.

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**Table 2: City profiles and sample details**

<table>
<thead>
<tr>
<th>State</th>
<th>Cities</th>
<th>Total population</th>
<th>No. of wards</th>
<th>Number of sample HHs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uttar Pradesh</strong></td>
<td>Varanasi</td>
<td>1,201815</td>
<td>90</td>
<td>9330</td>
</tr>
<tr>
<td></td>
<td>Rae Bareli</td>
<td>191,625</td>
<td>31</td>
<td>3134</td>
</tr>
<tr>
<td><strong>Madhya Pradesh</strong></td>
<td>Jabalpur</td>
<td>1,267,564</td>
<td>60</td>
<td>6636</td>
</tr>
<tr>
<td><strong>Rajasthan</strong></td>
<td>Ajmer</td>
<td>542,580</td>
<td>55</td>
<td>5500</td>
</tr>
<tr>
<td></td>
<td>Jhunjhunu</td>
<td>210,000</td>
<td>35</td>
<td>3823</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>3,413,584</td>
<td>271</td>
<td>28,423</td>
</tr>
</tbody>
</table>

The purposive sampling was done with the rationale that the city level sample size would be determined on the basis that each ward would have at least 100 households. There was a buffer of 10 per cent added to each city factoring in expected rejection rates of data records. While the survey started with a 10 per cent buffer factored into the target, every two weeks the rejection rate was reviewed and the target suitably adjusted.

**Develop strategies/ mechanisms and undertake effective outreach of the findings from the survey**

- Using social media tools including twitter, Facebook, SlideShare and Blogs.
- Disseminating updates through print media.

**Develop strategies/ mechanisms and undertake stakeholder engagement for the integration of survey findings with decision making and initiation of improvement measures**

- Forming the National Advisory Committee for inputs on the way forward and suggestions.
- City level dissemination and stakeholder engagement.
- Dissemination of SLB Connect survey findings/learnings at the national level in a multi stakeholder workshop involving national, state and local governments, international organisations, CSOs, media and academia.
- Efforts are being made to help ministries and departments formulate concrete policy and programme guidelines to improve governance, transparency, accountability and civic engagement.
### Table 3: Learning along stages of SLB Connect

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Engaging decision makers**  | - Garnering support from the ministries/departments of the national and state governments helps align with their priorities.  
                                - Orient key people in ULBs and formalise relationships (signing of Memorandum of Understanding) ensures their support at various stages (e.g. seeking comments on questionnaire, convening the sharing meeting, etc.). |
| **Partner selection**         | - Local knowledge and presence of CSO partners in the city is the key.  
                                - Proper orientation of enumerators, supervisors and local stakeholders ensures the quality of survey. |
| **Demographic representation**| - Aligning proportion of slum and non-slum sample households in the city with that of census record ensures a balanced sample.  
                                - Choosing samples from each ward ensures a city wide representative sample. |
| **Technology involved**       | - Use of GPS-enabled smart phones helps geo-tag the surveyed household on an online map.  
                                - Use of online survey management module helps in real time monitoring of records.  
                                - Use of online analytics presents real time data analysis and generates online reports. |
| **Survey management**         | - The online survey method is easier than the paper based method.  
                                - Survey management via the online method is faster, user friendly and effective. |
| **Data analyses**             | - Online use of data analytics makes the process of calculation easy.  
                                - Initial steps require programing of the formulas for calculations.  
                                - Once programming is set online calculation is faster and easy to understand.  
                                - Data representation is the biggest advantage since the graphs and charts generated are easy to understand. |
| **Advocacy**                  | - Digital, real time sharing with the municipality is a more engaging format than report based/paper based reports.  
                                - Sharing of online survey reports through SMS ensures larger outreach. |

### SLB Connect System

There are three main stages in the technology interface:
- Conducting a mobile-based survey of sample households on service aspects.
- Real-time monitoring of the survey using an online survey management module.
- Real-time analysis of survey results using an online data analysis tool and presenting results on web-based dashboard.
The table below provides an overview of the system functionalities available under the SLB Connect system.

<table>
<thead>
<tr>
<th>SLB CONNECT SYSTEM FUNCTIONALITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobile Interface</strong></td>
</tr>
<tr>
<td><strong>Feedback Collection</strong></td>
</tr>
<tr>
<td>Mobile based Household Survey</td>
</tr>
<tr>
<td>✓ Conduct survey in local language</td>
</tr>
<tr>
<td>✓ Conduct in training and live mode</td>
</tr>
<tr>
<td>✓ Geo-tagging of all locations</td>
</tr>
<tr>
<td>✓ Can work in offline mode requiring connectivity only for syncing data</td>
</tr>
<tr>
<td>✓ Records time and duration of survey</td>
</tr>
<tr>
<td>✓ Pics/ video recording</td>
</tr>
<tr>
<td>✓ Additional comments can be recorded</td>
</tr>
<tr>
<td>✓ Integrated with 'survey planning' and 'survey management' thereby allowing key functionalities of - Work allocation</td>
</tr>
<tr>
<td>✓Integrated with 'survey planning' and 'survey management' thereby allowing key functionalities of - Work allocation</td>
</tr>
<tr>
<td>✓ Regular monitoring and reporting</td>
</tr>
</tbody>
</table>

Use of the mobile to web systems offers several advantages, but also presents some challenges which should be provided for.

**Advantages:**
- A GIS tracking system in the smart phones indicates the location from where data is collected which - enhances the reliability of data collection; enables a ‘granular’ analysis at the zone/ ward level; and helps survey administrators track whether the survey locations are as per the survey plan.
- Each survey record shows the time the survey starts and the time of submission helping survey administrators track the average time taken and mark out irregularities.
- A web-based survey management module enables survey administrators track the progress of the survey on a real-time basis and enables remote monitoring and management of survey activities and hence greater quality control.
- Using pre-defined validation checks, the system flags exceptions thus helping in a first level scrutiny of records.
Data entered online can be cross tabbed in various permutations and combinations allowing for analyses of multiple metrics on water and sanitation services.

Easier to make information public since it is already available in the online format.

**Limitations:**
- Requires intensive training of survey administrators, supervisors and enumerators so that they can interface with the technology.
- Possibility of technical problems and occasional data errors, which can lead to unplanned delays.
- First time investment required in mobile devices since each enumerator needs to have a compatible smart-phone.
- Uploading of records on the online platform may take longer in some locations because of slow data speeds.
- Need to be factor in contingencies such as damage of laptops, data cards, and phones.

**SLB Connect App**

The mobile application is designed to operate on the Android Operating system which makes it possible to conduct the survey on affordable smart phones. The Graphical User Interface (GUI) was originally designed for optimal use for a 3.5 inch multi touch mobile screen but has been subsequently used on various screen sizes and has worked effectively since the GUI automatically adjusts to the screen on which it is displayed.

The phone used should have the following features:
- Good screen resolution
- True GPS (Global Positioning System) or Assisted GPS enabled
- Allowing for up to 3G data connection speeds
- Screen size of at least 3.5 inch or more
- At least 1300 mAh battery which delivers 4.5 hours of talk time and 167 hours standby.

**Features of SLB Connect App**

- Contains the pre-defined questionnaire and captures data based on the pre-defined questions.
- Submits the records to the web server on a real time basis and notes the time of submission and GPS location of the enumerator at the time of submission.
- Can store several survey data on the mobile handset in case internet is not available at the time of record submission.
- Automatically uploads all the survey data on the survey management module upon the availability of internet.
- Stores and uploads data comprising text, digits, images and videos captured during the survey.
- Features a help module built into the App to provide guidance to enumerators in case they face any technology related challenge. The help module has been developed based on common queries faced in the pilot and intervention cities.
- Can be customised and scaled up for the use of other questionnaires as well enhancing the replicability of the SLB exercise\(^3\).

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\(^3\)Please note that while there is a standard questionnaire used in the SLB Connect survey to allow inter-city comparisons, the survey form or questionnaire is customised to be relevant to the intervention city in question. The questionnaire is downloaded on the phone and syncs with the App. For example, the water and sanitation service providers differ from one state to another. These changes are incorporated in the survey questionnaire and uploaded in the phones before beginning the survey. Similarly the options on grievance redressal, alternate disposal of sewerage, bill payment options, and water sources available etc. list different options for different cities.
- Supports multiple languages. The current versions have capabilities for English, Hindi and Marathi.
- Has built in verification and checks on data entry by integrating questions and skip option based on the logic of the survey.

**SLB Connect survey management module**

The online SLB Connect survey management module is a web based platform which requires survey administrators to have a login user name and password. It works on all popular browsers. It has the following features.

- The homepage of the survey management module provides overall survey details: name of intervention city and number of survey records submitted.
- Once the particular intervention city has been clicked on/selected, the page opens to the details of the survey records.
- This page provides the names of the supervisors and enumerators involved in the survey; and allows the survey administrator to select records submitted by a particular supervisor/enumerator.
- The survey management module also allows survey administrators to select records based on ward numbers.
- Records which are lower than a pre-determined time span, before or after a pre-determined time of day, missing in GPS location, lower than a pre-determined set duration for survey are flagged by the survey management module.
- The survey administrator and supervisor can double check the flagged records and verify whether these records should be retained or rejected.
- The survey management module also allows records to download in excel format for quick verifications and excel formula inputs for cross tab verifications. The download can be done using filters on enumerators and date of survey.
- The survey management module provides ribbons for overview of multiple metrics including flagged data with record details, reason for flags, rejected data with details on survey record, records below acceptable survey time duration, percentage of data within time ranges (<5 minutes, 5-10 minutes, 10-20 minutes, > 20 minutes).
- The survey management module evaluates and presents the number of records with GPS tags, AGPS tags and without geo tags.
- Based on a built-in protocol the system automatically and randomly flags 10 per cent of the records entered for verification.
- The survey management module allows for planning the survey in terms of supervisor and enumerator allocation.
- Only once this allocation is done, the ward selected for survey shows on the enumerator phone.
SECTION 3: IMPLEMENTING SLB CONNECT

To ensure that SLB Connect is implemented efficiently the following step-by-step approach needs to be followed. As mentioned earlier, these steps have been standardised after being piloted in several cities. These were further fine-tuned during the scaling up phase in five cities. In this Section each step will be discussed in detail. The following steps can be considered a comprehensive approach towards the efficient implementation of SLB Connect in any city.

3.1 Preparing for the Survey
   3.1.1 Getting the key decision makers on board
   3.1.2 Planning for the survey

3.2 Orienting and training the team
   3.2.1 Orienting and training the implementing agency
   3.2.2 Orienting and training the city level survey team

3.3 Implementation, monitoring and quality assurance of the survey
   3.3.1 Field monitoring and quality assurance for sampling plan
   3.3.2 Online monitoring and quality assurance of the survey

3.4 Making sense of the survey findings
   3.4.1 SLB Connect analytical framework and analysis of survey findings
   3.4.2 Preparing a dissemination report

3.5 Sharing survey findings with others
   3.5.1 Validating findings with service providers
   3.5.2 Sharing survey findings with service providers, elected councillors and citizens
   3.5.3 Action planning: Agreeing on what needs to change and how
3.1 PREPARING FOR THE SURVEY

3.1.1 Getting the key decision makers on board

The steps involved in the preliminary planning of SLB Connect or a project of similar scale and intent are outlined below.

The first step is to align the objectives with those envisaged under national/ state level programs.

- In the SLB Connect pilot and scaling up phases, the identification of cities was done in consultation with the MoUD, Government of India, giving due consideration to the national programmes and projects being implemented in the proposed cities. An initial communication was sent by the Ministry to the concerned state departments intimating them about the proposed initiative, its linkage with the SLB programme, and introducing the implementing agencies involved. This gave SLB Connect more credibility and helped in future interactions with the state and city level institutions.

Formalising relationships with municipalities and city level UWSS utilities

- Following the introductory communication sent by the national government, the state departments sent communications to the concerned city authorities. Based on this, preliminary interactions were held with key officials (Commissioner/ Chief Executive Officer and Heads of the Water and Sanitation Departments) to explain the main objectives, processes and outcomes of the SLB Connect initiative. Feedback was sought and incorporated in the overall planning process.
- It was important to involve the Mayor and elected councillors at this stage since they were important links between the citizens and officials.
- A Memorandum of Agreement was also signed with the concerned municipality delineating the responsibilities of the implementing agency and the municipality (Annex.3). Each municipality also designated a nodal officer who was the link person between the SLB Connect implementing agency and municipality.

In Rae Bareli, the Mayor appointed two officials from the water and sanitation department as the nodal officers to help facilitate SLB Connect on behalf of the municipality. The Mayor also showed support for the survey by leading the oath taking ceremony with enumerators during the launch of the survey. With the consent of the municipality, a 'Thank You' message was sent to the respondents on behalf of themunicipality after the survey was completed in each household.

Partnering with local CSOs in implementing SLB Connect at the city level

SLB Connect partnered with a local CSO in each city in its planning and implementation. Being based in the city, the local CSO had the advantage of knowing the administrators, other stakeholders and key people and institutions in the city. The local CSO partners were also helpful in recruiting enumerators from the community. Orientation, training and capacity building was undertaken of partner organisations, which helped the CSO to effectively engage with ULBs and other city stakeholders. The local level partner was identified for each city using the following criteria.

- History of working with the ULB and good working relationships with the ULB officials and elected councillors.
Knowledge about the concerned city and its demographics.

- Equipped with reasonable IT infrastructure (e.g. laptops/computers with good internet connections) for implementing the IT based survey in the city.
- Assigned team members had the basic knowledge and skills of using computers.

### 3.1.2 Planning for the survey

Planning for the survey started with a scoping study in each city, in order to understand the overall context and institutions related to UWSS services specific to the city. It provided a snap-shot of the existing situation with respect to UWSS infrastructure, service levels, roles, responsibilities. This helped to fine-tune the survey planning and approach, the questionnaire and scope of training for supervisors and enumerators. It also helped provide a context for assessing and understanding the survey results.

Information for this scoping study was collected through both primary and secondary research. Primary research included informal interviews and field visits aimed at gathering and validating city level information. The research team interviewed and held discussions with the Commissioner/Chief Executive Officer and other officials of ULBs and other agencies like PHED. The ULB websites wherever available were a good source of information. The research team also referred to government documents and budgets available at the ULB and PHED as part of its secondary research. The report provided suggestions on improving the survey questionnaire, sample design and implementation plan for the survey. Refer to Annex.4 for checklists used in the scoping study.

**Figure 5: Stages of survey planning at a glance**

**Detailed steps**

- **Procuring mobile handsets**– The mobile handset which can be used for undertaking SLB Connect survey should have following minimum specifications:
  - Smart phone with at least Android v4.2 (Jelly Bean) operating system.
  - 5" inch TFT capacitative touch screen.
  - Atleast 1500 mAh battery.
  - Equipped with Assisted Global Positioning System (AGPS).
  - Multilingual support.
  - Atleast 5 MP primary camera with autofocus, LED flash and secondary VGA camera.
Procuring SIM cards—SIM cards are required for handsets to operate and make ready for undertaking the survey. Before procuring SIM cards and data connections it is advisable to take feedback on the service quality of available service operators in the city, as the service quality may vary for different cities, and even within a city. After finalising the service provider for the connection best available data plan is chosen. Generally the data plan available is 1GB data with a validity for 28 days. The SIM cards should be activated before the training of enumerators and field supervisors.

Maintenance of mobile set and SIM card—The supervisor and enumerators are always advised to take proper care of the instruments. Before handing over to the supervisors and enumerators, the mobile sets are equipped with screen guards and a pouch for each hand set. The field staff are advised to ensure that the mobile sets are fully charged before they start the survey.

Determine the scale of the survey—The survey can be conducted in multiple cities within a state or a district; within the city this can include either all the wards or select wards on a sample basis. Under the SLB Connect approach, it is desirable that all existing wards in a city are included in order to provide a city-wide perspective on service delivery.

Determine the spatial level at which data would be disaggregated—During implementation of the SLB Connect, disaggregation of survey results was done at the ward, administrative zone and community levels (e.g. slum and non-slum).

Determine the sampling plan to select the households to be surveyed—In determining the HHs to be surveyed, it was important that the total number of HHs in the city and their ward wise distribution were known. The census data was used as reference. The ward wise number of HHs were further disaggregated for slum (both notified and non-notified) and non-slum locations. In order to select a proportionate sample at the sub-ward level, data from the municipality was used for each area/mohalla within a ward. In certain cities, the list of households prepared by the municipality for property tax assessment was used (e.g. in Jabalpur) while in other cities the latest electoral list was used to determine the area/mohalla wise total number of households (e.g. Rae Bareli).

The sources of information like census data, municipal data, or electoral list could be from different years. For instance, the HH data for the ward could be from the latest census, but the slum data could be from years before or after the census notification and this latter data might not take into account new slums that had come up. In such cases, one has to validate information available with field checks. Typical instances for these would include double checking the number of HHs in non-notified slums, mapping area demarcations for property assessments and the approximate number of HHs within the area (please note that the number of HHs may be greater than list of property for tax assessment).

There might be instances where the city limits would have expanded after the last information update in the data sources with the government. This would include instances such as fresh ward delimitations which are not in sync with ward wise details available in the census or secondary studies. In order to overcome such aberrations, the SLB Connect used a large size sample which was validated by the ULBs.

Deploying an appropriate team with clearly defined responsibilities for each member—In order to ensure effective implementation and to monitor the quality assurance of the survey in each city, the following team was deployed.
<table>
<thead>
<tr>
<th>Team member</th>
<th>Key responsibilities</th>
</tr>
</thead>
</table>
| **Research Coordinator** from the Implementing Agency | ▶ Liaising with the state and city level stakeholders  
▶ Designing the scoping study and its quality assurance  
▶ Preparing sampling methodology to be applied across cities  
▶ Designing and facilitating orientation and training of supervisors and enumerators  
▶ Providing guidance in the implementation and monitoring of surveys  
▶ Planning for city level sharing and dissemination of survey results |
| **Survey Administrator** (city focal point) from the Implementing Agency | ▶ Liaising with city level stakeholders  
▶ Undertaking the scoping study and preparing the report  
▶ Preparing sampling methodology and plan  
▶ Supervising the implementation of the survey  
▶ Monitoring and quality checking of survey records  
▶ Providing support and guidance to supervisors and enumerators  
▶ Preparing the survey completion report  
▶ Cross checking the sub-ward level sampling plans  
▶ Supervising the implementation of the survey  
▶ Monitoring and quality checking of survey records  
▶ Providing support and guidance to enumerators  |
| **Supervisor** from the Partner Organisation    | ▶ Preparing the survey completion report  
▶ Cross checking the sub-ward level sampling plans  
▶ Supervising the implementation of the survey  
▶ Monitoring and quality checking of survey records  
▶ Providing support and guidance to enumerators  |
| **Enumerator** from the community                | ▶ Identifying households to be surveyed  
▶ Conducting household level surveys  
▶ Responding to all queries raised by the supervisor for various records |

In the scaling up phase of SLB Connect, PRIA played the role of **Implementing Agency** and in each city a local CSO played the role of the **Partner Organisation**.

- **Plan the duration of the survey and plan the timelines accordingly**
  - Avoid doing the water and sanitation survey in summer, since most Indian cities have water scarcity and responses are biased.
  - Avoid doing the water and sanitation survey in monsoons since the sewage and drains overflow and responses are biased.
  - On an average one enumerator takes about 12 minutes to complete a survey and can complete about 12-15 surveys in a day.
The survey design followed a city-wide approach with the ward being the unit of measurement.
Survey results were disaggregated for slum and non-slip HHs to understand the difference in service provisioning, if any.
Within each ward the sample population (HH is the unit of analysis) was selected through Randomised Sampling using the Population Proportional to Size (PPS) method.

PPS helped ensure that the sample size selected had relevant population groups proportional to their size in the total population of the municipality.
Relevant population groups were in three categories: Ward wise HHs, slum HHs, and non-slum HHs.
The ratio of the total number of HHs in the ward to the total number of HH in the town was maintained to select the number of HHs from within the ward.
The ratio of slum HHs and non-slum HHs to total ward HHswas also maintained in the corresponding sample ward population.

The sample size determination was purposive.
Ward wise sample populations for all three population categories:
Step 1: Calculate the ratio of total number of HHs in the ward to the total number of HHs in the city (percent).
\[ R_{HH} = \frac{(\text{Total number of HH in } W_n)}{\text{Total number of HH in the city}} \times 100 = \left( \frac{\sum HH \text{ in } W_n}{\sum HH \text{ in the city}} \right) \times 100 \]
Where, \( R_{HH} \) = Ratio of number of HH in \( W_n \) to total HH in the city
\( W_n \) = Ward under consideration
Step 2: The sample size of at the ward level is \( R_{HH} \) of \( F_C \) (percent)
\[ F_W = \frac{(R_{HH} \times F_C)}{100} \]
Where, \( F_W \) = Final sample size at the ward level
At the sub ward level, the data was disaggregated as slum and non-slum HHs. This disaggregated sample size was also calculated using PPS.
In case there is more than one slum in the same ward, the sample size for each slum will be calculated separately using PPS.

Sampling methodology at the sub-ward followed in scaling up phase

The ward was divided into identifiable slots. These slots included:
- **Mohallas which were pre-defined social/community habitations.**
- Voting booth areas listed on voting lists.
- **Landmarks were positioned using freeways, arterial, collector and distributor and local roads.**
  - This was done in consultation with local partners and other stakeholders.
- Each identified slot was further divided into pockets
  - This was done in consultation with local partners.
  - **Pockets were identified/ categorised on the basis of residential area categories (government houses, high rises, and commercial areas etc.).**
- At the pocket level houses were selected based on an approximate population ratio to the ward.
Annex.5 presents the sampling plan of Rae Bareli which was prepared on the basis of information available at the time of designing the survey.

- **Select the enumerators and supervisors** – A rigorous selection process for the enumerators and supervisors is critical to the success of the survey. In SLB Connect extra care was taken to ensure that the enumerator/supervisor did not have any political affiliations. The proposed qualification criteria for enumerators are provided below.

