



# Water and Sanitation services in Varanasi, Baseline survey for SLB Connect **Synthesis Report**

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## **About**

The synthesis report for the baseline study conducted in Varanasi is a shorter version of a more comprehensive study report. The comprehensive baseline report has been prepared based on an extensive scoping study undertaken by PRIA's local partners in Varanasi between August to September, 2014. The synthesis report culls information from the longer report which has immediate bearing on the survey results.

The information for the scoping study has been gathered through both primary and secondary research. Primary research included informal consultations, discussions and field visits to gather and validate city level information. Interviews and discussions were held with different officials from the Varanasi Municipal Corporation, Jal Kal Vibhag, DUDA, JICA, our local NGO partner- Sahbhagi Shiksha Kendra- faculty members from Kashi Vidyapeeth. Secondary research includes referring to the Varanasi Municipal Corporation website, CRISIL report on Varanasi, city reports available in the public domain, and documents shared by respective municipal officials and local partners.

## Management of Water and Sanitation services in Varanasi

### SLB Connect: Background

In 2009 the Ministry of Urban Development (MoUD), Government of India under the Jawaharlal Nehru Urban Renewal Mission (JNNURM) initiated 'Service Level Benchmarks' (SLB). SLB encourages municipalities and utilities to collect data to report their performances. The type of information to be collected encompasses data on three broad aspects, namely: financial performance, operational efficiency, and citizen service.

As of now, SLB related information is generated and reported by service providers. Based on official reporting for Varanasi's SLB indicators, table 1 provides results for water and sanitation services.

*Table 1: SLB Indicators for water and sanitation services, 2012-2013*

<b>WATER</b>	<b>Coverage of water supply Connections (%)</b>	<b>Per capita supply of water</b>	<b>Extent of metering of water connections (%)</b>	<b>Extent of non-revenue water (%)</b>	<b>Continuity of water supply</b>	<b>Quality of water supplied (%)</b>
Target	100	135 lpcd	100	20	24 hours	100 %
Achievement	69	135 lpcd	66	58	7-8 hours	Data not available
<b>SANITATION</b>	<b>Coverage of toilets (%)</b>	<b>Coverage of sewage network services (%)</b>	<b>Collection efficiency of the sewage network (%)</b>	<b>Adequacy of sewage treatment capacity (%)</b>	<b>Quality of sewage treatment (%)</b>	<b>Extent of reuse and recycling of treated sewage (%)</b>
Target	100	100	100	100	100	20
Achievement	92	31	43	45	Data Not available	0% of treated sewerage not of reusable grade

The feedback process in its current form does not involve residents.

World Bank's SLB Connect builds on the service-metrics model established by SLB. It is designed to survey users/citizens and collect information on service levels in water and sanitation. It aims to provide feedback on SLB indicators and collect and analyse citizen feedback on service delivery using an innovative mobile app and Information & Communication Technology (ICT) enabled analytical tools.

To collect data on the metrics included in SLB, proxies have been created. Some of the proxies include - source, quality, timings, and adequacy, user charges, and ease of payment. For sanitation services proxies include availability, ease of use, bill payments, grievance redressal, and coverage etc.

The survey is being launched in six cities across three states. These include Ajmer and Jhunjhunu in Rajasthan; Jabalpur and Bhopal in Madhya Pradesh; and Rae Bareilly and Varanasi in Uttar Pradesh.

Four major components of SLB Connect:

- ❖ Conducting a mobile-based survey of sample households on service aspects
- ❖ Real-time monitoring of survey quality using an online survey management system
- ❖ Real-time analysis of survey results using a web-based dashboard and data analysis tool
- ❖ Supporting ULBs to design appropriate reform and response processes based on the findings from the survey

The overall goal is to improve access to UWSS services with special focus on poor and marginalized citizens.

The survey seeks to collect information on the quality of water and sanitation services as experienced by citizens as users of the services. The analysis of the data collected from citizens as users of the services will then be used to complement SLB information as reported by the municipality.

PRIA is undertaking the SLB Connect project to help improve water and sanitation services in cities by mobilizing citizen participation and feedback. PRIA brings to SLB Connect its conviction in social accountability and draws from its years of experience as an enabler of participatory democracy.

In doing so, PRIA is training and engaging with grassroots organizations and local (youth) citizens in the selected cities to both conduct and manage the survey. The results will be shared with citizen groups, civil societies, thought leaders and opinion makers including members of the academia and the media, NGOs operating in the area, government officials at the city, state and national level.

SLB Connect was launched in Varanasi on 24 January, 2015.

### **City: Overview**

Varanasi also famously known as Benares and Kashi, is an Indian city on the banks of river Ganga in Uttar Pradesh (U.P.). It is also one of the oldest continuously inhabited cities in the world. According to census 2011 data it has an urban population of 15, 97,051 and 1, 90,835 households. The average literacy rate of Varanasi city is 80.12% of which male literacy is 84.11% and female literacy is 75.63%<sup>1</sup> respectively.

