

## Executive Summary

Microfinance offers significant potential for ensuring universal access to safe drinking water and sanitation services. MFIs, given their mission and outreach are well placed, to fulfil the financing gap required for ensuring access to safe drinking water and sanitation.

This study has been undertaken primarily to understand market characteristics and nature of demand in three states of North and East India – Uttar Pradesh, Bihar and Uttarakhand. The study has involved literature review, primary survey of about 1,200 respondents in 15 districts (400 respondents across 5 districts in each state), 15 Focus Group Discussions (FGDs) with about 250 residents in urban and rural areas and discussions with MFIs, NGOs and experts in water and sanitation.

For the purpose of this study, we have considered the following water credit products.

1. Credit for improved water source: Households may require credit for investing in an improved water source like a piped water connection, handpump or borewell.
2. Credit for improved toilets: Households may be offered credit for constructing improved toilets within their premises.
3. Credit for purchasing water purification appliances: Households may be offered credit for purchasing water purification appliances.

The following table summarises the potential market for microfinance loans for water and sanitation in the three states.

<b>Potential market for microfinance water and sanitation loans (Rs billion)</b>							
	<b>Uttar Pradesh</b>		<b>Bihar</b>		<b>Uttarakhand</b>		
	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>	<b>Urban</b>	<b>Rural</b>	<b>Total</b>
Improved water source	2.2	19.5	1.2	8.4	0.3	2.5	34.1
Improved toilet	1.8	32.5	1.5	23.4	0.03	1.6	60.8
Water purification appliances	1.0	2.1	0.1	0.2	0.01	0.01	3.4
<b>Total</b>	<b>5.0</b>	<b>54.2</b>	<b>2.8</b>	<b>32.0</b>	<b>0.3</b>	<b>4.1</b>	<b>98.4</b>

The demand for improved water source and improved toilet facility can be considered as decadal demand considering that improved water sources and toilets are likely to be replaced once in ten years. This is against the typical microfinance demand for consumption and income generating activities which is expressed as an annual demand.

### Market characteristics – Uttar Pradesh

1. Uttar Pradesh is the most populous state in India having population of about 200 million as per the census of 2011.
2. Uttar Pradesh is one of the poorest states in India, the number of poor households in the state has been estimated to be close to 14 million.
3. Uttar Pradesh is situated in the Indo-gangetic plains and most of the important rivers of North India pass through the state. The state also has ample ground water resources. Ground water in the western part of the state is affected by many contaminants.

4. Uttar Pradesh Jal Nigam (UPJN) is the main agency for water supply in both urban and rural areas. The large cities of the state (Lucknow, Kanpur, Varanasi, Agra and Allahabad) have dedicated public utilities (Jal Sansthan) for operations and maintenance of water supply schemes. In other towns, local municipal bodies are responsible for operations and maintenance of water supply schemes. Bundelkhand region also has dedicated public utilities (Jal Sansthan) for operations and maintenance of water supply schemes.
5. Total Sanitation Campaign (TSC) is operational in all the districts of the state. However, only about 2% of the Gram Panchayats in the state have received “no open defecation” status.
6. As per our primary survey, about 70% of the total households in the urban areas had access to water supply within their premises. However, only 47% had access to piped water supply in their home.
7. Piped water supply in urban areas, is relatively better in the larger cities. In most of the smaller cities piped water supply is not reliable and household level connections are not available. Urban population in smaller towns primarily depend on handpumps and borewells.
8. Rural water supply is almost entirely dependent on handpumps. Only 38% of the surveyed population in the rural areas had access to a source of water within their premises. For about 92% of the surveyed population, handpump was the primary source of drinking water. Although, the government is implementing some piped water schemes in the rural areas, we estimate that these schemes are operational in not more than 1% of the villages in the state.
9. 85% surveyed households in the urban areas and 24% of them in the rural areas had access to improved toilets in their houses. Only about 8% of the households in the urban areas reported open defecation while 74% of the households in the rural areas reported open defecation.
10. 23% of the surveyed population in the urban areas and 37% in the rural areas expressed willingness to obtain an improved water connection.
11. 38% of the surveyed population in the urban areas and 57% in the rural areas expressed willingness to obtain an improved toilet.
12. Total potential loan demand for water and sanitation has been estimated to be Rs60billion. Most of the potential market for water and sanitation related credit in Uttar Pradesh is in the rural areas. This is on account of two reasons. Firstly only about 20% of the total households of the state reside in the urban areas and secondly, urban areas have access to piped water network and improved sanitation facilities.
13. Most of the demand pertaining to improved water source in urban areas is for installing borewells. Amount required for obtaining a municipal water connection is very low (less than Rs5,000) for most places.

14. Almost entire demand for improved water source in rural areas is likely to be for installing private handpumps. Access to piped water supply network is negligible.
15. Uttar Pradesh is one of the most developed microfinance markets in North India. Cashpor, Sonata and Utkarsh are the MFIs of significant size having their Head Offices in the state. Some of the MFIs not having their offices in the state like Satin Creditcare, Mimoza Finance and SV Crediline have most of their loan portfolio in Uttar Pradesh.