<table>
<thead>
<tr>
<th>Mandatory</th>
<th>Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 years or above</td>
<td>Two years of experience in similar work</td>
</tr>
<tr>
<td>Bachelor’s degree in a relevant field</td>
<td>Preference will be given to female candidates</td>
</tr>
<tr>
<td>Prior experience of having conducted similar surveys</td>
<td>Has undertaken activities linked to water and sanitation issues</td>
</tr>
<tr>
<td>Has lived in the same city for at least one year or more</td>
<td>Experience of handling smart phones</td>
</tr>
<tr>
<td>Speaks, reads and writes the local language</td>
<td></td>
</tr>
<tr>
<td>Intermediate knowledge of English</td>
<td></td>
</tr>
</tbody>
</table>

The enumerators and supervisors were also given a copy of the authorisation letter issued by the municipality which they carried during the survey (Annex.6).

**Preparing a survey questionnaire** – As SLB Connect has a demand sided approach, the survey questionnaire needs to be adapted to a particular city’s context. Towards this, consultations with key stakeholders need to be undertaken. The household survey questionnaire is designed keeping in mind the overall objective of the survey and sample size. In this survey, a semi-structured questionnaire is used where most questions have multiple-choice answers. In addition, a few open ended questions are also used. Skip options are designed into the mobile survey app to improve efficiency and accuracy in data submission. The questionnaire is designed using the question bank module of the SLB Connect platform. Cities can develop these questionnaires prior to starting the survey by copying existing survey questionnaires or creating new ones using the question bank.

A sample SLB Connect questionnaire is presented in Annex.7. The questionnaire is divided into eight, which are further divided into sub-sections.

- **Section A**: Identification of the household.
- **Section B**: Demographic profile of the respondent.
- **Section C**: (C1) - sources and usage of water; (C2) - incidence of water scarcity; (C3) - feedback on sources located outside the household premise for drinking and domestic usage; (C4) - feedback on domestic piped water supply and feedback on billing; (C5) - feedback on municipal water tankers; (C6) - problem incidence and grievance redressal; (C7) - level of satisfaction with the service (C8) - ranking the top three indicators of satisfaction.
- **Section D**: (D1) - availability of toilet facility; (D2) - own and shared toilet facility; (D3) - public and community toilet facility; (D4) - toilets connected to municipal sewer; (D5) - satisfaction level in relation to public and community toilet services.
- **Section E**: Suggestions for the municipality to improve services.
- **Section F**: Consent to provide voluntary feedback on water supply and sewerage services to the municipality.
- **Section G**: Observations of field enumerators.
- **Section H**: Capture photograph/video or audio.
The following performance attributes are covered in the SLB Connect survey.

<table>
<thead>
<tr>
<th>Water Supply</th>
<th>Sanitation Services</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Access to toilets</td>
<td>Satisfaction levels</td>
</tr>
<tr>
<td>Adequacy</td>
<td>Usage of toilets</td>
<td>Willingness to provide feedback</td>
</tr>
<tr>
<td>Continuity</td>
<td>Access to sewerage network</td>
<td>Mobile contact number</td>
</tr>
<tr>
<td>Quality</td>
<td>Alternate disposal systems</td>
<td></td>
</tr>
<tr>
<td>Citizen complaints and redressal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of bill payments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Box 6: Why it is important to ensure the quality of the survey

- SLB Connect has the household survey at its core and it relies on good quality data.
- The conclusions drawn will depend on the quality of information gathered.
- All future advocacy work will depend on the data that can be analysed.
- The project and city reports will be prepared and shared with government officials, think tanks, media at the city, state and national levels.
- The survey reports may not be taken seriously by the stakeholders, if the survey is not designed well and/or not carried out properly/ethically.
- Robustness of methodology and survey data needs to be ensured.
- Survey efforts before and after the survey will effectively be wasted if the quality of the data is not ensured.
- If the data has errors, the survey will have to be repeated till the information quality is satisfactory which results in waste of time, money and effort.
- Too many mistakes in the information collected also puts the credibility of the implementing agency at stake.
3.2 ORIENTING AND TRAINING THE TEAM

The orientation and training of all actors in a large scale survey is a critical step towards ensuring the quality of the survey and accomplishing its overall objective. The orientation and training in SLB Connect focused on:

- the objective and approach of the survey,
- the survey methodology, including familiarisation with IT tools under SLB Connect

The aim was to ensure that the implementing agency and partner organisations were completely on board about their roles in the intervention, and capacitated to perform these roles. Table 4 provides details of a phased approach to orientation and training.

Table 4: Orientation of the implementing agency and partner organisations

<table>
<thead>
<tr>
<th>Orientation of the Implementing Agency</th>
<th>A two day workshop was held with the SLB Connect team members from the implementing agency to,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• orient them on the evolution, rationale and approach of SLB Connect</td>
</tr>
<tr>
<td></td>
<td>• share emerging best practices and lessons learned from the initial pilots</td>
</tr>
<tr>
<td></td>
<td>• work out a detailed plan for implementing SLB Connect in the scaling up phase.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Orientation of the Partner Organisation</th>
<th>One on one preliminary discussions held with partner organisations, to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• explain the rationale and approach of SLB Connect</td>
</tr>
<tr>
<td></td>
<td>• outline the requirements for implementing SLB Connect</td>
</tr>
<tr>
<td></td>
<td>• work out a detailed plan for implementing SLB Connect in their city.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Orientation of Supervisors and Enumerators</th>
<th>A four day workshop was held with the field team comprising of supervisors and enumerators in each city</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Training on SLB Connect, survey protocols and use of tools</td>
</tr>
<tr>
<td></td>
<td>• Half a day’s field work and debriefing after the field work</td>
</tr>
<tr>
<td></td>
<td>• Learning assessment for the supervisors and enumerators</td>
</tr>
<tr>
<td></td>
<td>• Account for an additional two days for hand holding of the team as they begin the survey.</td>
</tr>
</tbody>
</table>

3.2.1 Orienting and training the implementing agency

A two day training workshop was conducted for team members from the implementing agency. It was designed to (i) develop a comprehensive understanding of SLB Connect; (ii) develop a deeper understanding and skills to plan, implement and monitor this technology-enabled citizen feedback survey; (iii) arrive at a consensus regarding roles and responsibilities of various partners for effective project implementation. The workshop also focussed on the city specific issues, possible challenges to implementation as well as good practices that can be adopted by the implementing agency.

The workshop used a mix of interactive lectures, buzz group discussions, presentations, and question and answer sessions for effective learning and training. It emphasised the need for team ownership of the project and clear understanding of roles and responsibilities to avoid overlaps/oversights.
3.2.2 Orienting and training the city level survey team

The city level team comprise the survey administrator, supervisors, and enumerators. Their main roles are described below.

- Enumerators collected the survey records by conducting door-to-door household surveys.
- Each supervisor was assigned five to six enumerators and was responsible for outlining the areas where the team of enumerators would conduct the survey, specifying the targets and ensuring the survey quality through both online and physical verification.
- The survey administrator was responsible for allocating enumerators under each supervisor, monitoring the overall progress and ensuring the quality of the survey.

In the rollout phase, a four-day training workshop was organised in each city for the supervisors and enumerators. The training was facilitated in the following manner.

- The first two days focussed on the survey’s objective, the questionnaire, survey protocols and getting familiar with data collection through mobile phones.
- Participants were familiarised with the functionalities of smart phones viz., basic operations, navigation, typing etc. Thereafter, details of the SLB Connect App were explained and how it works – including geotagging, data analytics, flagging data, and real time monitoring of data.
- On the third day the field team received field experience by conducting test surveys in the allocated areas within the city. These test surveys were done in the Training Mode of the App and were not included in the final data bank.
- Every enumerator and supervisor submitted an original identity card (ID) before the mobile handset for training purposes was handed out and each phone was marked against the ID submitted.
- The supervisors and enumerators practiced sampling, house selection, surveying the household (at least one slum HH and one non-slum HH). Each team of supervisor and enumerators was accompanied by one team member from the implementing agency to provide necessary guidance as and when required.
- The queries, concerns, challenges faced in the field test session were subsequently addressed the same day in the second half after completion of the field practice session.
- Each enumerator and supervisor was also provided with a Frequently Asked Questions (FAQs) in the local language for reference (Annex.9).
- The last day was kept for the assessment of supervisors and enumerators. The field teams were evaluated and selected based on test scores and the other metrics (e.g. comfort with using smart phones and communication/ soft skills illustrated during field-work).
- A separate session is provided for field supervisors and survey administrators to ensure that they had understood the online dashboard and quality check mechanisms and protocol over and above the other survey components.
- The oath ceremony was organised on the last day of the training programme (refer Annex.8 for sample oath). The purpose of the oath ceremony was to motivate the supervisors and enumerators to follow the do’s and don’ts of the door-to-door survey. The Mayor or the Commissioner led the oath taking ceremony in most cities.
- The survey was launched within two days of the completion of the training sessions and under the close guidance of the survey administrator from the implementing agency. It was important to maintain the learning momentum from the view point of the supervisors and enumerators.

Table 5: An indicative design for training and orientation of the enumerators and supervisors
### Day 1

- Welcome and introduction to the objectives and design of the workshop: 15 min.
- Getting to know each other (align to the workshop’s objectives): 45 min.
- Understanding the rationale and objective of the survey: 30 min.
- Understanding urban water and sanitation services: 45 min.
- Ways to use a smart phone (focusing on general care of the instrument, charging battery, GPS, taking photos, changing languages, and typing): 45 min.
- Understanding the survey questionnaire (focusing on various sections and clarifying each question): 2 hrs. 45 min.
- Distributing smart phones loaded with the questionnaire to all participants so they could practice at home: 15 min.

### Day 2

- Introduction to SLB Connect Mobile App: 2 hrs.
- Practice session for using SLB Connect Mobile App: 1 hr. 15 min.
- Understanding the survey method used in SLB Connect and ways to identify households for interviews: 1 hr.
- Explaining survey etiquette with emphasis on the tactical requirements of SLB Connect: 1 hr.
- Instructions for next day’s field work: 1 hr.

### Day 3

- Field work for SLB Connect survey: 5 hrs.
- Initial debriefing of field work experience: 30 min.
- Presentation and discussion on the experience of field work: 2 hrs.

### Day 4

- Explaining the logistics, survey protocol, expectations from supervisors and enumerators in terms of planning, administration, reporting and target setting: 1 hr.
- Evaluation of survey enumerators and supervisors through a written test and combined evaluation of their behaviour as noticed through the workshop: 1 hr.
- Separate session with supervisors explaining the protocol to be followed, the supervision method, planning and things to be mindful of: 1 hr.
- Planning, next step and closure: 1 hr. 15 min.
- Oath preparation and oath with Mayor/Commissioner: 1 hr.
3.3 IMPLEMENTATION, MONITORING AND QUALITY ASSURANCE OF SURVEY

One of the main advantages of using ICTs in such surveys is the scope for better quality control over the survey process. Monitoring is done through the online survey management module as well as physical check at the field level where the survey is being implemented. This Section focuses on the quality assurance processes to be followed at the stages of sampling and data collection.

3.3.1 Field monitoring and quality assurance for sampling plan

The sampling plan at the (sub) ward level is done at least a week before the implementation of the survey in a particular ward. This gives adequate time to the supervisor for verifying if the sampling plan reflects the ground reality and to plan for allocating households to the enumerators for surveys.

In order to draw household sample proportionately within a ward, mohallas or housing society/ apartments or electoral booth were used as sub-ward units. Based on the scanning of the ward, the supervisor informs the survey administrator if there is need for revising the sample households distributed along these units. The sampling plan is finalised with the supervisor who in turn allocates number of households to be completed per ward, by each enumerator reporting to him/her.

The supervisor ensures that each enumerator follows the survey plan as closely as possible. In case of any concerns regarding the survey plan, the supervisor conducts physical checks on the households surveyed. The supervisor, whenever necessary, also accompanies the enumertaors to ensure that the surveys are being completed properly and all due checks are being followed.

Figure 6: Steps to be taken towards quality assurance and monitoring for sampling plan

- Ensuring that the sampling has been done right so that the survey is representative
- Checking whether the information based on which the sampling has been planned and calculated is in line with ground reality
- Ensuring that the enumerators are following the sampling plan and survey methodology as closely as possible on-ground
- Ensuring that the surveys being submitted by the enumerators are on the basis of surveys completed ethically
3.3.2 Online monitoring and quality assurance of the survey

The records collected by the enumerators are checked through the survey management module of SLB Connect web-based platform. These records contain information about the geographical location of enumerator/household from where data is collected, the start and the end time of the survey (duration) and name of the enumerator who collected the record. The completed records when submitted by the enumerators through SLB Connect App on the smart phone, are uploaded or synced with the server and stored in the database of web-based platform. The records are instantly synced if the network connectivity is available, else these are uploaded when connectivity is restored.

The monitoring and quality assurance of collected records as well as the performance of enumerators and supervisors are monitored at three levels as shown below.

Figure 7: Levels for monitoring and quality assurance

Back-checks are done to maintain data validity at various levels (supervisors, survey administrator, and research coordinator). The monitoring of records are done on the basis of following consideration:

- Flagged by the system based on pre-defined parameters*
- Flagged by the supervisor, survey administrator and/or research coordinator

*NOTE:* [These include - (i) if the GPS location is missing, (ii) if the time taken to complete the survey is more or less than the permissible time duration (10 to 20 minutes), and (iii) the interview time is beyond permissible interview time in the system (8 AM to 6 PM). The settings for flagging can be configured for a specific survey task.]

All such flagged records are verified by the supervisor in consultation with the respective enumerator. On receiving satisfactory explanation from the enumerator, the supervisor can accept the record. In case the explanation is found not satisfactory, the supervisor can reject the record. In both the cases, the supervisor provides necessary comments.

Apart from flagging for exceptions, the SLB Connect system flags 10 per cent of all the submitted records for verifications; this is done on a randomised basis by the system. The flagged records are verified by the respective supervisor and/or survey administrator by phone calls and/or house visits.

In addition to reviewing the system generated flagged records, the supervisors also review the first 1000 records collected by the enumerators. This is done for all the records including the normal ones, which help in early detection and rectification of any misunderstanding or misinterpretation of questionnaires and answer options by the enumerators. Supervisors are advised to flag those records where the time gap between two consecutive household surveys is too short (after estimating the normal time it may take to reach to the next surveyed household).

The supervisors are also advised, as far as possible, to review the records on the same day of the survey, so that necessary feedback can be given to enumerators before doing the new survey next day. The records are reviewed in a manner so that at least 10 per cent records collected by each enumerator is verified and UID (Unique Identification No.) numbers are noted.
The supervisors submit a weekly report to the survey administrator in a format provided in Annex.10.

Figure 8: Online monitoring procedure

The SLB Connect system generates a number of reports which help in monitoring and quality assurance of ongoing survey:

<table>
<thead>
<tr>
<th>Quality report</th>
<th>Performance report</th>
<th>Daily monitoring report</th>
<th>Survey progress report</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Flag wise report</td>
<td>• Supervisor total report</td>
<td>• Supervisor total report - ward wise targets, number of surveys conducted, survey records rejected, accepted and verified records.</td>
<td></td>
</tr>
<tr>
<td>• GPS wise report</td>
<td>• Supervisor pending report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Duration wise report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Contact wise report</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Performance Report

Supervisor total report

Supervisor pending

Supervisor flagged

Supervisor verification
Some useful tips for verification of records through telephone

The supervisors and/or survey administrators are advised to make the phone calls for verifying the household records. If the number is not reachable it is not advisable to change the status of the record immediately. The supervisor/survey administrator can try to reach for the next two days. In case it is still unreachable a comment is written without changing the status of the record and the next record is chosen manually. Cross check is done using the name of the respondents with the address. In case of a mismatch, the respondent’s name and whether he or she has been part of the survey or is aware of any family member being part of such a survey, is verified. In case the number dialled is found invalid, the record is replaced with another randomly generated one. It is advisable to always mention the reason in the specified field before taking an action (reject/accept). A list of critical questions are asked to verify the records which is given in Annex.12.
<table>
<thead>
<tr>
<th>Type of Record</th>
<th>Explanation</th>
<th>Action to be taken by</th>
<th>Action to be taken</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flagged Records</td>
<td>Flagged records are flagged by the system based on two aspects:</td>
<td>Action to be taken</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Duration: Permissible range is 10 to 20 min</td>
<td>1. For records flagged for duration: Supervisor consults the enumerator, reviews or rejects and writes comment in the comment box</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. GPS: When no coordinates shall be visible the record shall be flagged by system</td>
<td>2. For records flagged due to GPS: Supervisor consults the enumerator, checks previous records of the enumerator, checks other records in the same area and before reviewing or rejecting, consults the survey admin/IT help</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supervisor to review flagged records daily. If records are not reviewed for 2 days, administrator to follow up.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marked for verification</td>
<td>Marked for verification records are that are 10% back check records marked by the system. In addition survey administrator researchers can only mark records for verification</td>
<td>Supervisor to check the marked for verification records</td>
<td>Marked for verification records should be: 1. Verified using telephone survey 2. In case the records do not have a valid number, the records to be verified by actual field visit 3. All records either verified or rejected should be accompanied with a comment in the comment box. 4. While calling on the number provided in the record, the supervisor should try and speak to the person who gave the interview, even if the number is not his/her. If that is not possible, continue with asking the questions meant for back check</td>
<td></td>
</tr>
<tr>
<td>Normal Records</td>
<td>Normal records are records that are correct with no issue</td>
<td>Supervisor to review random normal records. Supervisor to accept all the normal records in batches</td>
<td>Normal records to be reviewed through random selection. Review should be based on two parameters: a. Enumerator wise trend b. Ground realities – check</td>
<td>Supervisor can review normal records once in 2 days. Can also accept records in batches.</td>
</tr>
<tr>
<td>Photographs/ multi media</td>
<td>Photographs in phone</td>
<td>Supervisor</td>
<td>Supervisor to download all the photographs taken by the enumerator</td>
<td>Once in a week</td>
</tr>
</tbody>
</table>

The survey administrator ensures allocation of supervisors and enumerators for a cluster of wards in which the survey is initiated. S/he also provides targets to the respective supervisors and enumerators for the completion of the survey in the format below. This is provided at least a couple of days before initiating the survey in the proposed cluster of wards.
The survey administrator reviews the records verified by the supervisor for final acceptance. This means that the 10 per cent randomly flagged records by the system and other records flagged by the system for any irregularities are reviewed by the survey administrator as well. The survey administrator provides appropriate comments for each record that she/he verifies before final acceptance.

The survey administrator is also advised to record any problem encountered by the supervisor or enumerator related to the SLB Connect technology platform. The following information is recorded and shared with the technical partner for efficient support:

- Date when the issue/problem is noticed
- Details of issue/problem reported
- Date when the action is taken

The survey administrator is advised to submit a weekly report to the research coordinator in the format provided in Annex.11. The research coordinator checks the survey data collection process and the monitoring process on a daily basis. He/she checks the followings:

- at least two records collected by each enumerator on a daily basis;
- at least 10 rejected plus reviewed plus accepted data sets each on a daily basis;
- ensuring data is collected from all sub-ward units as per plan;
- flags any observations with supervisors/survey administrator immediately.

**Box 9: Quick tips on cross-checks**

PRIA and WSP used SPSS and Microsoft Excel to perform the following checks. On the basis of these checks, the records which seemed irregular were flagged with the supervisors who conducted further checks on the records:

- Cross tab water source with whether there is water connection provided in toilets
- Cross tab income level with type of toilet at home and water connection accessed
- Cross tab income level with amount spent per month on water and sanitation requirements
- Cross tab area names with water and sanitation sources/means to check for discrepancies
- Select enumerator wise data to check for data patterns
- Cross tab name of area with slum distribution
- Cross tab slum households with water and sanitation means/sources
- Cross tab type of household with income disclosed
- Check for double/repeat entries on phone numbers
- Cross tabs different water sources reported and check to see if the options reported are realistic

A detailed guideline for survey monitoring process is given in Annex.13.
3.4 MAKING SENSE OF THE SURVEY FINDINGS

3.4.1 SLB Connect analytical framework and analysis of survey findings

Analysis of the data collected through the SLB Connect mobile survey is done with the help of an online data analysis platform. The results are presented using an analytical framework that mirrors the SLB indicator framework. At the top level, SLB Connect metric values are shown along with the overall city score. For more detailed inferences, survey findings are also presented in the form of charts and city maps showing the spatial spread of findings (using geo-tagged data). The indicator and detailed analytics are calculated using relevant questions from the questionnaire. The settings for indicator calculations and detailed analytics are done through the Analytics Configuration module provided in the SLB Connect system.

A step by step description of SLB Connect analytical dashboard is given below.

- Open the web-portal at http://www.slbconnect.in
- Sign in with the administrator log in details.
- Go to analytics and select the dashboard option.
- These details will give access to the specific city where the survey is undertaken.
- The landing page provides an overview of the city results.
The results have been analysed along parameters of access, continuity, adequacy, quality, complaint redressal, bill payment for water supply.

Each parameter in turn has been detailed out in terms of source of water and disaggregated along slum and non-slum areas.

Each parameter has been scored based on the city, slum and non-slum area as well as ward wise scoring.

All the graphs and tables can also be exported into user friendly pdf files or excel sheets.
The parameters for water supply have been defined as:

- **Access**: the most important source (primary source) used by the respondent for drinking and other purposes.
- **Continuity**: the duration of water supply received from the main source.
- **Adequacy**: the ability of water supplied through the main source to meet the HH’s requirements.
- **Quality**: receiving potable water from the main source.
- **Complaint redress**: the ability to fully resolve a complaint lodged with the service provider.
- **Bill payment**: receiving regular water bills and convenience of paying the bills.
- **Satisfaction**: satisfaction of the respondent with the water supply services.