Varanasi is graded as a B1 city based on norms. The Varanasi Nagar Nigam currently supervises 90 wards. Varanasi Nagar Nigam has the unique distinction of providing civic services to rural and urban villages, and resettlement colonies. The total area covered by the corporation is

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<sup>1</sup> <http://www.census2011.co.in/census/city/153-varanasi.html>

approximately 80 square kilometers. It has a population density of 14,656 persons per sq km<sup>2</sup>. Varanasi has 209 slums spread over the city constituting about 86, 396 households. The total population residing in slums is about 453,222, which accounts roughly for around 35 %of the total population in the population. Overall, slums have poor water supply and sanitation facilities.

Varanasi Nagar Nigam has 90 wards which have been grouped together into five administrative zones namely; Adampur, Bhelupur, Dashashwamedha, Kotwali and Barunapur. Each of these zones is further divided into sub-zones. Each of these five zones is headed by a zonal officer, who is responsible for their cleanliness, road, electricity, and other civic issues. The primary functions of VNN are Administration, Engineering, Health, Electricity, Mechanical, Tax, Gardening, and Right to Information and Legal.

The city has been divided into 16 water zones of which 5 zones lie in Trans Varuna zone; and 11 zones lie in the Cis Varuna region. The city's sewerage network is divided into two zones along the lines of the two districts– the Cis Varuna and the Trans Varuna.

### **Water Services: Management**

In Varanasi, water supply is looked after by the department of Jal Kal under the Varanasi Nagar Nigam.

The water supply in the city is provided 38% by river Ganga and 62% of the city's requirement is met with the help of 220 tube wells. A total of 122240 household water connections are distributed in the municipality area. There is no system of water meter and nearly 79707 households have non-functional water meters.

The per capita supply of water in Varanasi is 275 liters per capita per day (lpcd). In addition to household connections, the city supplies water through stand-posts, hand-pumps, tube-wells, mini tube-wells and reservoirs which include overhead tanks.

Slums in Varanasi have 42% water coverage with 32,900 households with water supply. There are in addition, community connections to supplement household connections. For slums there are 352 public water taps which supply water for around 6-7 hours a day, 750 hand pumps 41 tube wells and 16 mini tube wells.

Water and sanitation services are charged once a year. They are charged as Sewage Tax and Water Tax. All the billing collection is done by the Jal Kal Vibhag. The charges are not usage based.

The corresponding MIS generated is monitored by the commissioner on a monthly basis.

According to VNN's response to JNNURM, the public grievance module within e-governance is fully operational.

#### **Challenges faced by the Jal Kal department:**

In spite of inadequate water supply coverage, the officials responded that there were 'no challenges/problems'.

- Shortage of manpower and skills

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<sup>2</sup> Ministry of Urban Development, Government of India, Capacity Building for Urban Development Project, and CRISIL, Varanasi City

- State government hasn't yet transferred some functions to VNN since VNN lacks the required manpower and skills
- Some of the water lines are more than a hundred years old and deep underground. This makes maintenance very difficult
- Non-revenue water is very high at 58%. This puts very high financial burden on the Jal Sansthan

### **Sanitation Services: Management**

Sanitation services are the responsibility of the Jal Kal vibhag. An entity called the Ganga Pollution Unit is in-charge of the Sewerage Treatment Plants (STPs). The Health Department of VNN is responsible for cleaning drains and Solid Waste Management in the city.

The sewerage network of the city is divided into zones divided along the lines of the two districts- Cis Varuna and Trans Varuna.

Only 32% of the households are covered by sewerage network in the city. The remaining are covered via septic tanks, and pits; and rest are not covered at all. 18% of the city's population has no access to toilets, either independent or shared<sup>3</sup>.

There are a recorded 52,457 slum households which have toilets. In addition there are 99 community toilets operating in slums totaling 1, 134 seats.

The Varanasi Nagar Nigam (VNN) is directly responsible for the operation of mobile toilets (3 in all in the city) and public urinals (75 in all in the city) while community toilets and public toilets are operated by Sulabh International, Advances Sanitation Welfare Society, Refrogen Suvidha and NEDA; and Sulabh International respectively.

#### **Challenges faced**

- There is inadequate coverage of sewerage network
- The existing sewerage network is very old and is in need of repair
- The carrying capacity of sewerage lines is adversely affected because of garbage dumping in sewerage lines
- A separate financial account is not maintained for sewerage functions
- Heavy footfall of tourists leads to pressure on existing sources and facilities

### **Citizen Engagement and Grievance Redressal**

The municipality has instituted various ways to address citizen grievances for both sanitation and water services. It organizes a *Samadhan Diwas* on the second Monday of every month. Citizens gather on this day and voice their problems with the officials.

A helpline, a public grievance toll-free number and an Interactive Voice Response (IVR) system has been provided for citizens to lodge complaints.

Citizens also have the option to message their complaints which are further forwarded to the respective departments and are addressed within a specified timeframe.

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<sup>3</sup> ibid