While the online platform provides a default set of analytics, survey results can be further analysed by downloading survey data in excel sheet formats, and doing the analysis offline.

The option to check for distribution of surveyed households across spatial and economic categories is also provided. The survey details and demographic profiles can be viewed at a glance with the survey details tab.

### 3.4.2 Preparing a dissemination report

The survey results were summarised using simple info graphics into a city flyer. The information in the city flyer is organised in such a manner that it can be easily understood, and interpreted by lay persons. An indicative structure for the flyer is provided below.

- Brief about SLB Connect.
- Management of water supply and sanitation services in the city.
- City profile.
- Sample details.
- Overall city and slum scores on water supply and sanitation services.
- Highlights of survey findings on water supply and sanitation services.
- Detailed survey findings on water supply and sanitation services.
- Comparison between SLB Connect and SLB scores on various indicators of water supply and sanitation services.
- Details of wards identified on the basis of survey findings which require special attention on various indicators of water supply and sanitation services.
- Section on how municipality can use SLB Connect survey findings to improve services.
- Major initiatives taken by the municipality to improve services and commitments by using SLB Connect findings.
- Details of organisations involved in organising and implementing the SLB Connect survey.
- The city flyer is also prepared in the local language.
3.5 SHARING OF SURVEY FINDINGS WITH OTHERS

The dissemination of survey findings follows the outlined steps.

Figure 9: Stages of disseminating survey findings

3.5.1 Validating findings with the service providers

A validation meeting is organised with the Commissioner/ Chief Executive Officer and other concerned officials from the municipality and departments responsible for provisioning of water supply and sanitation services. The findings of the survey are shared through detailed presentations and the SLB Connect city dashboard. The purpose of the meeting is to validate the findings and cross check the inferences drawn on the basis of these findings. It also helps in developing a sense of ownership among the service providers. Effort should be made to link the SLB Connect city dashboard URL with the ULB website.

The validation meeting also provides an opportunity for the municipality and/or service provider to share details of various efforts that they are already making to overcome some of the gaps highlighted in the survey findings. These details should be included in the revised report/ presentation to be made during the city sharing meeting. The duration of the validation meeting is generally two to three hours.
3.5.2 Sharing of survey findings with service providers, elected councillors and citizens

The city sharing meeting is organised to share the survey’s findings with other stakeholders. In this meeting stakeholders from the city including the Mayor, elected and nominated members of municipality, Commissioner/Chief Executive Officer, officials of the municipality and concerned departments, and other institutions/organisations dealing with water supply and sanitation services, academia, CSOs, representatives of the Resident Welfare Associations (RWAs) and other citizen leaders are invited. It is useful if the city sharing meeting is organised jointly with the concerned municipality in the municipal office premises. It helps the municipality take ownership of the survey findings and take the next steps to work with the available information.

At the end of the meeting all the enumerators and survey administrators are felicitated and certificates are presented to them by the Mayor/Commissioner/Chief Executive Officer chairing the meeting. An indicative design for city sharing is given in Annex.14.

As an additional follow up step, the web link to the city flyer is disseminated across the city through a bulk SMS (including numbers of respondents collected through the survey).

3.5.3 Action planning: Agreeing on what needs to change and how

A discussion with the municipality/concerned department regarding how they can use findings of the survey and how they can use SLB Connect approach to generate citizen feedback in future through repeat surveys is helpful. An action plan for the city can prepared in consultation with the Mayor, Commissioner/Chief Executive Officer, municipal officials responsible for UWSS services, other practitioners, researchers, and academicians working on the UWSS related issues.

The login details are provided to local counterparts for them to access further details of the SLB Connect dashboard, and so that the IT department may integrate it with their other databases/platforms (e.g. GIS database). This encourages municipalities to have greater ownership for the SLBConnect findings.

Box 10: Dissemination of survey results in Jabalpur, Madhya Pradesh

A series of validation meetings were held which were attended by officials from the Jabalpur Municipal Corporation, members from the WSP team, members from SHODH (local CSO partner in Jabalpur) and the PRIA team. The results and interpretation were presented and discussed. Examples of previous improvements in water and sanitation services affected by SLB Connect were also shared. The officials made suggestions and helped provide context to some of the results which helped in a deeper understanding of the results and consequently a better presentation of the survey results at the sharing stage. Eighty participants attended the sharing stage held on August, 2015 at the City Hall, Jabalpur Municipal Corporation. The meeting was presided over by the Municipal President, the Mayor and a minister of the opposition party. The participants included JMC officials from various departments, ward councillors and the Mayor in Council (MIC) members of Jabalpur. There were extensive discussions on how to integrate SLB Connect with existing and/or planned initiatives by the corporation.
Key questions asked by participants were:
- Information about the duration of the survey.
- Sampling plan and rationale.
- Ward level data.

**Box 11: Action planning in Jabalpur, Madhya Pradesh**

- Survey findings to be used by the ULBs and affiliated departments.
- Survey findings to be used in the DPRs to be made.
- Findings to be shared on the Municipal website of the respective cities.
- Findings to be used under the theme of “Citizen Engagement” of SMART city, HRIDAY and AMRUT programmes.
- Findings to be used by ULBs to prepare proposals for SMART city programmes.
- Mobile database of respondents can be used by municipalities to seek smaller level citizen feedbacks on municipal services.
- A link of the SLBConnect dashboard would be provided on the JMC website.
SECTION 4: ENSURING A SUCCESSFUL SLB CONNECT

4.1 Success factors for interface with stakeholders

A successful interface with various stakeholders depends on the following strategies.

- Profile of different stakeholders to be engaged with.
- Stages at which interactions are undertaken with each of these stakeholders.
- Expectations of the implementing agency from its engagement with the stakeholders.

**Officials from the state government department:** Dialogue is initiated with officials from the state government department at the beginning about the rationale, objectives and methodology of SLB Connect, and the ways in which it can benefit the department. The mechanism for institutionalising SLB Connect through appropriate policy guidelines and operational details are also discussed. Ensuring a letter of support and signing a Memorandum of Understanding (MoU) with the relevant government department at the national or state level clearly outlining the terms and conditions of the survey is helpful.

**City authorities:** Similar discussions are also organised with the municipal Mayor, Commissioner/Chief Executive Officer and the heads of concerned department(s), explaining how the surveys can help them in planning and improving services. An MoU can be signed outlining the support required from the ULBs, especially, the information required to plan and conduct the survey. A letter of authorisation from the municipality is helpful. The Mayor and Commissioner/Chief Executive Officer are invited to attend part of the orientation for the enumerators and supervisors, particularly the oath-taking ceremony. The officials are approached to provide inputs for customising the questionnaire and periodically provided with updates, as the survey progresses. The survey findings are validated by the officials in a validation meeting.

**Citizens, opinion makers, media, and academia:** A regular flow of information and communication is maintained with the citizens, opinion makers, media, and academia about the survey and its progress through social media, pamphlets, and regular media channels. The final survey findings are shared with these stakeholders after validation by the ULB authorities.

4.2 Success factors for the survey

**Selection and training of partners:** A thorough orientation of team members from the implementing agency and partner organisation and the field team comprising of the survey administrator, supervisors and enumerators is of utmost importance to ensure a good quality survey. Following comprehensive, intensive and city specific training, regular discussions with these actors on updates, concerns or support required is always helpful. Clarity about their respective roles and responsibilities and standard operating procedures is reinforced through these regular discussions.

**Survey design and sampling:** The survey model is designed as a standard survey tool across cities, but allows for a certain degree of customisation without hampering its standardised format. The tool is scalable
and allows for longitudinal study to assess changes in service levels and the perceptions of citizens over time. The official data for sampling should be as recent as possible and the sources of various information should be as similar as possible. The sampling methodology within the ward may change from city to city since the source of information for sampling units can change from one city to the other.

**Monitoring:** Regular physical and online checks of the records collected along spatial spread, kinds of HHs being selected and information being collected across key parameters is crucial. A buffer can be maintained when selecting the number of HHs for survey, taking into account possible rejection of survey records.

### 4.3 Success factors for disseminating survey findings

**Validation meeting:** The preliminary findings need to be shared first with key officials in the municipality and the concerned service departments before being shared with other stakeholders. The perspectives, interpretations and rationale become evident through validation meetings. It helps in gaining acceptance for the findings and trust of the municipality leadership. It also helps minimise chances of erroneous interpretation of the findings. This usually happens among a small group of officials where they validate the findings against their benchmarks and operational information. Typically new information and analyses emerge from such validation meetings.

**Sharing meeting:** The final findings of the survey are shared with other stakeholders including the Mayors, Commissioner/Chief Executive Officer, councillors, local NGOs, media, academia and various citizens’ groups. This sharing is conducted at the city level and efforts are made to get representatives from all parts of the city. The sharing meeting is helpful in getting perspectives and suggestions from various stakeholders for service improvement planning.

Website details are shared with the municipality and other stakeholders, so that they can access the dashboard to reference the detailed findings. The municipality is also encouraged to integrate the city specific SLB Connect URL with the municipal website. It enhances the municipality’s sense of ownership of the SLB Connect findings.

**City level dissemination report:** A short city level report/flyer highlighting the key results, interpretations, and implications on service improvement plans is prepared for wider sharing with citizens. The report/flyer showcases the important findings of the city’s water and sanitation and provides information on the current steps taken by the municipal authorities on citizen engagement and to address water and sanitation issues in the city. One way to share the city report/flyer is to send an SMS text with a web link to all the respondents whose mobile numbers have been collected during the survey.
## Service Level Benchmarks

### Water Supply

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Indicator</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Coverage of water supply connections</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Per capita supply of water</td>
<td>135 lpcd</td>
</tr>
<tr>
<td>3.</td>
<td>Extent of metering of water connections</td>
<td>100%</td>
</tr>
<tr>
<td>4.</td>
<td>Extent of non-revenue water (NRW)</td>
<td>20%</td>
</tr>
<tr>
<td>5.</td>
<td>Continuity of water supply</td>
<td>24 hours</td>
</tr>
<tr>
<td>6.</td>
<td>Quality of water supplied</td>
<td>100%</td>
</tr>
<tr>
<td>7.</td>
<td>Efficiency in redressal of customer complaints</td>
<td>80%</td>
</tr>
<tr>
<td>8.</td>
<td>Cost recovery in water supply services</td>
<td>100%</td>
</tr>
<tr>
<td>9.</td>
<td>Efficiency in collection of water supply-related charges</td>
<td>90%</td>
</tr>
</tbody>
</table>

### Sewage Management Services (Sewerage and Sanitation)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Indicator</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Coverage of toilets</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Coverage of sewage network services</td>
<td>100%</td>
</tr>
<tr>
<td>3.</td>
<td>Collection efficiency of the sewage network</td>
<td>100%</td>
</tr>
<tr>
<td>4.</td>
<td>Adequacy of sewage treatment capacity</td>
<td>100%</td>
</tr>
<tr>
<td>5.</td>
<td>Quality of sewage treatment</td>
<td>100%</td>
</tr>
<tr>
<td>6.</td>
<td>Extent of reuse and recycling of sewage</td>
<td>20%</td>
</tr>
<tr>
<td>7.</td>
<td>Efficiency in redressal of customer complaints</td>
<td>80%</td>
</tr>
<tr>
<td>8.</td>
<td>Extent of cost recovery in sewage management</td>
<td>100%</td>
</tr>
<tr>
<td>9.</td>
<td>Efficiency in collection of sewage charges</td>
<td>90%</td>
</tr>
</tbody>
</table>

### Solid Waste Management (SWM)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Indicator</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Household level coverage of solid waste management services</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Efficiency of collection of municipal solid waste</td>
<td>100%</td>
</tr>
<tr>
<td>3.</td>
<td>Extent of segregation of municipal solid waste</td>
<td>100%</td>
</tr>
<tr>
<td>4.</td>
<td>Extent of municipal solid waste recovered</td>
<td>80%</td>
</tr>
<tr>
<td>5.</td>
<td>Extent of scientific disposal of municipal solid waste</td>
<td>100%</td>
</tr>
<tr>
<td>6.</td>
<td>Efficiency in redressal of customer complaints</td>
<td>80%</td>
</tr>
<tr>
<td>7.</td>
<td>Extent of cost recovery in SWM services</td>
<td>100%</td>
</tr>
<tr>
<td>8.</td>
<td>Efficiency in collection of SWM charges</td>
<td>90%</td>
</tr>
</tbody>
</table>

### Storm Water Drainage

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Indicator</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Coverage of storm water drainage network</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Incidence of water logging/flooding</td>
<td>0</td>
</tr>
</tbody>
</table>
### Annex.2
SLB Reporting by the Intervention Cities on Select Water Supply Indicators

<table>
<thead>
<tr>
<th>City/Year</th>
<th>Indicator</th>
<th>Reported performance against benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rae Bareli (2012-13)</strong></td>
<td>Coverage of water supply connections</td>
<td>44.1%</td>
</tr>
<tr>
<td></td>
<td>Per capita supply of water</td>
<td>120.91 lpcd</td>
</tr>
<tr>
<td></td>
<td>Extent of metering of water connections</td>
<td>Not applicable (no meters)</td>
</tr>
<tr>
<td></td>
<td>Continuity of water supply</td>
<td>3 hours</td>
</tr>
<tr>
<td></td>
<td>Quality of water supplied</td>
<td>96.29%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in redressal of customer complaints</td>
<td>94.9%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in collection of water supply-related charges</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Varanasi (2012-13)</strong></td>
<td>Coverage of water supply connections</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>Per capita supply of water</td>
<td>135 lpcd</td>
</tr>
<tr>
<td></td>
<td>Extent of metering of water connections</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>Continuity of water supply</td>
<td>7-8 hours</td>
</tr>
<tr>
<td></td>
<td>Quality of water supplied</td>
<td>Data unavailable</td>
</tr>
<tr>
<td></td>
<td>Efficiency in redressal of customer complaints</td>
<td>Data unavailable</td>
</tr>
<tr>
<td></td>
<td>Efficiency in collection of water supply-related charges</td>
<td>92%</td>
</tr>
<tr>
<td><strong>Ajmer (2013-14)</strong></td>
<td>Coverage of water supply connections</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Per capita supply of water</td>
<td>100 lpcd</td>
</tr>
<tr>
<td></td>
<td>Extent of metering of water connections</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>Continuity of water supply</td>
<td>0.75 hours</td>
</tr>
<tr>
<td></td>
<td>Quality of water supplied</td>
<td>78%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in redressal of customer complaints</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in collection of water supply-related charges</td>
<td>84%</td>
</tr>
<tr>
<td><strong>Jhunjhunu (2013-14)</strong></td>
<td>Coverage of water supply connections</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>Per capita supply of water</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>Extent of metering of water connections</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Continuity of water supply</td>
<td>0.50 hours</td>
</tr>
<tr>
<td></td>
<td>Quality of water supplied</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in redressal of customer complaints</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in collection of water supply-related charges</td>
<td>90%</td>
</tr>
<tr>
<td><strong>Jabalpur (2012-13)</strong></td>
<td>Coverage of water supply connections</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Per capita supply of water</td>
<td>135 lpcd</td>
</tr>
<tr>
<td></td>
<td>Extent of metering of water connections</td>
<td>0.75%</td>
</tr>
<tr>
<td></td>
<td>Continuity of water supply</td>
<td>3 hours</td>
</tr>
<tr>
<td></td>
<td>Quality of water supplied</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in redressal of customer complaints</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>Efficiency in collection of water supply-related charges</td>
<td>45%</td>
</tr>
</tbody>
</table>
सहमति पत्र

उद्देश्य
एस.एल.बी. कनेक्ट (SLB Connect) जल एवं स्वच्छता कार्यक्रम (WSP), विश्व बैंक द्वारा शहरी विकास मंत्रालय, भारत सरकार के संयुक्त तत्त्वाधान से प्रारंभ किया गया है। वर्तमान में इसमें पानी की आपूर्ति, शोध एवं जल निकायी सेवाओं को शामिल किया गया है। इसके अंतर्गत मोबाइल से नवीन वेब तकनीक का उपयोग करते हुए नागरिकों की प्रतिक्रियाओं का सबैभरण किया जा रहा है।

इस सर्वेक्षण का उद्देश्य पानी और शोध एवं जल निकायी आदि सेवाओं के संबंध में जलवायु पर शहर के नागरिकों के दृष्टिकोण के आधार पर इन सेवाओं के स्तर की जीज़ करना, नगर निगम को निगमाधीन एवं समस्ताओं के निर्देशक के लिए वार्ड वार अंकनें उपलब्ध करवाना तथा शहर के नागरिकों को इन सेवाओं के विभिन्न पहलुओं की निम्नाधीन लेख के लिए मोबाइल आधारित तकनीक का प्रयोग करने के लिए प्रोत्साहित करना है।

उपरोक्त उद्देश्यों को प्राप्त करने के लिए प्रिया, नई दिल्ली, शोध, जलवायु तथा नगर निगम जलवायु के बीच आज दिनांक ......... मार्च 2015 को एक सहमति पत्र पर हस्ताक्षर किए जा रहे हैं।

इस कार्य को सकलतापूर्वक पूरा करने के लिए प्रिया (सोसाइटी फोर पार्टीसिपेटरी रिसर्च इन एशिया), नई दिल्ली, शोध (सोसाइटी फोर डेलिगेमेंट आर्क ह्यूमनिटी), जलवायु तथा नगर निगम, जलवायु की भूमिका एवं जिम्मेदारियों में मिलालिखित होनी।

प्रिया और शोधकी भूमिका एवं जिम्मेदारियाँ:

1. प्रिया और स्थानीय सहयोगी संस्था (शोध) द्वारा नगर निगम के अधिकारियों के साथ उक्त विषय पर चर्चा करना व उन्हें उचित जानकारी प्रदान करना।
2. उक्त सेवाओं के संबंध में एक अभियन रिपोर्ट तैयार करना।
3. प्रिया द्वारा उक्त प्रक्रिया के अंतर्गत सर्वेक्षण के लिए एक सर्व प्रशासनी तैयार करना, स्थानीय आवश्यकताओं के अनुसार इसकी समीक्षा करना तथा इसमें उचित संशोधन करना।
4. उक्त सर्वोत्तम के लिए सर्वेक्षण तक्षता तथा फील्ड सुपरवाइजर उपलब्ध करवाना तथा उनके प्रशिक्षण करना।
5. शहर के सभी वाइडो (कच्ची बसिडों सहित) में सामग्री के द्वारा पहियाओं का चयन व सर्वेक्षण करना।
6. सर्वेक्षण प्रक्रिया की निगमाधीन करना तथा सर्वेक्षण की गुणवत्ता चुनिन्दित करने के लिए आंकड़ों की समीक्षा व स्वीकृति प्रदान करना।
7. सर्वेक्षण पूर्ण होने के पश्चात विश्लेषण कर रिपोर्ट तैयार करना व इसे नगर निगम के साथ साझा करना।
8. नगर निगम की स्वीकृति के पश्चात उपरोक्त रिपोर्ट को संबंधित अधिकारियों, जार्डिनों तथा अन्य हितोद्वारकों से साझा करना।
9. एस.एल.बी. कॅन्टेक्ट से संबंधित प्रक्रियाओं पर नगर निगम, अधिकारियों तथा स्थानीय नागर समाज समूहों का अर्द्ध –दिवसीय प्रशिक्षण करना।
10. सोसाइल मीडिया (जैसे फेसबुक, ट्वीटर आदि) के माध्यम से सर्वेक्षण के निष्कर्षों का प्रचार प्रसार करना।

जबलपुर नगर निगमकी भूमिका एवं जिम्मेदारियों:

1. सर्वेक्षण और सर्वेक्षण संबंधित प्रक्रियाओं को पूरा करने में आवश्यक सहायता प्रदान करना।
2. प्रिया और स्थानीय सहयोगी संस्था के साथ समन्वय करने के लिए एक नोडल अधिकारी को नियुक्त करना।
3. सर्वेक्षण के संबंध में नगर निगम की ओर से सर्वेक्षणकर्ताओं तथा फील्ड सुपरवाइजर को प्राथिकार पत्र उपलब्ध करवाना।
4. सर्वेक्षण आरम्भ करने से पहले सर्वेक्षणकर्ताओं तथा फील्ड सुपरवाइजर को शपथ दिलाना।
5. एस.एल.बी. कॅन्टेक्ट से संबंधित प्रक्रियाओं पर जबलपुर नगर निगम के अधिकारियों तथा स्थानीय नागर समाज समूहों का अर्द्ध –दिवसीय प्रशिक्षण कार्यशाला के लिए नगर निगम स्थान उपलब्ध करवाना।
6. संबंधित कार्य पर विचार–विषय करने के संबंध में होने वाली चर्चा/बैठकों आदि में संबंधित विभागों के अधिकारियों की भागीदारी सुनिश्चित करना।
7. सफलतापूर्वक सर्वेक्षण पूरा होने पर सर्वेक्षणकर्ताओं तथा फील्ड सुपरवाइजर के लिए प्रमाण पत्र के वितरण के लिए सहयोग प्रदान करना।
8- नगर निगम की वेबसाइट पर प्रक्रिया की जानकारी को लोगों के साथ बोलना।
9- सर्वेक्षण के पश्चात उत्तरदाया के मोबाइल पर निम्नलिखित ईमेल प्रस्तावित करने की अनुमति देना–
“सर्वेक्षण में भाग लेने के लिए धन्यवाद। आप पानी, जल निकायों एवं सेंटिक टैंक संबंधी शिकायत हमारी वेबसाइट http://jmcjabalpur.org पर दर्ज करना सकते हैं– नगर निगम, जबलपुर”.

निदेशक
प्रिया, नई दिल्ली

निदेशक
शोध, जबलपुर

आयुक्त
नगर निगम, जबलपुर
## Section I: General Information

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Check-list</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Name of the state:</td>
</tr>
<tr>
<td>2.</td>
<td>Name of the city:</td>
</tr>
<tr>
<td>3.</td>
<td>Name of the municipality:</td>
</tr>
<tr>
<td>4.</td>
<td>Type of municipality:</td>
</tr>
<tr>
<td></td>
<td>Municipal Corporation</td>
</tr>
<tr>
<td></td>
<td>Municipal Council</td>
</tr>
<tr>
<td></td>
<td>Nagar Panchayat</td>
</tr>
<tr>
<td>5.</td>
<td>Municipal website (if any):</td>
</tr>
<tr>
<td>6.</td>
<td>Details of wards in the municipality. Please furnish this information in Annex.3.1</td>
</tr>
<tr>
<td>7.</td>
<td>Ward wise total number of households. Please furnish this information in Annex.3.1</td>
</tr>
<tr>
<td>8.</td>
<td>Ward wise information about slum areas (notified and non-notified). Please furnish this information in Annex.3.2</td>
</tr>
</tbody>
</table>

## Section II: Governance of the Municipality

1. Is there an elected body in place?
2. When was the last election held?
3. Were the elections held on party lines? If yes, please provide information about the party wise tally for elected councillors?
   - Party 1:
   - Party 2:
   - Party 3:
4. Is there any Mayor in Council at the municipality?
5. How many women councillors are there in the municipality?
6. What is the name and designation of elected head of the municipality?
7. What is the name and designation of executive head of the municipality?
8. Is there any District Planning Committee? If yes, when was it constituted? What is the current composition of the District Planning Committee?
9. If there is a District Planning Committee, what is its relationship with the municipality?
10. Are there any other decision making bodies in the municipality. For example, Standing Committees of the Municipality, etc. If yes, please provide details.
11. How many functional departments are there in the municipality? Please provide an organogram of the municipality.

## Section III: Services

### Sub-section IIIA: Water

1. Which institution is responsible for the following water supply related functions? Should you observe any overlapping of functions, please provide a detailed note.

<table>
<thead>
<tr>
<th>Function</th>
<th>PHED (State Govt.)</th>
<th>Municipality</th>
<th>Para-statal Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function</td>
<td>Role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraction and storage of water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply of water</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. What is the role of municipality/utility vis-à-vis the functions mentioned below?

3. Please provide a detailed staff profile of municipality/utility related to water supply.

<table>
<thead>
<tr>
<th>Post</th>
<th>Sanctioned</th>
<th>Filled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular</td>
<td>Contractual</td>
</tr>
<tr>
<td></td>
<td>Regular</td>
<td>Contractual</td>
</tr>
<tr>
<td>Technical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-technical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. How many water zones are there in the city? Should you find that the city is not divided into water zones, please collect information related to relevant administrative structures using the same questions.

5. Is there any map delineating various water zones in the city? If yes, please collect a copy of the map.

6. Please provide zone wise number of households covered by piped water supply? Please furnish this information in Annex.3.3

7. Please also provide zone wise number of households covered by piped water supply with meter connections? Please furnish this information in Annex. 3.3

8. Please provide zone wise number of stand-posts (community/group connections) supplied by the municipality/utility? Please furnish this information in Annex. 3.3

9. What are the other mechanisms for supplying water (tanker, hand pumps etc.) followed by the municipality/utility?

10. Please provide the information related to total amount (in litres) of water (per day):
    - extracted and stored:
    - supplied through piped connections to households:
    - supplied through stand posts (community/group connections):
    - supplied through tankers and other means:

11. What are the tariffs for water consumption? Please provide separate information for domestic, mixed and commercial consumptions.

12. Do tariffs vary between zones for domestic, mixed and commercial consumption?

13. Which institution (municipality/utility) is responsible for collecting water tariffs (user charges)?

14. What are the various modes for payment (Online and/or Manual)? Please specify the process.

15. What is the billing cycle for water supply (monthly, quarterly, half-yearly, or annual)?

16. What are the existing mechanisms for grievance redressal related to water supply?

17. Which of the above information is available in public domain? What are the mechanisms for disclosing such information?

18. Has the municipality/utility prepared any Detailed Project Report (DPR) on water supply? If yes, please get a copy of the DPR.

19. If yes, in which year the DPR was prepared?

20. Has the municipality/utility implemented the DPR? If yes, which components of DPR have already been implemented?

21. Please provide detailed (Capital, Operation and Maintenance Expenditures) annual expenditures for water supply for the past three financial years.

22. Please provide amount of revenues from various sources (Grants, User Charges etc.) related to water supply.
23. Please provide information related to various challenges faced by the municipality/utility in relation to water supply?

Section IIIB: Sanitation (including Solid Waste and Sewerage)

1. Which institution is responsible for the following Solid Waste and Sewerage related functions? Should you observe any overlapping of functions, please provide a detailed note.

<table>
<thead>
<tr>
<th>Function</th>
<th>State Govt. Dept.</th>
<th>Municipality</th>
<th>Para-statal Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. What is the role of municipality/utility vis-à-vis the functions mentioned below?

<table>
<thead>
<tr>
<th>Function</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid waste collection</td>
<td></td>
</tr>
<tr>
<td>Solid waste disposal at primary sites</td>
<td></td>
</tr>
<tr>
<td>Solid waste disposal at landfill sites</td>
<td></td>
</tr>
<tr>
<td>Sewerage collection</td>
<td></td>
</tr>
<tr>
<td>Sewerage treatment</td>
<td></td>
</tr>
</tbody>
</table>

3. Please provide a detailed staff profile of municipality/utility related to sanitation (including solid waste and sewerage management) services.

<table>
<thead>
<tr>
<th>Post</th>
<th>Sanctioned</th>
<th>Filled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular</td>
<td>Contractual</td>
</tr>
<tr>
<td>Technical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-technical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Are there any administrative divisions/zones for managing the sanitation services in the municipal area? If yes, please provide details. Please also collect a copy of the map, delineating these administrative divisions, if available.

5. Please provide administrative division/zone wise number of households covered by solid waste and sewerage management services? Please furnish this information in Annex 3.4.

6. Please provide the information related to total amount in relation to following services (on daily basis).
   - Solid waste collected (amount):
   - Solid waste collected (from no. of households):
   - Solid waste disposed at the primary sites:
   - Solid waste disposed at the landfill site:
   - Sewerage collected (amount):
   - No. of household connected to sewerage line:
   - Sewerage treated:

7. Please provide information related to various challenges faced by the municipality/utility in relation to solid waste and sewerage management services?

8. Is there any user charge for domestic solid waste and sewerage management services? If yes, please provide details.

9. Do user charges vary between administrative divisions/zones for the above services?

10. Which institution (municipality/utility) is responsible for collecting such user charges?

11. What are the various modes for payment (Online and/or Manual)? Please specify the process.

12. What is the billing cycle for such services (monthly, quarterly, half-yearly, or annual)?
### Section IV: Mechanisms Related to Citizen Participation

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. What are the existing mechanisms for grievance redressal related to solid waste and sewerage management services?</td>
</tr>
<tr>
<td>14. Which of the above information is available in public domain? What are the mechanisms for disclosing such information?</td>
</tr>
<tr>
<td>15. Has the municipality/utility prepared any Detailed Project Report (DPR) on solid waste and sewerage management? If yes, please get a copy of the DPR.</td>
</tr>
<tr>
<td>16. If yes, in which year the DPR was prepared?</td>
</tr>
<tr>
<td>17. Has the municipality/utility implemented the DPR? If yes, which components of DPR have already been implemented?</td>
</tr>
<tr>
<td>18. Please provide detailed (Capital, Operation and Maintenance Expenditures) annual expenditures for water supply for the past three financial years.</td>
</tr>
<tr>
<td>19. Please provide amount of revenues from various sources (Grants, User Charges etc.) related to solid waste and sewerage management services.</td>
</tr>
<tr>
<td>20. How many public toilets are serviced by the municipality? Please collect ward wise number of public toilets provided by the municipality.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
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<tbody>
<tr>
<td>1. Does the municipality/utility have a Citizens’ Charter? If yes, please collect a copy of the Citizen Charter?</td>
</tr>
<tr>
<td>2. If yes, is the Citizen Charter available in public domain? How is it disseminated among the citizens?</td>
</tr>
<tr>
<td>3. Does the municipality have service standards defined for water supply and sanitation services?</td>
</tr>
<tr>
<td>4. What are the existing mechanisms for citizen engagement? For example, Ward Committee, Area Sabhas, Resident Welfare Association (RWAs) etc.</td>
</tr>
<tr>
<td>5. If yes, what roles these entities play in the planning and monitoring of service delivery and any other municipal governance related issues?</td>
</tr>
<tr>
<td>6. Are there any instances of engagement between municipality/utility and local NGOs/ CSOs? If yes, please provide details.</td>
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Annex.3.1

<table>
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<tr>
<th>Ward No.</th>
<th>Name of the Ward</th>
<th>No. of Households</th>
<th>Name of the Ward Councillor</th>
<th>Affiliated Political Party</th>
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Annex.3.2

<table>
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<th>Ward No.</th>
<th>Name of the Slum</th>
<th>Notified/Non-notified</th>
<th>No. of Households in Each Slum</th>
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</table>

Annex.3.3

<table>
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<th>Zone No.</th>
<th>No. of households connected to piped water</th>
<th>No. of households connected to piped water with meter connection</th>
<th>Number of stand-posts (community/group connections)</th>
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</table>

Please add rows

*If information is available at the ward level, please modify the table accordingly.*

Annex.3.4

<table>
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<tr>
<th>Zone No.</th>
<th>No. of households serviced by solid waste management services</th>
<th>No. of households connected to sewerage lines</th>
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Annex.5
Sampling Method Followed in Rae Bareli

Sources of information:

- Nagar Palika slum details (2009) from the municipality including slum names and household numbers
- The municipality then helped the team further categorise the households as notified/ non-notified slum (this was double checked with 2006 slum information received from the municipality)
- The ward level and city level household information was taken from Census of India 2011 data
- The PPS method was used to tabulate the household data on a city/ward and sub-ward level using the Census of India data and the municipal information.
- After that the sub-ward level tabulations were done for slum sample and non-slum samples.
- The city was divided in clusters where each cluster was a compilation of 3-4 wards.
- Each ward was further separated along slum household and non-slum households tabulated using the PPS method and the information mentioned above.
- The supervisor did a physical check on the ward to delineate the geo-boundaries between the slum and non-slum and also provide an approximate number of households (HHs) from each slum
- Using an approximation the total number of slum HH in the ward would then be spread across the slums in the ward using a rough estimation based on feedback from the field by the supervisor
Table of calculation on a ward and sub ward (Σ slum and Σ non-slum HH) using Census of India 2011 data:

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<th>No. of HH</th>
<th>Ward HH: City HH (%)</th>
<th>Sample size (in HH terms) [(C*3410)/100]</th>
<th>Without buffer</th>
<th>Name of slum</th>
<th>Slum HH*</th>
<th>Non Slum HH</th>
<th>Slum HH: Ward HH (%) [G/C*100]</th>
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<td>1139</td>
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<td>Kaharo ka Adda, Nale Ke Kinare Ki Basti</td>
<td>97</td>
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<td>87</td>
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<td>97</td>
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<td>74</td>
<td>845</td>
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<td>82</td>
<td>845</td>
<td>100.0</td>
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</tr>
</tbody>
</table>

Total 35197

Slum data from RAY report Annex 1A and 1C

The cells that have been colour coded with the same colour are the wards that share slums. The slum households have been divided equally between both wards.
Using ward 7 and 8 as examples to focus on sub ward level (Mohalla and per slum level) tabulations:

<table>
<thead>
<tr>
<th>Slum</th>
<th>HH from field</th>
<th>Re-adjusted HH (B/no. of HH from the field)*Slum HH sample based on 2011</th>
<th>Non Slum</th>
<th>HH from field</th>
<th>Re-adjusted HH (J/total no. of H from field)*Non Slum HH sample based on 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slum 1</td>
<td>200</td>
<td>13</td>
<td>Mohalla 1</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>Slum 2</td>
<td>200</td>
<td>13</td>
<td>Mohalla 2</td>
<td>50</td>
<td>8</td>
</tr>
<tr>
<td>Slum 3</td>
<td>400</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slum 4</td>
<td>500</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1300</td>
<td>87</td>
<td>Total</td>
<td>80</td>
<td>13</td>
</tr>
</tbody>
</table>

| Ward 8 |               |                                                                        |          |               |                                                                          |
| Slum 1 | 231           | 20                                                                     | Mohalla 1| 150           | 10                                                                       |
| Slum 2 | 300           | 26                                                                     | Mohalla 2| 250           | 17                                                                       |
| Slum 3 | 83            | 7                                                                      | Mohalla 3| 100           | 7                                                                        |
|        |               |                                                                        | Mohalla 4| 150           | 10                                                                       |
|        |               |                                                                        | Mohalla 5| 75            | 5                                                                        |
| Total  | 614           | 53                                                                     | Total    | 725           | 49                                                                       |

Ward 7 & 8: Mohalla wise enumerator and supervisor planning

### Ward 7

**Non Slum Households**

<table>
<thead>
<tr>
<th>Mohalla</th>
<th>No. of HH to be surveyed</th>
<th>Enumerator</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohalla 1</td>
<td>5</td>
<td>Shiv Shakti</td>
<td>Shobhit</td>
</tr>
<tr>
<td>Mohalla 2</td>
<td>8</td>
<td>Atul</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Slum Households**

<table>
<thead>
<tr>
<th>Slum</th>
<th>No. of HH to be surveyed</th>
<th>Enumerator</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slum 1</td>
<td>13</td>
<td>Satyendra</td>
<td>Shobhit</td>
</tr>
<tr>
<td>Slum 2</td>
<td>13</td>
<td>Satyendra</td>
<td></td>
</tr>
<tr>
<td>Slum 3</td>
<td>27</td>
<td>Shiv Shakti</td>
<td></td>
</tr>
<tr>
<td>Slum 4</td>
<td>33</td>
<td>Atul+Ajay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>87</td>
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<td></td>
</tr>
</tbody>
</table>

### Ward 8

**Non Slum Households**

<table>
<thead>
<tr>
<th>Mohalla</th>
<th>No. of HH to be surveyed</th>
<th>Enumerator</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohalla 1</td>
<td>10</td>
<td>Ajay</td>
<td>Shobhit</td>
</tr>
<tr>
<td>Mohalla 2</td>
<td>17</td>
<td>Atul</td>
<td></td>
</tr>
<tr>
<td>Mohalla 3</td>
<td>7</td>
<td>Satyendra</td>
<td></td>
</tr>
<tr>
<td>Mohalla 4</td>
<td>10</td>
<td>Satyendra</td>
<td></td>
</tr>
<tr>
<td>Mohalla 5</td>
<td>5</td>
<td>Ajay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Slum Households**

<table>
<thead>
<tr>
<th>Slum</th>
<th>No. of HH to be surveyed</th>
<th>Enumerator</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slum 1</td>
<td>20</td>
<td>Atul+Satyenda</td>
<td>Shobhit</td>
</tr>
<tr>
<td>Slum 2</td>
<td>26</td>
<td>Shiv Shakti</td>
<td></td>
</tr>
<tr>
<td>Slum 3</td>
<td>7</td>
<td>Ajay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To Whom It May Concern

This is to certify that the bearer of this letter is authorised to undertake household survey in Jabalpur city with consent of Municipal Commissioner, Municipal Corporation, Jabalpur.

The survey is conducted under the programme “SLB Connect- Conducting Citizen Feedback Surveys Using Innovative Mobile-to-Web System” supported by Water and Sanitation Program (WSP), World Bank, Ministry of Urban Development, Govt. of India and Department of Urban Administration and Development, Govt. of Madhya Pradesh.

The survey is implemented by Society for Participatory Research in Asia (PRIA), New Delhi and Shodh, Jabalpur.

Following persons are involved in undertaking household survey in municipal corporation limit of Jabalpur city:

**Enumerators**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
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<tr>
<td>4</td>
<td>17</td>
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<td>19</td>
</tr>
<tr>
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<tr>
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<tr>
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<td>2</td>
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<tr>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

**Field Supervisors**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
</tr>
</tbody>
</table>

Commissioner
Municipal Corporation
Jabalpur

Director
SHODH
Jabalpur

Programme Manager
PRIA
New Delhi
SLB CONNECT – CITIZEN FEEDBACK ON WATER & SANITATION SERVICES IN
Varanasi Municipal Corporation

A. IDENTIFICATION

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A1.</td>
<td>Name of the Election Ward with Code No.</td>
<td>Auto coded in the device</td>
<td></td>
</tr>
<tr>
<td>A2.</td>
<td>Name of the Administrative Zone (if any) with Code No.</td>
<td>Auto coded in the device</td>
<td></td>
</tr>
<tr>
<td>A3.</td>
<td>Name of the Water Zone (if any) with Code No.</td>
<td>Auto coded in the device</td>
<td></td>
</tr>
<tr>
<td>A4.</td>
<td>Interviewer’s Code No.</td>
<td>Auto coded in the device</td>
<td></td>
</tr>
<tr>
<td>A5.</td>
<td>Date of interview (DD/MM/YY)</td>
<td>Auto coded in the device</td>
<td></td>
</tr>
<tr>
<td>A6.</td>
<td>Time of interview (Hour/Min.) Coded in 24 Hrs. (Display survey record in AM/ PM in the web app)</td>
<td>Start Time</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A7.</td>
<td>Is this a slum area? *</td>
<td>No – 1</td>
<td>Yes, notified – 2</td>
</tr>
<tr>
<td>A8.</td>
<td>Type of dwelling *</td>
<td>Pucca house with concrete roof - 1</td>
<td>Pucca house with any other kind of roof - 2</td>
</tr>
<tr>
<td>A9.</td>
<td>Would you be willing to participate in the survey for water and sanitation services?</td>
<td>Yes - 1</td>
<td>No - 2</td>
</tr>
<tr>
<td>A10.</td>
<td>What is your address?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Questions marked with “*” are not to be asked. To be filled by enumerator based on her/his observation

B. DEMOGRAPHIC PROFILE OF THE RESPONDENT

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B1.</td>
<td>What is your name?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2.</td>
<td>Gender of the respondent *</td>
<td>Male – 1</td>
<td>Female – 2</td>
</tr>
<tr>
<td>B3.</td>
<td>What is your age?</td>
<td>18-29 years – 1</td>
<td>30-49 years - 2</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| B4. Are you the head of the household? | Yes - 1  
No - 2  
(IF CODED 1, GO TO Q. B6) |
| B5. What is the name of the Head of household | .............................................................. |
| B6. What type of ration card does your household have? | APL - 1  
BPL - 2  
No card - 3 |
| B7. What is the combined annual income of the household (From all sources) | Less than or equal to Rs.25000 – 1  
Rs.25001 to 100000 – 2  
Rs.100001 to Rs.5 lakh – 3  
Above Rs.5 lakh – 4  
Do not know – 5 |
| B8. Is this a rented house? | Yes – 1  
No - 2 |

**C. DRINKING WATER**

**C1. SOURCES & USAGE OF WATER**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water charges paid to Jal Kal (Rs.___________)</td>
</tr>
</tbody>
</table>

**C1.1a** Which is the single most used water source for drinking purposes by the household?  
**Single Response**  
Refer code list below

**C1.1b** Which is the single most used water source for other purposes by the household?  
**Single Response**  
Refer code list below

**C1.2a** Is the household dependent on other sources of water for drinking and other purposes?  
Yes - 1  
No - 2  
(IF CODED 2, GO TO C1.3)

**C1.2b** Which is/are the other sources of water used for drinking and other purposes?  
Multiple Responses, Refer code list below

ASK THE NEXT 3 QUESTIONS ONLY TO THOSE WHO DO NOT USE A FACILITY PROVIDED BY Municipal Corporation (THOSE WHO CODED 8,9,10,11,12 IN Q. C1.1a and C1.1b) & THEN GO TO SANITATION SECTION

**C1.3.** Why don’t you use the source provided by the Municipal Corporation?  
**Multiple Responses**  
Poor quality of water – 1  
Unreliable supply – 2  
Insufficient supply – 3  
Municipal water not accessible – 4  
Other reason – 5

**C1.4.** If services improve for the delivery of municipal water sources, would you like to shift to them?  
Yes – 1  
No – 2

**C1.5.** Do you pay any charges for water supply?  
If so, how much does your household - Yes, Water charges paid to Jal Kal (Rs.___________) - 1
<table>
<thead>
<tr>
<th>Code list for water usage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOVT SOURCES</strong></td>
</tr>
<tr>
<td>GOV- Household piped connection -1</td>
</tr>
<tr>
<td>GOV – Stand post -2</td>
</tr>
<tr>
<td>GOV – Tankers -3</td>
</tr>
<tr>
<td>GOV – Onsite Tank -4</td>
</tr>
<tr>
<td>GOV – Hand pump -5</td>
</tr>
<tr>
<td>GOV – Open Well -6</td>
</tr>
<tr>
<td>GOV – Covered Well -7</td>
</tr>
</tbody>
</table>

**C2. INCIDENCE OF WATER SCARCITY (TO BE ASKED FOR ALL USING GOVT (MUNICIPAL CORPORATION) SOURCES)**

**C2.1.** During the last 1 year did you face any water scarcity in summer months?
- Yes – 1 Continue with Q. C2.2
- No – 2 (Auto skip to C3 or C4 as the case may be)

**C2.2.** What was the main source of drinking water used by your household during the period of scarcity?
Refer Code list for Water Usage

**C3. FEEDBACK ON GOVT STAND POST (PIPED) LOCATED OUTSIDE THE HOUSE (DRINKING & DOMESTIC USES)
Q. C3.1 TO C3.12 ARE TO BE ASKED ONLY TO THOSE WHO CODED 2 in Q. C1.1a or Q.C1.1b**

**C3.1.** How far do you travel to collect water?
- Less than 200 meters – 1
- 200 – 500 meters – 2
- 500 meters - 1 Kilometers – 3
- More than 1Kilometers – 4

**C3.2.** How long does it take to fetch water for the household?
(from house to the source and back, including waiting time, and multiple trips)
- Less than 15 min – 1
- 15- 30 min - 2
- 30 min – 1 hr – 3
- More than 1 hr – 4

**C3.3.** How many days in a week do you get water from this source?

**C3.4.** Normally, on the day of supply how many hours/minutes of supply do you get from this source?

**C3.5.** Is the supply of water sufficient to meet the needs of
- Yes – 1

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>your family?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>C3.6.</strong> Is the water supplied as per a predictable time schedule?</td>
<td><strong>No – 2</strong></td>
</tr>
<tr>
<td><strong>C3.7.</strong> How convenient is the timing of water supply?</td>
<td>Always – 1</td>
</tr>
<tr>
<td></td>
<td>Mostly – 2</td>
</tr>
<tr>
<td></td>
<td>Rarely – 3</td>
</tr>
<tr>
<td></td>
<td>Never – 4</td>
</tr>
<tr>
<td></td>
<td>Do not know – 5</td>
</tr>
<tr>
<td><strong>C3.8.</strong> During the last 3 months, how many times did you receive water which was dirty?</td>
<td><strong>Never – 1</strong></td>
</tr>
<tr>
<td></td>
<td>Less than 3 times – 2</td>
</tr>
<tr>
<td></td>
<td>More than 3 times – 3</td>
</tr>
<tr>
<td></td>
<td>Always – 4</td>
</tr>
<tr>
<td><strong>C3.9.</strong> Do you buy water from other sources to meet your family’s needs? If yes, how much does your household spend per month?</td>
<td>Yes, Rs.__________</td>
</tr>
<tr>
<td></td>
<td>Yes, don’t know - 1</td>
</tr>
<tr>
<td></td>
<td>No, Do not buy – 2</td>
</tr>
<tr>
<td><strong>C3.10.</strong> Do you want a household piped water connection?</td>
<td>Yes – 1</td>
</tr>
<tr>
<td></td>
<td>No - 2</td>
</tr>
<tr>
<td></td>
<td>Already have – 3</td>
</tr>
<tr>
<td><strong>C3.10 (TO BE ASKED IF 1 or 2 is coded in Q C3.10)</strong></td>
<td>No supply network available – 1</td>
</tr>
<tr>
<td></td>
<td>Not eligible for a connection – 2</td>
</tr>
<tr>
<td></td>
<td>Too expensive – 3</td>
</tr>
<tr>
<td></td>
<td>Complicated process – 4</td>
</tr>
<tr>
<td></td>
<td>Have applied for a connection - 5</td>
</tr>
<tr>
<td></td>
<td>Others – 6</td>
</tr>
<tr>
<td><strong>C3.12</strong> For emergency use, what has been your experience with Municipal Corporation Tankers?</td>
<td>Good – 1</td>
</tr>
<tr>
<td></td>
<td>Fair – 2</td>
</tr>
<tr>
<td></td>
<td>Poor – 3</td>
</tr>
<tr>
<td></td>
<td>Not used – 4</td>
</tr>
<tr>
<td><strong>C4.</strong> FEEDBACK ON DOMESTIC PIPED WATER CONNECTION (Individual and Shared)</td>
<td></td>
</tr>
<tr>
<td><strong>Q C4.1 TO Q.C4.19 ARE TO BE ASKED WHO CODED 1 IN Q.C1.1a or Q.C1.1b</strong></td>
<td></td>
</tr>
<tr>
<td><strong>C4.1</strong> How many household(s) are using this connection?</td>
<td>…….. household/s</td>
</tr>
<tr>
<td><strong>C4.2</strong> How many days in a week do you get water?</td>
<td>………… day/s</td>
</tr>
<tr>
<td><strong>C4.3</strong> Normally, on the day of the supply how many hours/ minutes do you get water?</td>
<td>………….. hours</td>
</tr>
<tr>
<td></td>
<td>………….. minutes</td>
</tr>
<tr>
<td><strong>C4.4</strong> Is the supply of water sufficient to meet the needs of your family?</td>
<td>Yes – 1</td>
</tr>
<tr>
<td></td>
<td>No – 2</td>
</tr>
<tr>
<td><strong>C4.5</strong> Is the water supplied as per a predictable time schedule?</td>
<td>Always – 1</td>
</tr>
<tr>
<td></td>
<td>Mostly – 2</td>
</tr>
<tr>
<td></td>
<td>Rarely – 3</td>
</tr>
<tr>
<td></td>
<td>Never – 4</td>
</tr>
<tr>
<td></td>
<td>Do not know – 5</td>
</tr>
</tbody>
</table>
| C4.6 | How convenient is the timing of water supply? | Very convenient – 1  
Somewhat convenient – 2  
Not at all convenient – 3  
Do not know – 4 |
| C4.7 | During the last 3 months, how many times did you receive water which was dirty? | Never – 1  
Less than 3 times – 2  
More than 3 times – 3  
Always – 4 |
| C4.8 | Do you pay for water supply? | Yes – 1  
No – 2  
Do not know -3 |
| C4.9a. | How much does your household spend per Year? | Water charges paid to Jal Kal (Rs.__________) -1  
Water charges paid to landlord/society(Rs.__________) -2  
Do not know-3 |
| C4.9b. | Do you buy water from other sources to meet your family’s needs? If yes, how much does your household spend per month? | Yes, Rs.__________  
Yes, don’t know -1  
No, do not buy – 2 |
| C4.10 | Is there a meter for the water connection? | Yes, functional -1  
Yes, non-functional – 2  
No meter – 3  
Do not know – 4 |

**Feedback on Billing**

| C4.11 | Do you get a bill for water supply? If yes, how frequently? | Yes– 1  
-Once a month  
-Once in two months  
-Once in three months  
-Once in six months  
-Once in a year  
-No regular pattern  
**Do not get a bill – 2 (SKIP TO Q.C6.1)**  
**Do not know – 3 (SKIP TO Q.C6.1)** |
| C4.12 | Is this billing frequency convenient? | Yes – 1  
No - 2  
Do not know – 3 |
| C4.13 | How is the billed amount calculated? | As per actual meter reading – 1  
Fixed amount – 2  
Do not know – 3 |
| C4.14 | Do you feel there are errors in billing? | Yes, in every bill – 1  
Yes, in some bills-2  
Never – 3 |
| C4.15 | How do you pay your water bills? | Jal Kal Department Counter – 1 (ASK Q.C4.16 )  
Bank Counter – 2 (ASK Q.C4.16)  
During campaign/ camp – 3 (ASK Q.C4.16)  
Online/ internet- 4 (ASK Q.C4.18)  
Tax Inspector – 5 (ASK Q. C4.19)  
Do not know – 6 (ASK Q.C4.19) |
C4.16 Is it convenient to pay bills in terms of timing?  
Yes -1  
No -2  
Do not know -3  

C4.17 Is it convenient to pay bills in terms of location?  
Yes -1  
No -2  
Do not know -3  

C4.18 Is it convenient to pay bill online?  
Yes -1  
No -2  
Do not know -3  

C4.19 For emergency use, what has been your experience with Municipal Corporation Tankers?  
Good – 1  
Fair – 2  
Poor – 3  
Not used – 4  

C5. FEEDBACK ON OTHER MUNICIPAL (NON-PIPED) SOURCES LOCATED OUTSIDE HOUSE  
Q.C5.1 TO Q.5.9 ARE TO BE ASKED TO ONLY THOSE WHO CODED 3, 4 or 5 IN Q.C1.1a or Q.C1.1b  

C5.1. How many days in a week do you get water?  
--------- days  

C5.2. Is the supply of water sufficient to meet the needs of your household?  
Yes – 1  
No – 2  

C5.3. How convenient is the timing of water supply?  
Very convenient – 1  
Somewhat convenient – 2  
Not at all convenient – 3  
Do not know – 4  
Not applicable -5  

C5.4. Is the water supplied as per a predictable time schedule?  
Always – 1  
Mostly – 2  
Rarely – 3  
Never – 4  
Do not know – 5  
Not applicable -6  

C5.5. How long does it take to fetch water? (from house to the source and back, including waiting time)  
Less than 15 mins – 1  
15 – 30 mins – 2  
30 mins – 1 hr – 3  
More than 1 hr – 4  

C5.6. During the last 3 months, how many times did you receive water which was dirty?  
Never – 1  
Less than 3 times – 2  
More than 3 times – 3  
Always – 4  

C5.7. Do you buy water from other sources to meet your family’s needs? If yes, how much does your household spend per month?  
Rs.__________  
Don’t know - 1  
Do not buy – 2  

C5.8. Do you want a household piped water connection?  
Yes – 1  
No - 2  
Already have – 3  

C5.9. What is the reason for your household for not having a piped water connection?  
No supply network available – 1  
Not eligible for a connection
C6. PROBLEM INCIDENCE AND GRIEVANCE REDRESS
(TO BE ASKED FOR ALL USING GOVT (MUNICIPAL CORPORATION) SOURCES)

C6.1 During the last 1 year, did you ever lodge a complaint with the Jal Kal Department on water related problems?  
Yes – 1 (Go to Q. C6.2)  
No – 2 (AUTO SKIP TO Q.C7.1)

C6.2 What is the nature of the complaint?  
(Multiple responses)  
Irregular water supply- 1  
Poor quality of water- 2  
False meter reading- 3  
Billing errors- 4  
Breakdown of handpump -5  
Any other- 6

C6.3 How did you lodge the complaint?  
Through the local Councillor – 1  
At the helpdesk – 2  
With the city/dept. Engineer/plumber -3  
Called helpline/telephone – 4  
Through SMS- 5  
Through website- 6  
Personal visit to Jal Kal office – 7  
Group visit to Jal Kal office – 8  
Others –9

C6.4 Was the complaint attended to?  
Yes, within 1 day – 1  
Yes, within 2-3 days – 2  
Yes, within 4-7 days – 3  
Yes, after a week – 4  
Not attended – 5 (SKIP TO Q C7.1)

C6.5 Within how many days of the complaint was the problem solved?  
------------- day/s - 1  
Not solved- 2

SATISFACTION WITH THE WATER SUPPLY SERVICE ((TO BE ASKED FOR ALL USING GOVT (MUNICIPAL CORPORATION) SOURCES)

C7.1 Are you satisfied with the water supply services?  
Fully satisfied -1  
Partially satisfied -2  
Not satisfied - 3
C8. THE MOST IMPORTANT ASPECTS OF SERVICE DELIVERY
[(TO BE ASKED FOR ALL USING GOVT (MUNICIPAL CORPORATION) SOURCES)]

<table>
<thead>
<tr>
<th>C8.1</th>
<th>In your opinion, which are the three most important aspects of service delivery? Please refer the card (Maximum three responses)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[List of indicators]</td>
</tr>
<tr>
<td></td>
<td>Regularity of water supply as per stipulated time - 1</td>
</tr>
<tr>
<td></td>
<td>Adequacy of water (i.e. water available from this source is enough to meet the needs of the family) - 2</td>
</tr>
<tr>
<td></td>
<td>Water pressure - 3</td>
</tr>
<tr>
<td></td>
<td>Quality of water (i.e. whether water is clear, sweet, no smell) - 4</td>
</tr>
<tr>
<td></td>
<td>Quality of complaint redress - 5</td>
</tr>
<tr>
<td></td>
<td>Convenience of payment – 6</td>
</tr>
<tr>
<td></td>
<td>Not Applicable - 7</td>
</tr>
</tbody>
</table>

| C8.2. | How does the water service you are receiving now compare with that of one year back?                                                                                     | Better than before – 1 |
|       |                                                                                                                                   | Same as before – 2     |
|       |                                                                                                                                   | Worse than before – 3  |
|       |                                                                                                                                   | Cannot comment – 4     |

D. SANITATION

| D1.1  | Is there a toilet facility available for your household? If so, what type?                                      | Yes, Own toilet at home -1 (ASK Q.D2) |
|       |                                                                                                                                   | Yes, Shared toilet -2 (ASK Q.D2)     |
|       |                                                                                                                                   | Yes, Public /community toilet - 3 (ASK Q.D3) |
|       |                                                                                                                                   | No toilet facility- 4 (ASK Q.D1.2)   |

| D1.2  | What are your reasons for not having a toilet facility at home?                                                                                     | Too expensive - 1       |
|       |                                                                                                                                   | Difficult to clean - 2  |
|       |                                                                                                                                   | Insufficient water - 3  |
|       |                                                                                                                                   | Insufficient space - 4  |
|       |                                                                                                                                   | Prefer going outside - 5|
|       |                                                                                                                                   | Unaware of how to avail the facility - 6|
|       |                                                                                                                                   | Rented accommodation - 7|
|       |                                                                                                                                   | Others - 8             |

| D1.3  | If you have an access to a toilet facility, would you like to use it?                                                                                | Yes -1               |
|       |                                                                                                                                   | No - 2               |

D2. OWN /SHARED TOILET (Q.D2.1 TO D2.7 ARE TO BE ASKED TO ONLY THOSE WHO CODED 1 or 2 IN Q.D1)

| D2.1  | How is water provided in the toilet?                                                                                     | Tap inside the toilet- 1 |
|       |                                                                                                                                   | Storage inside the toilet- 2 |
|       |                                                                                                                                   | Carry by hand- 3          |
|       |                                                                                                                                   | Not available- 4          |
|       |                                                                                                                                   | Don’t know – 5            |

| D2.2  | How many household members use the toilet?                                                                             | All members use - 1 (ASK Q.D2.5) |
|       |                                                                                                                                   | Some members use – 2 (ASK Q.D2.3) |
|       |                                                                                                                                   | None of the members use - 3 (ASK Q.2.4) |

| D2.3  | Which of the family members do not use toilets?                                                                             | Elderly male (+60 yrs)- 1 |
|       |                                                                                                                                   | Elderly female (+60 yrs) -2 |
|       |                                                                                                                                   | Adult male (18-59 yrs)-3  |
| **D2.4** What are the reasons for not using the toilet? | Lack of water -1  
No /lack of proper provision for disposal of waste water/- 2  
Lack of ventilation/smelly – 3  
Toilet will clog if all members use – 4  
Not conveniently located/feel unsafe – 5  
Others - 6 |
| **D2.5** Where does the waste water from your toilet go? | Municipal Corporation’s sewer - 1 [SKIP TO Q.D5.1]  
Septic tank - 2 [ASK Q. D2.6]  
Soak-pit - 3 [ASK Q. D2.6]  
Open drain/street - 4 [SKIP TO QD4.1]  
Pit toilet -5 [SKIP TO QD2.6]  
Other- 6 [ASK Q TO Q.D4.1]  
Do not know 7 [SKIP TO QD4.1] |
| **D2.6** How did you empty/desludge the pit/septic tank when it got filled up? | Municipality service - 1  
Private agency licensed by municipality- 2  
Private contractor- 3  
Local labour - 4  
Has not filled up/did not get cleaned - 5 (ASK Q.D4.1)  
Do not know- 6 |
| **D2.7** What is the frequency of emptying the septic tank/pit? | Within a year - 1  
Once in 2 years- 2  
More than 2 years- 3  
Don’t know - 4  
(PROCEED TO Q.D4.1) |

### D3  PUBLIC/ COMMUNITY TOILETS (Q.D3.1 TO Q.D3.9 ARE TO BE ASKED TO ONLY THOSE WHO CODED 3 IN Q.D1)

| **D3.1.** How far is the public toilet from your house? | Less than 100 meters – 1  
100 – 250 meters - 2  
250- 500 meters- 3  
More than 500 meters- 4 |
| **D3.2** How many household members use the toilet? | All members use - 1 (ASK Q.D3.5)  
Some members use – 2 (ASK Q.D3.3)  
None of the members use- 3 (ASK Q.D3.4) |
| **D3.3** Which of the family members do not use toilets? | Elderly male (+60 yrs)- 1  
Elderly female (+60 yrs) -2  
Adult male (18-59 yrs)-3  
Adult female (18-59 yrs)-4  
Boy (4-17 yrs)-5  
Girl (4-17 yrs)-6  
Children below 4 years – 7 |
| **D3.4** What are the reasons for household | Too expensive – 1 |
members not using this facility?  
(Accept multiple responses)  
Not safe for women- 2  
Not open at all times- 3  
Not well maintained- 4  
Waiting time is too long – 5  
Too far - 6  
Other - 7  

[IF Q. D3.2 CODED 1 OR 2, ASK Q. D3.5, ELSE SKIP TO Q. D4.1]

<table>
<thead>
<tr>
<th>D3.5</th>
<th>How much time do you need to wait for using the toilet?</th>
</tr>
</thead>
</table>
|      | Less than 5 min- 1  
       | 6-15 min- 2  
       | 16-30 min- 3  
       | More than 30 min- 4  
       | Do not know -5 |

<table>
<thead>
<tr>
<th>D3.6</th>
<th>How is water provided in the toilet?</th>
</tr>
</thead>
</table>
|      | Tap inside the toilet- 1  
       | Storage inside the toilet- 2  
       | Carry by hand- 3  
       | Not available- 4  
       | Do not know – 5 |

<table>
<thead>
<tr>
<th>D3.7</th>
<th>Who manages the public / community toilet?</th>
</tr>
</thead>
</table>
|      | Private contractor – 1  
       | Municipality- 2  
       | NGO- 3  
       | Community group - 4  
       | Others- 5  
       | Don’t know – 6 |

<table>
<thead>
<tr>
<th>D3.8.</th>
<th>Is the toilet well maintained?</th>
</tr>
</thead>
</table>
|       | Always -1  
       | Sometimes- 2  
       | Rarely- 3  
       | Never- 4 |

<table>
<thead>
<tr>
<th>D3.9.</th>
<th>Does the household spend for the use of the toilet? If so, how much</th>
</tr>
</thead>
</table>
|       | Yes-1  
       | - Per day (Rs ............)  
       | - Fixed amount per month (Rs ............)  
       | No, free of charge- 2 |

<table>
<thead>
<tr>
<th>D4</th>
<th>FOR ALL RESPONDENTS (EXCEPT Q. D2.5 with Code 1)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>D4.1</th>
<th>Does your house have a connection to the municipal sewer?</th>
</tr>
</thead>
</table>
|      | Yes - 1[SKIP TO Q. D5.1]  
       | No- 2 [ASK Q. D4.2]  
       | Do not know -3 [ASK Q.D4.2] |

<table>
<thead>
<tr>
<th>D4.2</th>
<th>Is there an underground municipal sewer near your house?</th>
</tr>
</thead>
</table>
|      | Yes- 1 [ASK D4.3]  
       | No- 2 [SKIP TO Q. D5.1]  
       | Do not know -3 [SKIP TO Q. D5.1] |

| D4.3 | Why haven’t you taken a connection to the sewerage network?  
   | (Accept multiple responses) |
|------|----------------------------------------------------------------|
|      | Prefer existing arrangement/no felt need - 1  
       | Do not know how to get the connection- 2  
       | Too expensive- 3  
       | House on rent- 4  
       | Not allowed (illegal settlement) - 5  
       | Other- 6 |

D5. SATISFACTION WITH PUBLIC / COMMUNITY TOILET SERVICES (TO BE ASKED IF CODED 1 or 2 IN Q D3.2)
D5.1 | Are you satisfied with the public/community toilet services? | Fully satisfied -1  
| | | Partially satisfied -2  
| | | Not Satisfied - 3  

E. FOR ALL RESPONDENTS

E.1 Do you have any suggestions for the Municipal Corporation to improve its services?

………………………………
…………………………
(optional/ accept no answer)

F. FOR ALL RESPONDENTS

F.1 In future, would you be willing to provide feedback on water supply and sanitation services to the municipality?

Yes- 1  
No - 2  
Not sure- 3  

F.2 What is your Contact number?

Mobile:

Landline:

G. OBSERVATIONS

G.1 Observations

………………………………………………..
………………………………………………..

H. Capture Multi-media information (photo/video/audio)
शपथ

मैं........... का नागरिक होने के नाते यह शपथ लेता हूँ /लेती हूँ कि मैं अपने शहर में पानी और शौच एवं जल निकासी की स्थिति को बेहतर बनाने के लिए काम करंगा/करूँगी। इसके लिए मैं इस सर्वेक्षण प्रक्रिया से जुड़ रहा/रही हूँ।

मैं यह शपथ लेता हूँ /लेती हूँ कि मैं इस कार्य को पूरी निष्ठा और ईमानदारी से पूरा करंगा/करूँगी।

मैं यह शपथ लेता हूँ /लेती हूँ कि इस कार्य को करने के दौरान —

- मैं पूरी ईमानदारी से आंखें एकत्रित करंगा/करूँगी और किसी प्रकार का अनैतिक कार्य नहीं करंगा/करूँगी।
- मैं सर्वेक्षण करते हुए उत्तरदाता से आदर एवं सद्भावना से पेश आउंगा/आउंगी।
- मैं सर्वेक्षण करते हुए उत्तरदाता की भावनाओं का सम्मान करंगा/करूँगी।
- मैं उत्तरदाता की निजी जानकारी को किसी के साथ साझा नहीं करंगा/करूँगी जब तक यह आवश्यक न हो।
- मैं एकत्रित किए गए आंकड़ों की जानकारी जिस कार्य के लिए यह एकत्रित किए जा रहे हैं के अतिरिक्त किसी और से किसी भी रूप में साझा नहीं करंगा/करूँगी।

मैं यह शपथ लेता/लेती हूँ कि मैं अपने शहर के विकास में अपने इस कार्य के द्वारा महत्वपूर्ण योगदान देने के लिए सदैव तत्पर रहंगा/रहूँगी।

जय हिन्द
नियमित पूछे जानेवाले प्रश्न (FAQs)

1. मैं अपना परिचय कैसे दूं?

परिचय सर्वेक्षण का एक महत्वपूर्ण भाग है। बिना सही परिचय के अध्ययन करने के लिए सही और उचित उत्तर नहीं मिलेंगे। सर्वेक्षणकर्ताएं जिस व्यक्ति से सर्वे कर रहा है उसे कोई भी गलत या गुमरह करनेवाली जानकारी नहीं देखा और तेजस्वी बल बतायेगा। सर्वेक्षणकर्ताएं अपना परिचय देते हुए सर्वेक्षण के उद्धरणों को स्पष्ट रूप से बतायेगा। (अधिक जानकारी के लिए परिचय अन्वयास संलग्न है)

2. अगर उत्तरदाता 18 वर्ष से कम आयु का हो तो हमें क्या करना चाहिए?

कृपया सर्वेक्षण ना करें तथा अगले घर को जाएं।

3. अगर उत्तरदाता 18 वर्ष से उपर का हो लेकिन जबाब नहीं जानता हो तो क्या करना चाहिए?

कृपया सर्वेक्षण ना करें तथा अगले घर को जाएं।

4. अगर आवंटित घर बंद हो तो क्या करना चाहिए?

बंद घर के अगले घर का सर्वेक्षण करें।

5. झूठी बस्ती या आवासीय परिसर में प्रवेश करने से पहले मुझे किससे संपर्क करना चाहिए?

अपने सुपरवाइजर को बताएं तथा स्थानीय संबंधित व्यक्ति से संपर्क करें उन्हें अपना परिचय दें तथा उन्हें बतायें कि आप यह सर्वेक्षण करें कर रहे हैं।

6. अगर कोई व्यक्ति हमारे परिचय संचालन नहीं हो और सर्वेक्षण के बारे में अपनी राय नहीं दे बाहर हो तो क्या करना चाहिए?

उसे समझाने का प्रयास करें। अगर फिर भी वह नहीं समझता/समझती है तो अगले घर को जाएं।

7. समुदाय में अगर कोई तनाव हो तो क्या करें?

उस दिन वह सर्वेक्षण कार्य ना करें भले ही समुदाय में आपसी तनाव या झगड़ा कितना ही छोटा क्यों ना हो। अपने सुपरवाइजर के संपर्क में रहें तथा उनके आदेशानुसार ही अगला कार्यक्रम तत्कालिन रूप से बंद करें।

8. अविस्मरित झूठी बस्ती से आपका क्या तार्किक है?

कच्चे रूप से बने घरों के समूह वाली कोई भी छोटी बस्ती जो कि अधिकांशतः अस्थायी हो, साथ साथ सटे हुए हों, सामान्यतया अपर्याप्त स्वच्छता तथा पीने वाली पानी के साथ कम से कम 20 परिवार जाना रह रहे हों उसे झूठी बस्ती कहा जाता है।

यह क्षेत्र झूठी बस्ती के रूप में स्थानीय सरकारों, नगरपालिकाओं, निगमों, स्थानीय निकायों अथवा विकास प्राधिकरणों द्वारा अविस्मरित होते हैं।
9. गैर अधिसूचित द्वारा बस्ती से आपका क्या तालाब्य है?
कच्चे रूप से बने हुए घरों के समूह वाली कोई भी छोटी बस्ती जो कि अधिकांशतः अस्थायी हों, साथ साथ सटे हुए हों, सामान्यतया अपर्याप्त स्वच्छता तथा पीने के पानी के साथ कम से कम 20 परिवार जहाँ रह रहे हों उसे द्वारा बस्ती कहा जाता है। अगर ऐसी द्वारा बस्ती अधिसूचित नहीं है तो इसे गैर अधिसूचित द्वारा बस्ती कहा जायेगा।

10. "किसी भी अन्य प्रकार के छत्ते बालों पक्के घर" से आपका क्या तालाब्य है?
कोई भी घर जिसकी छत कंक्रिट के बनाया किसी भी अन्य चीज (जैसे ईस्टेम्प की चादर, बलुआ पत्थर आदि) से बना हो तथा दीवार इंट और मसाले से बनी हो उसे "किसी भी अन्य प्रकार के छत्ते बालों पक्के घर" कहते हैं।

11. कच्चे घर से आपका क्या तालाब्य है?
कच्चा घर मिट्टी या सूखे घास-फूस या टिन की छत का बना होता है। सामान्यतया यह खराब मौसम में बेकार हो जाता है।

12. ए.पी.एल क्या है?
ए.पी.एल. का मतलब है गरीबी रेखा से ऊपर बाला परिवार है। वाराणसी शहर में ए.पी.एल. कार्डधारकों के राशन कार्ड का रंग पीला है।

13. बी.पी.एल क्या है?
बी.पी.एल. का मतलब है गरीबी रेखा से नीचे बाला परिवार है। वाराणसी शहर में बी.पी.एल. कार्डधारकों के राशन कार्ड का रंग सफ़ेद है।

14. अंत्योदय क्या है?
अंत्योदय गरीबी रेखा से नीचे बाले परिवारों की एक श्रेणी है। वाराणसी शहर में अंत्योदय कार्डधारकों के राशन कार्ड का रंग लाल है। सर्वकालिक से दौसा अंत्योदय परिवारों को बी.पी.एल. की श्रेणी में ही रखा जाएगा।

15. परिवार की सालाना आय से क्या तालाब्य है?
परिवार की सालाना आय का अर्थ परिवार के सभी सदस्यों की साल भर में सभी सृष्टियों से होने वाली कुल आय है। उदाहरण के लिए यदि परिवार में 5 सदस्य हैं, तथा परिवार के मुखिया की आमदनी 10000 हज़ार रुपये महीना है तथा वह कहते हैं कि उनका एक बेटा दुकान चलाता है व लगभग 12000 रुपये महीना कमा लेता है। इस रिथियों में परिवार की सालाना आय निम्नलिखित होगी—

परिवार के मुखिया की सालाना आमदनी 10000 X 12 = 120000रुपये
उनके बेटी की सालाना आमदनी 12000 X 12 = 144000रुपये
परिवार की कुल सालाना आमदनी 120000+144000= 264000रुपये

16. पानी की गुणवत्ता जांचने का क्या मानक है?
पानी का रंग, स्वाद और गंध पानी की गुणवत्ता के मुख्य मानक है जिसे बिना किसी वैज्ञानिक उपकरण की मदद के एक आम व्यक्ति भी सकता है।
17. पीने योग्य पानी उपलब्ध कराने को जिम्मेदार सरकारी एजेंसी से आपका क्या तालमेल है?
सरकारी एजेंसी शहर के नागरिकों को पीने का पानी उपलब्ध कराने के लिए उत्तरदायी है। सामयिकी शहर में पीने का पानी उपलब्ध कराने की जिम्मेदारी जलाल कविता की है।

18. सरकारी स्टैंड पोस्ट्से क्या तालमेल है?
स्टैंड पोस्ट समूहद्वारे के लोगों को पीने का पानी उपलब्ध कराने हेतु सरकार द्वारा स्थापित पानी का स्रोत है। इसका कनेक्शन किसी व्यक्ति विशेष के नाम पर नहीं होता है। इसे बंबा भी कहते हैं।

19. "सोसायटी द्वारा संचालित पानी" से क्या तालमेल है?
हाँ।सोसायटी द्वारा पानी उपलब्ध कराने के लिए एपर्टमेंट एसोसिएशन एक आवासीय परिसर के अंदर घरों का समूह होता है, जो आमतौर पर कई बिल्डिंगों को मिलाकर बनता है जिनमें अनेक पल्ले होते हैं। आम तौर पर इन सोसायटियों में मूंगित जल को पहले पानी के टैंकों में संग्रहित किया जाता है फिर यहाँ से प्रत्येक घर में आपूर्ति की जाती है। कभी-कभी ये सोसायटियों पानी की आपूर्ति करने से पहले पानी को साफ भी करती हैं। ऐसी सोसायटियों द्वारा इस प्रकार पानी को संग्रहित कर उनकी आपूर्ति करने को "सोसायटी द्वारा संचालित पानी" कहा जा सकता है।

20. परिवार की क्या परिभाषा है?
परिवार एक से अधिक लोगों से मिलकर बनता है जो एक ही छत के नीचे रहते हैं तथा एक ही रसोई का उपयोग करते हैं। एक घर में भी अनेक परिवार हो सकते हैं अगर वह अलग रसोई या रखने के स्थान का उपयोग करते हों।

21. "एक परिवार अथवा एक से अधिक परिवार का सांप्रदायिक कनेक्शन" से क्या तालमेल है?
जहां पानी की आपूर्ति को एक से अधिक परिवारों द्वारा संचालित किया जाता है उसे सांप्रदायिक कनेक्शन कहा जायेगा।

22. पानी के बचाव से आप क्या समझते हैं?
पानी का बचाव एक बल है जिससे पाइप द्वारा पानी हमारे घरों तक पहुंचाता है। पानी का बचाव सही होने का अर्थ है कि थोड़े समय में ही पानी मरा जा सकता है।
23. अगर पानी के टैंक में संग्रहित पानी की आपूर्ति नलों के जरिए शौचालय में की जाती है तो पानी का स्रोत क्या होगा?

शौचालय में पानी का स्रोत नल होगा। इससे मतलब नहीं है कि पानी कहां संग्रहित है। सार्वजनिक बात यह है कि कोई परिवार शौचालय में पानी का उपयोग कैसे करता है। अगर शौचालय में नल का पानी उपलब्ध है तो पानी का स्रोत नल ही होगा।

24. सोखा गाढ़े (Soak Pit) से आप क्या समझते हैं?

सोखा गाढ़ा को धुनने-बाल नाम से भी जाना जाता है जो डका हुआ होता है और इसके चारों ओर छोटी बाली दिखाई देती है। जिसके द्वारा पानी धीरे-धीरे जमीन में चला जाता है। संग्रहण, भंडारण, भूसंरक्षण चैंबर में प्रवाहित हो जाता है जहां से यह आसपास की मिट्टी में चला जाता है। जैसे ही यह अपारिश जल सोखे-बाल नाम से मिट्टी के द्वारा रिसर्ट से छूट जाते हैं तथा जीवाणु सुधारित हो जाते हैं।

25. सेंटिक टैंक से आप क्या समझते हैं?

सेंटिक टैंक एक छोटे स्तर का अपारिश शौचालय टैंक होता है। यह मूल्य अपारिश पाइपलाइन से नहीं जुड़ा होता है जो स्थानीय सरकार के नियमों द्वारा योग्य का योग्य को जाती है। एक सेंटिक टैंक कंक्रीट या प्लास्टिक का बना हुआ 4000 से 7500 लीटर की क्षमता वाला टैंक (कभी कभी एक से ज्यादा टैंक) होता है। इस टैंक को अपनी क्षमता के मुताबिक तथा जल की क्षमता तथा अपारिश टैंक हो जाता है। आप तथा सेंटिक टैंक में जाता है।

26. भरे हुए सेंटिक टैंक को खाली करने हेतु "नगरपालिका लाइसेंस धारक निजी कंपनी" कौन है?

सेंटिक टैंक खाली करने की सेवा नामांकन को प्रदान करने हेतु नगरपालिका ने कुछ निजी कंपनियों/एजेंसियों को अधिकृत किया हुआ है। यह एजेंसियों एक नियमानुसार राशि लेकर सेंटिक टैंक को खाली करने का कार्य करती हैं।

27. सार्वजनिक / सामुदायिक शौचालय का संचालन करनेवाले "निजी ठेकेदार" कौन है?

सामुदायिक शौचालय का प्रबंधन नगरपालिका द्वारा निजी लोगों या कंपनियों को दिया गया है। ये लोग इन सेवाओं का रखरखाव करते हैं तथा लोगों से इस सेवा के प्रयोग हेतु शुल्क लेते हैं।

28. भूसंरक्षण अपारिश जल तंत्र से क्या तात्पर्य है?

सीवर विशेष रूप से व्ययों से अपारिश जल को पाइया के द्वारा शौचित या प्रवाहित करने के लिए एक भूसंरक्षण प्रणाली है। सीवरों का तंत्र सीवरेज कहलाता है।

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*SBL Connect*
29 पानी का सबमसिंबल कनेक्शन क्या होता है?

पानी का सबमसिंबल कनेक्शन एक प्रकार का बोर्वेल होता है। इसे व्यक्तिगत बोर्वेल के अंतर्गत दर्ज किया जाएगा।

30 टप्पबेल से पानी का कनेक्शन क्या सरकारी पाईप कनेक्शन है?

हां, यह सरकारी पाईप कनेक्शन के अंतर्गत दर्ज किया जाएगा। इसके अतिरिक्त प्राइवेट टप्पबेल को निजी ढंग से जोडने का अंतर्गत दर्ज किया जाएगा।
## SUPERVISOR’S DAILY REPORT

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<th>Details of Records</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of records collected by enumerators&lt;sup&gt;1&lt;/sup&gt;</td>
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</tr>
<tr>
<td>2</td>
<td>No. of normal records</td>
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</tr>
<tr>
<td>2a</td>
<td>No. of normal records reviewed and accepted</td>
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</tr>
<tr>
<td>2b</td>
<td>No of normal records reviewed and identified for consultation with enumerators</td>
<td></td>
</tr>
<tr>
<td>2c</td>
<td>No. of normal records reviewed and rejected</td>
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</tr>
<tr>
<td>3</td>
<td>No. of records flagged by system&lt;sup&gt;2&lt;/sup&gt;</td>
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</tr>
<tr>
<td>3a</td>
<td>No. of flagged records reviewed and accepted</td>
<td></td>
</tr>
<tr>
<td>3b</td>
<td>No. of flagged records reviewed and rejected</td>
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</tr>
<tr>
<td>4</td>
<td>No. of records marked for verification&lt;sup&gt;3&lt;/sup&gt;</td>
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<td>No. of records (marked for verifications) verified and accepted after telephone interview</td>
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<tr>
<td>4b</td>
<td>No. of records (marked for verifications) verified and rejected after telephone interview</td>
<td></td>
</tr>
<tr>
<td>4c</td>
<td>No. of records (marked for verifications) verified and accepted after physical verification&lt;sup&gt;4&lt;/sup&gt;</td>
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<tr>
<td>4d</td>
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</tr>
<tr>
<td>6</td>
<td>Total no. of records rejected</td>
<td>0</td>
</tr>
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Please do not enter any number for item no. 5 & 6; it will be added automatically.

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<td>Target records</td>
</tr>
<tr>
<td>8</td>
<td>Achieved records</td>
</tr>
</tbody>
</table>

<sup>1</sup> Enumerators who are assigned to you for supervision
<sup>2</sup> Records will be flagged by system for faults in time duration, GPS location and time gap between two interviews
<sup>3</sup> Records will be marked for verification by the system and Survey Administrator
<sup>4</sup> Physical verification is required in case of invalid mobile number
Annex.11
Reporting Format for Survey Administrator to be submitted to Research Coordinator of the Implementing Agency

### WEEKLY FACE SHEET

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Details of Records</th>
<th>Achieved</th>
<th>Target</th>
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</thead>
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<td>No. of records collected by enumerators</td>
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<tr>
<td>2</td>
<td>Reason for gap if any</td>
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<td>3</td>
<td>No. of records verified by supervisors</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>Reason for gap if any</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Have these gaps been identified?</td>
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</tr>
<tr>
<td>6a</td>
<td>No. of normal records reviewed and accepted</td>
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</tr>
<tr>
<td>6b</td>
<td>No of normal records reviewed and identified for consultation with enumerators</td>
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<td>No. of flagged records reviewed and accepted</td>
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<tr>
<td>8a</td>
<td>No. of records (marked for verifications) verified and accepted after telephone interview</td>
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<tr>
<td>8b</td>
<td>No. of records (marked for verifications) verified and accepted after physical verification</td>
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<tr>
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</tbody>
</table>
Annex.12
List of Critical Questions
to be Used for Reviewing Records

Online Verification by Field Supervisors
Check Following Questions in the Records Filled and Submitted by the Enumerators

I. DRINKING WATER

C1. SOURCES & USAGE OF WATER

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1.1a Which is the single most used water source for drinking purposes by the household?</td>
<td>Single Response</td>
</tr>
<tr>
<td>C1.1b Which is the single most used water source for other purposes by the household?</td>
<td>Single Response</td>
</tr>
<tr>
<td>C1.2a Is the household dependent on other sources of water for drinking and other purposes?</td>
<td>Yes -1; No -2</td>
</tr>
<tr>
<td>C1.2b Which is/are the other sources of water used for drinking and other purposes?</td>
<td>Multiple Responses</td>
</tr>
</tbody>
</table>

During verification of questions above, check

✓ Whether source of water is entered correctly in Q. No. C1.1a and C1.1b? It is possible that the source entered is not consistent to the available sources in the particular colony or ward.
✓ Ensure that source or sources of water entered in question no. C1.2b is/are different from water sources entered in Q. No. C1.1a and C1.1b.

C3. FEEDBACK ON GOVT STAND POST (PIPED) LOCATED OUTSIDE THE HOUSE
(DRINKING & DOMESTIC USES)

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3.3 How many days in a week do you get water from this source?</td>
<td>.................... day(s)</td>
</tr>
</tbody>
</table>
| C3.4 Normally, on the day of supply how many hours/ minutes of supply do you get from this source? | .................... hours
|                                                                      | .................... Minutes    |
| C3.5 Is the supply of water sufficient to meet the needs of your family? | Yes – 1; No – 2              |
| C3.8 During the last 3 months, how many times did you receive water which was dirty? | Never – 1; Less than 3 times – 2; More than 3 times – 3; Always – 4 |

During verification of questions above, check

✓ Whether days are entered correctly in Q. No. C3.3. It may be possible that the number of days entered here are not consistent with the normal situation of that particular colony or ward.
✓ Whether the time entered correctly in Q. No. C3.4. It may be possible that the time of water supply entered here is not consistent with the normal situation of that particular colony or ward.
## C4. FEEDBACK ON DOMESTIC PIPED WATER CONNECTION (Individual and Shared)

<table>
<thead>
<tr>
<th>C4.2</th>
<th>How many days in a week do you get water?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-------------------- day/s</td>
</tr>
<tr>
<td>C4.3</td>
<td>Normally, on the day of the supply how many hours/minutes do you get water?</td>
</tr>
<tr>
<td></td>
<td>-------------------- hours</td>
</tr>
<tr>
<td></td>
<td>-------------------- minutes</td>
</tr>
<tr>
<td>C4.4</td>
<td>Is the supply of water sufficient to meet the needs of your family?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>C4.7</td>
<td>During the last 3 months, how many times did you receive water which was dirty?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>C4.8</td>
<td>Do you pay for water supply?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>C4.9a</td>
<td>How much does your household spend per Year?</td>
</tr>
<tr>
<td></td>
<td>(TO BE ASKED IF 1 is CODED IN Q C4.8)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>C4.9b</td>
<td>Do you buy water from other sources to meet your family’s needs? If yes, how much does your household spend per month?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Feedback on Billing

| C4.11 | Do you get a bill for water supply? If yes, how frequently? | Yes– 1 |
|-------|-----------------------------------------------------------|
|       | - Once a month                                           |
|       | - Once in two months                                      |
|       | - Once in three months                                    |
|       | - Once in six months                                      |
|       | - Once in a year                                          |
|       | - No regular pattern                                      |
|       | Do not get a bill – 2                                      |
|       | Do not know – 3                                            |
| C4.13 | How is the billed amount calculated?                      | As per actual meter reading – 1 |
|       |                                                          | Fixed amount – 2 |
|       |                                                          | Do not know – 3 |
| C4.16 | Is it convenient to pay bills in terms of timing?         | Yes -1 |
|       |                                                          | No -2 |
|       |                                                          | Do not know -3 |
| C4.17 | Is it convenient to pay bills in terms of location?       | Yes -1 |
|       |                                                          | No -2 |
|       |                                                          | Do not know -3 |
| C4.18 | Is it convinient to pay bill online?                       | Yes -1 |
|       |                                                          | No -2 |
|       |                                                          | Do not know -3 |
During verification of questions above, check

- Whether days are entered correctly in Q. No. C 4.2. It may be possible that the number of days entered here are not consistent with the normal situation of that particular colony or ward.
- Whether the time entered correctly in Q. No.C 4.3. It may be possible that the time of water supply entered here is not consistent with the normal situation of that particular colony or ward.
- Whether the amount of bill entered correctly in Q. No.C 4.9a. It may be possible that if amount of bill is of fixed nature and entered amount is not consistent with the normal situation of that particular colony or ward.
- In case the answer to Q. No. C 4.11 is YES; ensure that it should be once in a year because in Varanasi, Jal Kal dept. issues water bills once in a year.
- While verifying the questions related to water billing please ensure that whether particular enumerator is entering ‘Bill not received’ in response to Q. No. C4.11; in that case all the related questions get skipped. In case the bill is for fixed amount, then also code 1 to be entered in response and all the relevant questions further needs to be answered.

C5. FEEDBACK ON OTHER MUNICIPAL (NON-PIPED) SOURCES LOCATED OUTSIDE HOUSE

<table>
<thead>
<tr>
<th>C5.1.</th>
<th>How many days in a week do you get water?</th>
<th>--------- day/s</th>
</tr>
</thead>
</table>
| C5.2. | Is the supply of water sufficient to meet the needs of your household? | Yes – 1  
No – 2 |
| C5.6. | During the last 3 months, how many times did you receive water which was dirty? | Never – 1  
Less than 3 times – 2  
More than 3 times – 3  
Always – 4 |

During verification of questions above, check

- Whether days are entered correctly in Q. No. C 5.1. It may be possible that the number of days entered here are not consistent with the normal situation of that particular colony or ward.

C6. PROBLEM INCIDENCE AND GRIEVANCE REDRESS

| C6.1 | During the last 1 year, did you ever lodge a complaint with the Jal Kal Department on water related problems? | Yes – 1  
No – 2 |
| C6.4 | Was the complaint attended to? | Yes, within 1 day – 1  
Yes, within 2-3 days – 2  
Yes, within 4-7 days – 3  
Yes, after a week – 4  
Not attended – 5 |
| C6.5 | Within how many days of the complaint was the problem solved? | --------- day/s - 1  
Not solved- 2 |

During verification of questions above, check

- While verifying the questions related to grievance redressal ensure that any particular enumerator is repeatedly entering “NO” in response to Q. No. C6.1. because in that case all the related questions got skipped. In case the bill is for fixed amount, then also code 1 to be entered in response and all the relevant questions further needs to be answered.
✓ Whether the complaint resolution time is correctly entered in response to Q. No. C6.5.

SATISFACTION WITH THE WATER SUPPLY SERVICES

| C7.1 | Are you satisfied with the water supply services? | Fully satisfied -1  
|      |                                              | Partially satisfied -2  
|      |                                              | Not satisfied - 3  

D. SANITATION

| D1.1 | Is there a toilet facility available for your household? If so, what type? | Yes, Own toilet at home -1  
|      |                                                   | Yes, Shared toilet -2  
|      |                                                   | Yes, Public /community toilet - 3  
|      |                                                   | No toilet facility- 4  

| D2.2. | How many household members use the toilet? | All members use - 1  
|       |                                               | Some members use – 2  
|       |                                               | None of the members use - 3  

| D2.5 | Where does the waste water from your toilet go? | Municipal Corporation’s sewer- 1  
|      |                                                  | Septic tank- 2  
|      |                                                  | Soak-pit - 3  
|      |                                                  | Open drain/street - 4  
|      |                                                  | Pit toilet -5  
|      |                                                  | Other- 6  
|      |                                                  | Do not know 7  

| D3.9. | Does the household spend for the use of the toilet? If so, how much | Yes-1  
|       |                                                          | - Per day (Rs .............)  
|       |                                                          | - Fixed amount per month (Rs .............)  
|       |                                                          | No, free of charge- 2  

| D4.1. | Does your house have a connection to the municipal sewer? | Yes - 1  
|       |                                                          | No- 2  
|       |                                                          | Do not know -3  

During verification of questions above, check

✓ For Q. No. D1.1, enumerator may enter “No toilet facility-4’ in hurry if respondent’s answer is ‘No toilet facility’. But in actual sense the household may be using community toilet facility.
✓ In case the household residing in a slum is using community toilet and the toilet is not in proper condition/ cleaned. It is possible that children of that household may be defecating in open. Hence information provided in response to this question must be verified.
✓ Whether the normal amount is entered in response to Q. No. D3.9.
✓ Parts of the city where sewer line is available, verify the response of the household in case sewer connection is not taken.
Verification through Telephone

Verification by the Field Supervisor

Hello!

I am calling from PRIA. You have participated in a mobile phone based survey on water supply and sanitation on ______ date. I would like to ask few questions from you with reference to the survey. Can you give your valuable time for this? It will take 2-3 minutes.

Ask only 5 questions from below:

1. What is your address?
2. Whether your house is Pucca or Kutcha? (Ask definitely, If the survey record belongs to colony or area where such houses are not there)
3. What kind of ration card you have?
4. What is the major source of water you use for drinking purpose?
5. Do you receive water bill?
6. Where do you deposit your water bill?
7. Whether you have lodged complaint regarding water supply during last one year?
8. Where does the waste water of your toilet go?

Thank you for giving your valuable time.
### Annex.13

**Guideline for Survey Monitoring Process**

<table>
<thead>
<tr>
<th>Monitoring parameter</th>
<th>Explanation</th>
<th>Action to be taken by</th>
<th>Action to be taken</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flagged Records</strong></td>
<td>Flagged records are flagged by the system based on three aspects:</td>
<td>3. For records flagged for duration: Supervisor to review</td>
<td>3. For records flagged for duration: Supervisor to consult the enumerator, Review or Reject and write comment in the comment box</td>
<td>Supervisor to review the flagged records daily. If records are not reviewed for two days, survey administrator should take notice of the same.</td>
</tr>
<tr>
<td></td>
<td>3. Duration: Permissible range is 10 to 20 min</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. GPS: When no coordinates shall be visible the record shall be flagged by system</td>
<td>4. For records flagged due to GPS: Supervisor to review in consultation with Survey Admin/IT help.</td>
<td>4. For records flagged due to GPS: Supervisor to consult the enumerator, check the previous records of enumerator, check other records in the same area and before Reviewing or Rejecting, consult the survey admin/IT help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Interview time: the time at which survey was taken. Permissible interview time in the system is between 7 AM to 8 PM</td>
<td>5. For records flagged for interview time: Supervisor to review the record</td>
<td>5. For records flagged due to interview time, supervisor to consult the enumerator and Review or Reject and write comment in the comment box</td>
<td></td>
</tr>
<tr>
<td><strong>Marked for verification</strong></td>
<td>Marked for verification records are those that are marked by the system for back check (10% of survey records). In addition survey administrator / researchers can also mark records for verification</td>
<td>Supervisor to check the Marked for Verification records</td>
<td>Marked for verification records should be: 5. Verified using telephone survey 6. In case the records do not have a valid contact number, the records to be verified by actual field visit 7. After verification the Supervisor can</td>
<td>Should do regularly. At least twice a week. To be cleared in less than 7 days (if gap is long the respondent might not recall survey/</td>
</tr>
</tbody>
</table>
8. All records either verified or rejected should be accompanied with a comment in the comment box.
9. While calling the respondent at the number provided in the record, the supervisor should try and speak to the person who gave the interview, even if the number is not his/her. If that is not possible, continue with asking the questions meant for back check.

<table>
<thead>
<tr>
<th>Monitoring parameter</th>
<th>Explanation</th>
<th>Action to be taken by</th>
<th>Action to be taken</th>
<th>Frequency</th>
</tr>
</thead>
</table>
| Normal Records       | Normal records are records that are correct with no system flagging. Supervisor to review normal records on random basis. Supervisor to accept normal records without obvious errors/inconsistencies, in batches. | Supervisor to review normal records on random basis. | Normal records to be reviewed through manual random selection. Review should be based on two parameter:  
   c. Enumerator wise trend  
   d. Ground realities – check  
Normal record can be Rejected in case there are apparent errors/inconsistencies in responses. Else should be Accepted in batches. | Supervisor can review the normal records once in two days. He can also accept records in batches. |
| Survey Monitoring Reports | Review data quality reports, progress reports, enumerator performance reports, daily summary monitoring reports | Supervisor | Follow up excessive error incidence, poor enumerator performance, daily summary monitoring report, survey progress report, data quality reports | Daily |
| Photographs/ multi media | Photographs in phone | Enumerator -> Supervisor | Supervisor to download all the photographs taken by the enumerator | Once in a week |
Explanatory Note of SLB-Connect Analytics

The SLB CONNECT initiative commenced in 2012 with the aim of strengthening citizen engagement for delivering improved service outcomes. It is a citizen based feedback on water and sanitation services in residential areas. The feedback is thereafter analyzed in the form of 'demand side' metrics, which use similar vocabulary to the SLB ('supply side') metrics reported by service providers. The SLB Connect dashboard gives an access to following analytics:

1. **Baseline analytics** for the survey area which overall score for each service area which can be further sorted location wise in the survey area or through user category i.e. those who are accessing that source.
2. **Detailed analytics of each indicator** of the service area
3. **Detailed analytics at the sampling level** in the survey area for a granular analysis
4. **Spatial analytics with key aspects of service** delivery are geo-referenced on a open-source map

The following note provides explanation and definition of indicators to measure a service area and their detailed analytics. The detailed analytics as stated above can also be accessed at sampling level.

I. **Base line Analytics – City level metrics for water and sanitation**

**WATER SUPPLY**

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Access</td>
<td>Defined in terms of the most important source (primary source) used by the respondent for drinking and other purposes. The SLB-C indicator captures number of respondents indicating main source of supply through individual or shared household piped connection</td>
</tr>
<tr>
<td>B</td>
<td>Continuity</td>
<td>Defined as the duration of water supply received from the main source. The SLB-C indicator captures the duration of water supply, as reported by respondents receiving piped municipal water supply, in terms of days per week and hours per day (median values) reflected as percentage of benchmark value of 24 hours x 7 days per week</td>
</tr>
<tr>
<td>C</td>
<td>Adequacy</td>
<td>Defined as the ability of the water supplied through the main source to meet the requirements of the family. The SLB –C indicator captures the number of respondents receiving municipal water supply who indicate that water supply is adequate to meet their family's needs</td>
</tr>
<tr>
<td>D</td>
<td>Water quality</td>
<td>Defined in terms of receiving potable water from the main source. The SLB –C indicator captures the number of...</td>
</tr>
</tbody>
</table>
respondents to have never received dirty water from a municipal source during the last 3 months preceding the survey.

E  Complaint redressal
- Defined in terms of the ability to fully resolve a complaint lodged with the service provider. The SLB-C indicator captures number of respondents who lodged a complaint, reporting resolution of the complaint within a day.

F  Bill payment
- Defined in terms of receiving regular water bills and the convenience of paying the bills. The SLB-C indicator captures number of respondents who use piped connections reporting regular receipt of bills and finding the location and timing of payment of bills convenient.

G  Satisfaction
- Defined in terms of satisfaction of the respondent with the water supply services. The SLB-C indicator captures the level of satisfaction of the respondent with water supply services.

**Overall score for water supply services**
- Weighted average of the following: Access, Continuity, Adequacy, Water quality, Complaint redressal

---

**SANITATION**

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Toilet access</td>
<td>Defined as access to individual, shared or public toilets, available for the respondent. The SLB-C indicator captures number of respondents reporting access to of individual or shared or public toilets.</td>
</tr>
<tr>
<td>B</td>
<td>Toilet usage</td>
<td>Defined as usage of toilet facility by all family members of the household. The SLB-C indicator captures number of respondents who reported that all family members use toilets.</td>
</tr>
<tr>
<td>C</td>
<td>Access to sewerage</td>
<td>Defined as access to a sewerage connection. The SLB-C indicator captures number of respondents who reported to have a connection to the municipal sewer.</td>
</tr>
<tr>
<td>D</td>
<td>Alternate disposal</td>
<td>Defined as reported full or partial disposal of wastewater to any onsite facility. The SLB-C indicator captures number of respondents reporting disposal of wastewater to sanitary onsite facilities.</td>
</tr>
<tr>
<td>E</td>
<td>Satisfaction</td>
<td>Defined in terms of satisfaction of the respondent with the public toilet services. The SLB-C indicator captures number of respondents reporting satisfaction levels with public toilet facilities.</td>
</tr>
</tbody>
</table>

**Overall score for sanitation**
- Weighted average of Toilet access, Toilet usage and Access to sewerage.
## II. Indicator wise detailed analytics for water and sanitation services

### WATER SUPPLY

#### A. ACCESS INDICATOR FOR WATER SUPPLY SERVICE

The ‘access’ indicator of SLB –Connect captures the source of water supply accessed and the ease of accessing the source by the citizens. According to SLB Handbook which defines SLB Benchmarks, the minimum level acceptable standard for water supply service should be a household level water supply connection, that is, a direct piped connection for water supply within the household. Water provision to households (urban poor or otherwise), at common public standposts cannot be considered as an acceptable/long-term permanent service provision standard.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Main source of drinking water</td>
<td>The analytics captures the primary source of water used by the household (Government or a non-government source)</td>
</tr>
<tr>
<td>A2</td>
<td>Main source for other purposes</td>
<td>The analytics captures the primary source of water used by the household for ‘other than drinking’ purposes such as washing, bathing etc. (Government or a non-government source)</td>
</tr>
<tr>
<td>A3</td>
<td>Dependence on municipal sources for primary use</td>
<td>The indicator measures the level of ‘dependency’ on a municipal/ government source of water for primary use for drinking or other purposes and tabulates the whether the household is dependent on municipal source. When the household utilizes municipal source as a primary source for both drinking and other purpose, the household is considered fully dependent on municipal sources of water supply, when the household is only dependent on a municipal source for drinking purpose, the analytics measures the same</td>
</tr>
<tr>
<td>A4</td>
<td>Dependence on other sources</td>
<td>The indicator measures the level of dependency on other sources (than those mentioned as primary source) of water as a secondary source for drinking and other purposes</td>
</tr>
<tr>
<td>A5</td>
<td>Other sources accessed</td>
<td>Captures all secondary sources of water supply used by the household for drinking and other purposes</td>
</tr>
<tr>
<td>A6</td>
<td>Reasons for not using municipal sources</td>
<td>For the respondents who are not accessing municipal sources of water supply, reasons for not utilizing the same are mapped</td>
</tr>
<tr>
<td>A7</td>
<td>Willingness to use municipal sources, if services Improve</td>
<td>For the respondents who are not accessing municipal sources of water supply, the willingness to use municipal sources, if the service improve is mapped</td>
</tr>
<tr>
<td>A8</td>
<td>Distance to access municipal water points (users of outside piped sources)</td>
<td>Maps the ease of accessing municipal water points which are outside piped sources such as stand post, in aspects of ‘distance’ between the water point and the respondent’s dwelling</td>
</tr>
<tr>
<td>A9</td>
<td>Time taken to access municipal water points (users of outside piped sources)</td>
<td>Maps the ease of accessing municipal water points which are outside piped sources such as stand post, in aspects of ‘time taken’ to access the water points, to and from the dwelling and waiting time at the water point.</td>
</tr>
<tr>
<td>A10</td>
<td>Incidence of water scarcity in dry season</td>
<td>Captures the incidence of water scarcity as reported by the respondent in dry seasons</td>
</tr>
</tbody>
</table>
A11 | Source migration during scarcity | Captures the use of an alternate source of water supply other than the primary source as reported by the respondent for drinking and other purposes during scarcity.

A12 | Willingness to take household piped connection (users of non-piped and outside sources) | Captures the willingness of the respondents who are using municipal non-piped (such as handpump) and municipal outside piped sources (such as standpost) to access household piped connection.

A13 | Reasons for not having a household piped connection (users of non-piped and outside sources) | Captures the reasons of the respondents who are using municipal non-piped (such as handpump) and municipal outside piped sources (such as standpost) for not having an access to household piped connection.

### B. CONTINUITY OF WATER SUPPLY SERVICE

The ‘continuity’ indicator of SLB – Connect captures the number of days in a week and number of hours in a day that the water from a ‘piped connection’ as a primary source of water is supplied or made available to a household. According to SLB Handbook which defines SLB Benchmarks, a continuous (24x7) water supply system should be the norm for all cities.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Duration of Supply – days per week (piped sources)</td>
<td>Captures the duration of water supply together for household piped and outside piped sources (such as standpost) in respect to days per week</td>
</tr>
<tr>
<td>B2</td>
<td>Duration of Supply – hours of supply per day (piped sources)</td>
<td>Captures the duration of supply together for household piped and outside piped sources in respect to hours of supply per day</td>
</tr>
<tr>
<td>B3</td>
<td>Predictability of supply (piped sources)</td>
<td>Captures the predictability of supply of water for household piped and outside piped sources as reported by the respondents</td>
</tr>
<tr>
<td>B4</td>
<td>Convenience of Supply Timings (piped sources)</td>
<td>Captures the convenience of supply timings for household piped and outside piped sources as reported by the respondents</td>
</tr>
<tr>
<td>B5</td>
<td>Duration of supply (days per week) source wise</td>
<td>Captures the duration of supply in respect to days per week individually for household piped and outside piped sources</td>
</tr>
<tr>
<td>B6</td>
<td>Duration of Supply – hours of supply per day - source wise</td>
<td>Captures the duration of supply in respect to hours of supply per day individually for household piped and outside piped sources</td>
</tr>
<tr>
<td>B7</td>
<td>Predictability of supply (source wise)</td>
<td>Captures the predictability of supply of water individually for household piped and outside piped sources as reported by the respondents</td>
</tr>
<tr>
<td>B8</td>
<td>Convenience of Supply Timings (source wise)</td>
<td>Captures the convenience of supply timings individually for household piped and outside piped sources as reported by the respondents</td>
</tr>
</tbody>
</table>

### C. ADEQUACY OF WATER SUPPLY SERVICE

The ‘adequacy’ indicator of SLB – Connect captures whether the municipal source of water is adequate to meet the household requirements. According to SLB Handbook which defines SLB Benchmarks, adequacy is expressed as per capita supply of water.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| C1 | Water supply reported to be | Captures the adequacy of water supply – source wise as
### C2 Inadequacy of water – respondents reporting buying of water (Source-wise)
Captures the inadequacy of water supply – source wise as accessed to meet the household needs wherein the household is also has an expenditure towards other sources of water to meet its needs.

### C3 Expenditure on buying water from private source (per month)
Captures the total range of expenditure per month households reported in the survey area on other sources of water bought from private sources to meet their needs.

### C4 Expenditure on Buying Water from private source per month – Source wise i.e piped, outside piped and non-piped sources
Captures the total range of expenditure per month households reported in correlation to their primary source of water as accessed, on other sources of water bought from private sources to meet their needs.

### D. QUALITY OF WATER
The ‘Quality’ indicator of SLB – Connect captures whether there are any instances of receiving dirty municipal water as reported by the respondents. The SLB handbook on the other hand scientifically tests the water samples to verify whether they meet or exceed the specified potable water standards, as defined by CPHEEO.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>Instances of dirty water supply in last 3 months</td>
<td>Captures the total incidences of receiving dirty water supply in the last three month as reported by the respondents.</td>
</tr>
<tr>
<td>D2</td>
<td>Instances of dirty water supply in last 3 months (source wise)</td>
<td>Captures the total incidences of receiving dirty water supply in correlation to the source of water accessed, in the last three months as reported by the respondents.</td>
</tr>
</tbody>
</table>

### E. COMPLAINT REDRESSAL
The complaint redressal indicator of SLB – Connect captures the efficiency in the redressal of customer complaints. The SLB handbook captures the total number of water supply related complaints redressed within 24 hours of receipt of complaint, as a percentage of the total number of water supply related complaints received in the given time period.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Respondents lodging complaints (in last one year)</td>
<td>Captures the total number of respondents who have lodged complaints in the last one year</td>
</tr>
<tr>
<td>E2</td>
<td>Complaints resolved</td>
<td>Captures the total number of the complaints as lodged in last one year that have been resolved</td>
</tr>
<tr>
<td>E3</td>
<td>Type of complaints</td>
<td>Captures the ‘types of complaints’ as lodged in last one year</td>
</tr>
<tr>
<td>E4</td>
<td>Mode of lodging the complaint</td>
<td>Captures the ‘mode’ of lodging a complaint such as through the councilor, help desk at municipality, online etc.</td>
</tr>
<tr>
<td>E5</td>
<td>Response time for attending to complaints</td>
<td>Captures the range of ‘response time’ across the survey area as reported by the respondents that the municipality or concerned authority took to attend to the complaint lodged</td>
</tr>
<tr>
<td>E6</td>
<td>Time Taken to solve the Complaints</td>
<td>Captures the range of ‘time taken’ across the survey area by the municipality or concerned authority to resolve the complaint lodged</td>
</tr>
</tbody>
</table>
### F. BILL PAYMENT

The ‘Bill payment’ indicator of SLB – Connect captures various attributes of bill payment such as regular receipt of water bills/charge, convenience of paying the bills and feedback on water meters. The SLB handbook on the other hand has indicators for extent of metering, extent of non-revenue water and cost recovery which are not measured from the demand side metrics of SLB-C.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Payment for water supply</td>
<td>Captures whether the respondents ‘pay’ for the water supply services</td>
</tr>
<tr>
<td>F2</td>
<td>Payment made to</td>
<td>Captures ‘whom’ the payment is made to – i.e. is the payment made to municipality, jal board, landlord etc.</td>
</tr>
<tr>
<td>F3</td>
<td>Frequency of bill receipt</td>
<td>Captures the frequency of receiving a ‘bill receipt’</td>
</tr>
<tr>
<td>F4</td>
<td>Convenience of billing frequency</td>
<td>Captures the convenience of the frequency of bill receipt as reported by the respondent</td>
</tr>
<tr>
<td>F5</td>
<td>Errors in billing</td>
<td>Captures the frequency of errors in billing as reported by the respondents</td>
</tr>
<tr>
<td>F6</td>
<td>Mode of bill payment to Municipality/ Govt. agencies</td>
<td>Captures the mode of payment of bills i.e. is the payment made at the municipal counter, online, kiosks, agent etc.</td>
</tr>
<tr>
<td>F7</td>
<td>Convenience of Bill Payment at designated counters (Locations)</td>
<td>Captures the convenience of bill payment in respect to the location for those respondents who report the mode of payment through municipal office or a counter</td>
</tr>
<tr>
<td>F8</td>
<td>Convenience of Bill Payment at designated counters (Timing)</td>
<td>Captures the convenience of bill payment in respect to timing, for those respondents who report the mode of payment through municipal office or a counter</td>
</tr>
<tr>
<td>F9</td>
<td>Ease of paying bills online</td>
<td>Captures the ease of paying online, for those respondents who report payment of bills through online mode</td>
</tr>
<tr>
<td>F10</td>
<td>Feedback on Water meters</td>
<td>Captures the functionality of water meters in the survey area as reported by the respondents</td>
</tr>
</tbody>
</table>

### G. SATISFACTION

The SLB-C indicator captures the level of satisfaction of the respondent with water supply services. The SLB indicators do not capture citizen based feedback on satisfaction.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Water supply services compared to last year</td>
<td>Captures how the respondents rate the water supply service in comparison to the service as provided to them in the last one year</td>
</tr>
<tr>
<td>G2</td>
<td>Satisfaction with water supply services</td>
<td>Captures the overall level of satisfaction with water supply services as reported by respondents</td>
</tr>
<tr>
<td>G3</td>
<td>Three most important aspects of service delivery</td>
<td>Captures the three priority areas which the respondents report to be most critical towards improvement of water supply services</td>
</tr>
</tbody>
</table>
## SANITATION

### A. ACCESS TO TOILET

The 'access' indicator of SLB Connect captures the access to individual, shared or public toilet by the respondents. A similar indicator is analyzed in SLB supply side metrics.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Access to toilet</td>
<td>Captures the access to individual, shared or public toilet as reported by the respondents</td>
</tr>
<tr>
<td>A2</td>
<td>Distance to access Public/Community Toilet</td>
<td>Captures the distance to a public/ community toilet accessed by the respondents</td>
</tr>
<tr>
<td>A3</td>
<td>Time taken to access Public/ Community Toilet</td>
<td>Captures the total time taken to access and wait at the public/community toilet by the respondents</td>
</tr>
<tr>
<td>A4</td>
<td>Main Source of Water for Toilet</td>
<td>Captures the main source of water in toilets</td>
</tr>
<tr>
<td>A5</td>
<td>Main Source of water for toilet (toilet type)</td>
<td>Captures the main source of water in correlation to toilet type i.e. individual, shared or public toilet</td>
</tr>
<tr>
<td>A6</td>
<td>Management of Public/Community Toilet</td>
<td>Captures the information on who manages the public/community toilet</td>
</tr>
<tr>
<td>A7</td>
<td>Maintenance of Public/Community Toilet</td>
<td>Capture the level of maintenance of community/public toilet as reported by the respondent who access the same</td>
</tr>
<tr>
<td>A8</td>
<td>Households paying for using Public/ Community Toilet</td>
<td>Captures whether there is a payment made to access community/public toilet as reported by the respondent who access the same</td>
</tr>
<tr>
<td>A9</td>
<td>Reasons for not having a toilet facility at home</td>
<td>Captures the reasons for not having an access to an own individual toilet from the respondents who do not have a toilet facility at home</td>
</tr>
<tr>
<td>A10</td>
<td>Willingness to use a toilet, If available</td>
<td>Captures whether the respondents who do not have an access to individual, shared or public toilet would be willing to use the toilet facility if made available</td>
</tr>
</tbody>
</table>

### B. TOILET USAGE

The 'toilet usage' indicator of SLB Connect captures the usage of toilet facility by all family members of the household. The SLB supply side metrics do not capture information on toilet usage.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Toilet usage by household members</td>
<td>Captures whether all family members of a household have access and use a toilet facility</td>
</tr>
<tr>
<td>B2</td>
<td>Toilet usage by household members (Toilet Type)</td>
<td>Captures whether all family members of a household use the toilet facility that is accessible to the household</td>
</tr>
<tr>
<td>B3</td>
<td>Household members not using toilet</td>
<td>Captures which of the family members in a household do not use the toilet facility accessible to them</td>
</tr>
<tr>
<td>B4</td>
<td>Household members not using toilet (Toilet Type)</td>
<td>Captures which of the family members in a household do not use the toilet facility accessible to them, in correlation to the toilet type (individual, shared or public)</td>
</tr>
<tr>
<td>B5</td>
<td>Reasons for not using a toilet (for households with own/shared toilet)</td>
<td>Captures the reasons for not using the accessible individual or shared toilet facility from the respondents who reported some/all members of a household not using the available facility</td>
</tr>
<tr>
<td>B6</td>
<td>Reason for Not Using Toilet ( for households with access to</td>
<td>Captures the reasons for not using the accessible public toilet facility from the respondents who reported some/all</td>
</tr>
</tbody>
</table>
### C. ACCESS TO SEWERAGE

The ‘access to sewerage’ indicator of SLB Connect captures different attributes of access to a sewer network of the city. The SLB indicator captures the coverage of waste water network services.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Households connected to municipal sewer</td>
<td>Captures the households that are connected to the municipal sewer in the service area</td>
</tr>
<tr>
<td>C2</td>
<td>Availability of sewer near unconnected households</td>
<td>Captures the availability of sewer for households that are not connected to municipal sewer</td>
</tr>
<tr>
<td>C3</td>
<td>Reasons for not taking connection to the nearby sewer</td>
<td>Captures the reasons of not taking connection to the municipal sewer, when available</td>
</tr>
</tbody>
</table>

### D. ALTERNATE DISPOSAL

The ‘alternate disposal’ indicator of SLB Connect captures the extent of full or partial disposal of wastewater to any onsite facility. The SLB supply side metrics does not measure this indicator.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>Disposal of waste water from household toilet</td>
<td>Captures the mode of disposal of waste water from household toilets</td>
</tr>
<tr>
<td>D2</td>
<td>Cleaning/ Desludging of Household Pit/Septic Tank</td>
<td>Captures details on who cleans/ desuludges the household pit/septic tank</td>
</tr>
<tr>
<td>D3</td>
<td>Frequency of Cleaning/ Desludging Household Pit/Septic Tank</td>
<td>Captures the frequency of cleaning/ desludging the household pit/septic tank</td>
</tr>
</tbody>
</table>

### E. SATISFACTION WITH PUBLIC TOILET

The SLB-C indicator captures the level of satisfaction of the respondent with public toilet services. The SLB indicators do not capture citizen based feedback on satisfaction.

<table>
<thead>
<tr>
<th>#</th>
<th>Analytics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Satisfaction with public toilet</td>
<td>Captures the level of satisfaction with public/community toilet services as reported by the respondents who access the same.</td>
</tr>
</tbody>
</table>
WATER SUPPLY SERVICES - BASELINE ANALYTICS FOR EACH CITY DASHBOARD

1. **ACCESS:** Respondents indicating main source of supply through individual or shared household piped connection

   **Relevant Questions in SLB Questionnaire:** C1.1a and C1.1b

   **Formula:** \[
   \text{Access} = \frac{\text{Count of respondents who answer/reach section C4}}{\text{Total number of respondents in survey}} \times 100
   \]

   **For example:**

   C1.1 a: Number of respondents reporting main supply of water for drinking through household piped connection: 100
   C1.1 b: Number of respondents reporting main supply for other purposes through household piped connection: 150
   C1.1 a OR C1.1 b: Number of respondents reporting main supply of water for drinking OR other purposes through household piped connection: 120 i.e. THE COUNT OF RESPONDENTS WHO REACH SECTION C4 IN THE QUESTIONNAIRE

   Total number of respondents: 200

   Then,

   Access: \[
   \frac{120}{200} \times 100 = 60\%
   \]

2. **CONTINUITY:** Duration of water supply through government (municipal/PHED) sources expressed as a combination of days per week and hours per day

   **Relevant Questions in SLB Questionnaire:** C3.3 and C3.4, C3.4 and C4.3

   **Formula:**
   \[
   \text{CONSOLIDATED SCORE} = \frac{\text{Median Value of days of supply of water from a municipal source/7days} \times 100}{\text{Median Value of hours of supply in a day/24hours} \times 100}
   \]

   **For example:**

   Total number of respondents for C3.3 /C3.4: 100
   Total number of respondents for C4.2/C4.3: 150
C3.3 (outside piped) and C4.2 (household piped): **How many days in a week do you get water from this source?**

<table>
<thead>
<tr>
<th>Days</th>
<th>Respondents - C3.3</th>
<th>Respondents – C4.2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 days</td>
<td>60</td>
<td>70</td>
<td>130</td>
</tr>
<tr>
<td>6 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 days</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>3 days</td>
<td>20</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>2 days</td>
<td></td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>1 day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td></td>
<td></td>
<td><strong>4 days</strong></td>
</tr>
</tbody>
</table>

A: Median Value of days of supply of water from a municipal source/7 days]*100
= (4/7)*100
=57%

C3.4 (outside piped) and C4.3 (household piped): **Normally, on the day of the supply how many hours/ minutes do you get water?**

<table>
<thead>
<tr>
<th>Number of hours</th>
<th>Respondents – C3.4</th>
<th>Respondents – C4.3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25 - less than 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - less than 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 - less than 3</td>
<td>60</td>
<td>80</td>
<td>140</td>
</tr>
<tr>
<td>3 - less than 4</td>
<td>30</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td>4 - less than 5</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>5 - less than 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 - less than 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - less than 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td></td>
<td></td>
<td><strong>4 hours</strong></td>
</tr>
</tbody>
</table>

B: [Median Value of hours of supply in a day/24hours]*100
=4/24*100
=17%

Total value for Continuity: Average of A and B above = (57+17)/2 = 37%

3. **ADEQUACY:** Respondents receiving municipal water supply who indicate that water supply is adequate to meet their family’s needs

**Relevant Questions in SLB Questionnaire:** C3.5, C4.4, C5.2

**Numerator:** Total number of respondents who reported YES the water is adequate for their needs in C3.5, C4.4 and C5.2

**Denominator:** Total number of respondents using municipal sources (= total number of responses for these questions)
**Formula:** [Number of respondents (who report using Government (municipal/PHED) water sources) reporting adequacy of water supply to meet their family’s needs / Total number of respondents who use municipal water sources] \* 100

For example:

**C3.5, C4.3 and C5.2: Is the supply of water sufficient to meet the needs of your family?**

**Total number of respondents using municipal sources**

<table>
<thead>
<tr>
<th></th>
<th>Respondents-C3.5</th>
<th>Respondents-C4.3</th>
<th>Respondents-C5.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100</td>
<td>12</td>
</tr>
<tr>
<td>No</td>
<td>40</td>
<td>50</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>150</td>
<td>20</td>
</tr>
</tbody>
</table>

**Adequacy:** [Weighted average of number of respondents (who report using Government (municipal/PHED) water sources) reporting adequacy of water supply to meet their family’s needs / Total number of respondents who use municipal water sources] \* 100

\[=\frac{[\frac{(60/100)*100}{100}+\frac{(100/150)*150}{150}+\frac{(12/20)*20}{20}]}{100+150+20}\]

\[=64\%\]

4. **QUALITY: Respondents who reported never receiving dirty water from a Government source during the last 3 months preceding the survey**

**Relevant Questions in SLB Questionnaire:** C3.8, C4.7 and C5.6

**Formula:** [Number of respondents using Government (municipal/PHED) water sources who reported never receiving any dirty water during the last 3 months preceding the survey / Total number of respondents using these municipal water sources] \* 100

**Numerator:** Total number of respondents who reported NEVER receiving dirty water in last three months in C3.8, C4.7 and C5.6

**Denominator:** Total number of respondents using municipal sources (= total number of responses for these questions)

For example

**C3.8,C4.7 and C5.6: During the last 3 months, how many times did you receive water which was dirty?**

<table>
<thead>
<tr>
<th></th>
<th>Respondents-C3.8</th>
<th>Respondents-C4.7</th>
<th>Respondents-C5.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>20</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Less than 3 times</td>
<td>40</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td>More than 3 times</td>
<td>40</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>150</td>
<td>20</td>
</tr>
</tbody>
</table>

**Quality:** [Weighted average of number of respondents using Government (municipal/PHED) water sources who reported never receiving any dirty water during the last 3 months preceding the survey / Total number of respondents using these municipal water sources] \* 100
For C3.8: 20/100%=20%
For C4.7:30/150%=20%
For C5.6: 10/20%=50%

Total indicator for Quality = weighted average of the above the above indicators (C3.8, C4.7,C5.6)/ Total number of respondents using these municipal source

=(20%*100)+(20%*150)+(50%*20)/(100+150+20)
=22%

5. Complaint Redress: Respondents who lodged a complaint, reporting resolution of the complaint within a day

Relevant Questions in SLB Questionnaire: C6.5 and C6.1

Formula: [Number of respondents reporting resolution to their complaint within 1 day/ Total number of respondents who lodged a complaint]*100

Numerator: Total number of respondents who reported resolution in 1 day (from Question C6.5)
Denominator: Total number of respondents who lodged a complaint (who answered YES in Question C6.1)

For example
C6.1 During the last 1 year, did you ever lodge a complaint with the municipality on water related problems?

<table>
<thead>
<tr>
<th></th>
<th>Number of respondents (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
</tr>
<tr>
<td>No</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>180</strong></td>
</tr>
</tbody>
</table>

C6.5 Within how many days of the complaint was the problem solved?

<table>
<thead>
<tr>
<th></th>
<th>Number of respondents (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, within 1 day</td>
<td>10</td>
</tr>
<tr>
<td>Yes, within 2-3 days</td>
<td>20</td>
</tr>
<tr>
<td>Yes, within 4-7 days</td>
<td>10</td>
</tr>
<tr>
<td>Yes, after a week</td>
<td>20</td>
</tr>
<tr>
<td>Not attended</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

Indicator for Complaint Redress: (10)/60*100
=17%

6. Bill receipt and Payment: Respondents who use piped connections reporting regular receipt of bills, and finding the location and timing of payment of bills convenient and method of online payment convenient

Relevant Questions in SLB Questionnaire: C4.11, C4.16, C4.17 and C4.18

Formula: a) [Number of respondents who use household piped connections, reporting regular receipts/Total number of respondents using piped connections]*100
(b) [Number of respondents who use household piped connections, reporting convenience in timing/Total number of respondents making payments through municipal counters, kiosks, banks, direct agents, customer service counters (CSC), or post office] * 100
(c) [Number of respondents who use household piped connections, reporting convenience in location/Total number of respondents making payments through municipal counters, kiosks, banks, direct agents, CSC or post office] * 100
(d) Number of respondents who use household piped connection, reporting convenience in paying online/Total number of respondents making payment online * 100

CONSOLIDATEDSCORE = Weighted average of a, b, c and d above

A: Regular receipts
Numerator: Respondents reporting regular receipts - (YES in question C4.11)
Denominator: Total number of respondents using domestic piped connection (the counts of respondents who reach section C4 of the questionnaire)

B: Convenience in timing
Numerator: Respondents reporting timing convenient – (YES in question C4.16)
Denominator: Total number of respondents paying through municipal counters, kiosks, banks, direct agents, customer service counters (CSC), or post office – (= Total number of responses for this question)

C: Convenience in location
Numerator: Respondents reporting timing convenient – (YES in question C4.17)
Denominator: Total number of respondents paying through municipal counters, kiosks, banks, direct agents, customer service counters (CSC), or post office – (= Total number of responses for this question)

D: Ease in online payment
Numerator: Respondents reporting ease to pay online – (YES in question C4.18)
Denominator: Total number of respondents paying bills online – (= Total number of responses for this question)

For example
A: Total number of respondents getting a receipt/Total number of respondents with domestic piped connection = 50/120 = 42%
B: Ease in timing/Total number of respondents paying through municipal channels = 20/30 = 67%
C: Ease in location/Total number of respondents paying through municipal channels = 15/30 = 50%
D: Ease in paying online/Total number of respondents paying online = 5/10 = 50%

Total indicator for bill receipt and payment = (50+20+15+5)/(120+30+30+10) * 100
= 47%
OR Total indicator for bill receipt and payment =
[(42% * 120) + (67% * 30) + (50% * 30) + (50% * 10)] / (120 + 30 + 30 + 10)
= 47%
Overall Score: Weighted average of all the SIX individual indicator score

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>Number of respondents/frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>60%</td>
<td>200</td>
</tr>
<tr>
<td>Continuity</td>
<td>37%</td>
<td>120</td>
</tr>
<tr>
<td>Adequacy</td>
<td>64%</td>
<td>270</td>
</tr>
<tr>
<td>Quality</td>
<td>22%</td>
<td>270</td>
</tr>
<tr>
<td>Complaint Redress</td>
<td>17%</td>
<td>60</td>
</tr>
</tbody>
</table>

\[
\frac{(60\% \times 200) + (37\% \times 120) + (64\% \times 270) + (22\% \times 270) + (17\% \times 60)}{(200+120+270+270+60)}
\]

7. Satisfaction with Services: Respondents indicating their satisfaction along service aspects of water supply (Fully, partially, not satisfied)

Relevant Questions in SLB Questionnaire: C7.1

Formula: [Number of respondents reporting full, partial and no satisfaction with the particular service aspect / total number of respondents using municipal water supply] * 100

The data to be shown as a PIE CHART with the three values for fully, partially and not-satisfied as replies

Numerator A: Fully Satisfied: Number of respondents who coded 1 in C7.1
Numerator B: Partially Satisfied: Number of respondents who coded 2 in C7.1
Numerator C: Not satisfied: Number of respondents who coded 3 in C7.1

Denominator (for A/B/C): Number of respondents who reached section C6

8. Three most important aspect of Service Delivery

Relevant Questions in SLB Questionnaire: C8.1

Formula: [Top 3 aspects of service delivery calculated from Maximum number of counts on the priority areas for service delivery asked from all those who use municipal sources / total number of respondents using municipal water supply] * 100

Numerator: From C8.1
Denominator: All those respondents who reached section C6

The data to be shown as PIE CHART with percentage values of the three significant aspects for service delivery

9. Service compared to last year

Relevant Questions in SLB Questionnaire: C8.2

Formula: Number of respondents who found the services better, same or worse in comparison to last year / total number of respondents using municipal water supply

Numerator: Number of respondents who found the services better, same or worse in C8.2
Denominator: All those respondents who reached section C6

The data to be shown as PIE CHART with percentage values of the better, same or worse service delivery in comparison to last year
SANITATION SERVICES- BASELINE ANALYTICS FOR EACH CITY DASHBOARD

1. **TOILET ACCESS**: Respondents reporting access to individual, shared or public toilets
   Relevant Questions in SLB Questionnaire: D1.1
   **Formula**: \[
   \text{Indicator for TOILET ACCESS} = \left( \frac{\text{Numerator}}{\text{Denominator}} \right) \times 100
   \]
   **Numerator**: Total number of respondents who coded 1, 2 and 3 in D1.1
   **Denominator**: Total number of respondents in survey

   For example
   Total number of respondents in survey: 200
   Total number of respondents who coded 1, 2 and 3 in D1.1: 60
   Indicator for TOILET ACCESS = \(\frac{60}{200}\)\times 100 = 30% 

2. **TOILET USAGE**: Respondents reporting all family members using toilets
   Relevant Questions in SLB Questionnaire: D2.2 and D3.2
   **Formula**: \[
   \text{Indicator for TOILET USAGE} = \left( \frac{\text{Numerator}}{\text{Denominator}} \right) \times 100
   \]
   **Numerator**: Total number of respondents who coded 1 in D2.2 and D3.2
   **Denominator**: Total number of respondents to D2.2 and D3.2

   For example
   Total number of respondents who coded 1 in D2.2 and D3.2: 20 + 30 = 50
   Total number of respondents to D2.2 and D3.2: 60 + 70 = 130
   Indicator for TOILET USAGE = \(\frac{50}{130}\)\times 100 = 38% 

3. **ACCESS TO SEWERAGE**: Respondents reporting having a connection to the municipal sewer
   Relevant Questions in SLB Questionnaire: D2.5 and D4.1
   **Formula**: \[
   \text{Indicator for ACCESS TO SEWERAGE} = \left( \frac{\text{Numerator}}{\text{Denominator}} \right) \times 100
   \]
   **Numerator**: Total number of respondents who coded 1 in D2.5 and who coded 1 in D4.1
   **Denominator**: Total number of respondents to section D

   For example
   Total number of respondents who coded 1 in D2.5 and who coded 1 in D4.1: 20 + 5 = 25
   Total number of respondents to section D = 200
   Indicator for ACCESS TO SEWERAGE = \(\frac{25}{200}\)\times 100 = 12.5% 

**OVERALL SCORE: WEIGHTED AVERAGE OF THE ABOVE THREE INDICATORS**

\[
\text{Overall Score} = \left( \frac{(30\% \times 200) + (38\% \times 130) + (19\% \times 130)}{200 + 130 + 130} \right) \times 100
\]

\(= 29\% \)

4. **ALTERNATE DISPOSAL**: Respondents reporting disposal of waste water to sanitary on-site facilities
   Relevant Questions in SLB Questionnaire: D2.5
   **Formula**: \[
   \text{Indicator for ALTERNATE DISPOSAL} = \left( \frac{\text{Numerator}}{\text{Denominator}} \right) \times 100
   \]
   **Numerator**: Number of respondents reporting disposal of waste water to sanitary on-site facilities (i.e septic tanks, and pit toilets)
   **Denominator**: Total number of respondents reporting access to individual or shared toilets
Numerator = Total number of respondents who coded 2 and 3 (Septic tank and pit toilet) in D2.5
Denominator = Total number of respondents to D2.5

5. SATISFACTION WITH PUBLIC TOILET FACILITY: Respondents indicating their satisfaction along service aspects of public/ community toilets - Fully, partially, Not satisfied
Relevant Questions in SLB Questionnaire: C5.1
Formula: \[ \frac{\text{Number of respondents reporting full, partial and no satisfaction with the particular service aspect}}{\text{total number of respondents using public toilets}} \times 100 \]
The data to be shown as a PIE CHART with the three values for fully, partially and not-satisfied
Numerator A: Fully Satisfied: Number of respondents who coded 1 in C5.1
Numerator B: Partially Satisfied: Number of respondents who coded 2 in C5.1
Numerator C: Not satisfied: Number of respondents who coded 3 in C5.1
Denominator (for A/B/C): Number of respondents to D5.1
Annex.15
Indicative Design for City Sharing

SLB Connect - Conducting Citizen Feedback Surveys
Using Mobile to Web Based System Validation and Sharing Meeting
Programme Date and Venue

**Agenda: Validation of the survey findings with Commissioner, officials of Municipality and concerned departments**

2:30- 4:00 PM About SLB Connect and presentation on findings of the survey
4:00- 5:00 PM Discussion and inputs for finalisation of city flyer

**Date and Venue**

**Agenda: Sharing of survey findings with Mayor, Commissioner, elected members, officials of Municipality and concerned departments, local NGOs working on related issues, RWA representatives, citizen groups, other institutions/ consultants working on similar issues in the city and media**

10:25- 10:30 AM Welcome of participants
10:30- 10:45 AM Inaugural address by Mayor
10:45- 11:00 AM Introduction – SLBConnect
11:00- 12:00 AM Presentation on findings of the survey
12:00- 01:00 PM Discussion and ways forward (to be Chaired and moderated by Commissioner/ CEO Municipality)
01:00- 01:20 PM Distribution of certificates to enumerators and field supervisors (Mayor/ Commissioner)
01:20- 01:30 PM Vote of thanks