### **Market Characteristics – Bihar**

1. Bihar is the third most populous state in India, behind Uttar Pradesh and Maharastra and according to the 2011 census, the total population of Bihar was 103.8 millions.
2. Bihar is one of the poorest states in India, the number of poor households in the state has been estimated to be close to 10 million.
3. Bihar is situated in the Indo-gangetic plains and is well endowed with surface water resources and good rainfall. The state also has ample ground water resources. Ground water level the state is relatively high (less than 50 feet at most of the places) and is relatively unexploited. Many districts of the state are affected by Arsenic contamination.
4. Public Health and Engineering Department (PHED) of the state government is responsible for planning and construction of drinking water schemes in the state. Bihar Rajya Jal Parshad (BRJP) is responsible for operations and maintenance of these schemes in large towns like Patna and Gaya. In smaller towns operations and maintenance is being undertaken by local municipal bodies. Operations and maintenance of water schemes in the rural areas is the responsibility of PHED.
5. Total Sanitation Campaign (TSC) is operational in all the districts of the state. However, only about 2% of the Gram Panchayats in the state have received 'no open defecation' status. The state government is implementing the Lohiya Swachhta Yojna (LSY) to supplement the TSC which primarily aims at providing additional subsidies to the beneficiaries.
6. As per our primary survey, about 60% of the total households in the urban areas had access to water supply within their premises. None of them had access to piped water supply facility. Almost entire population in the urban areas depended on tubewells or handpumps.
7. Except for a few localities in large cities – Patna and Gaya – piped water supply in the colonies where low income clients usually reside, is unreliable and erratic.
8. Rural water supply is almost entirely dependent on the handpumps. Only 38% of the surveyed population in the rural areas had access to a source of water within their premises. For about 90% of the surveyed households, handpump was the primary source of drinking water.

9. 45% of the surveyed households in the urban areas and 28% of them in the rural areas had access to improved toilets in their houses. 42% of the households in the urban areas and 78% of the households in the rural areas reported open defecation.
10. 52% of the surveyed households in the urban areas and 50% of them in the rural areas expressed willingness to obtain an improved water source.
11. 45% of the surveyed households in the urban areas and 65% of them in the rural areas expressed willingness to obtain an improved toilet.
12. Total potential loan demand for water and sanitation has been estimated to be Rs35billion. Most of the potential market for water and sanitation related credit in Bihar is in rural areas. This is mainly on account of the fact that about 90% of the population of the state is rural.
13. In both urban and rural areas, demand for improved water source is for the handpumps. Demand for borewells is likely to be only in a few urban localities in Patna and Gaya on account of poor status of electricity supply in most of the urban areas.
14. Bihar does not have any MFI of significant size having its Head Office in the state. Most of the MFIs having significant portfolio in the state have their Head Offices out of the state (eg SKS and Bandhan).

### **Market characteristics – Uttarakhand**

1. Uttarakhand was carved out of Uttar Pradesh in November 2000 and as per the census of 2011, the total population of the state was about 10 million. Uttarakhand is largely a hilly state with about 86% of the geographical area of the state in the hilly region. The hilly region is sparsely populated. The three plain districts of the state (Dehradun, Haridwar and Udham Singh Nagar) constitute about 52% of state's population.
2. Per capita income of the state is comparable to the average per capital income of India. Total number of poor households in the state is estimated to be about 684,000.
3. The state receives plentiful of snow fall and many rivers of North India (including Ganga and Yamuna) originate in Uttarakhand.
4. There are innumerable springs which flow throughout the hilly regions in the state. These streams are major source of water for the settlements around these streams. Areas in the plains have ample surface water as well as ground water resources.
5. Uttarakhand has two public utilities under ministry of drinking water for handling water supply in the rural and the urban areas. These institutions are Uttarakhand Pey Jal Nigam (UKPJN) and Uttarakhand Jal Sansthan (UJS). UKPJN is responsible for planning and construction of drinking water schemes in the state while UJS is responsible for operations and maintenance of these schemes.

6. Total Sanitation Campaign is operational in all the districts of the state. However, only about 6% of the Gram Panchayats in the state have received ‘no open defecation’ status.
7. As per our primary survey, about 51% of the total households in the urban areas had access to a source of water in their premises. Most of the households in the urban areas depend on the piped water connection for their water requirements. This is the case in both urban and rural areas.
8. In the hilly areas, piped water supply is the main source of water while in the plains handpumps are the main source of water. The government is trying to have piped water schemes in all the villages in the hilly region. About 41% of the surveyed households had access to a water source in their houses.
9. 74% of the surveyed households in the urban areas and 71% of them in the rural areas had access to improved toilets in their houses. Only about 15% of the surveyed households in the urban areas and 7% of the households in the rural areas reported open defecation.
10. 46% of the surveyed population in the urban areas and 69% in the rural areas expressed willingness to obtain an improved water connection.
11. 42% of the surveyed population in the urban areas and 57% in the rural areas expressed willingness to obtain an improved toilet.
12. Total potential loan demand for water and sanitation has been estimated to be Rs4.4billion. Most of the potential market for water related credit in Uttarakhand is in the plain areas. This mainly consists of districts of Dehradun, Udham Singh Nagar and Haridwar. Majority of the population of the state resides in these three districts and also has access to ground water. Water supply from piped network is erratic even in large towns like Dehradun and Haridwar. There is demand for borewells in the larger towns.
13. In many villages in the hills piped water schemes are being implemented. Contribution required for piped water connection in the villages is very low and Households are not likely to seek loan for such small amounts.
14. Demand for improved toilets, particularly in the hills, is impacted by the availability of water within or near the premises. In case the households require to travel long distances to fetch water, demand for improved toilets is likely to be expressed only when availability of water has been ensured.
15. Uttarakhand does not have any MFI of significant size having its Head Office in the state. Most of the MFIs having significant portfolio in the state have their Head Offices out of the state (eg SKS and Bandhan).

## **Challenges and the way forward**

The following are going to be important challenges for MFIs in providing watercredit products.

- Our study suggests that there are considerable variations in the nature of demand even in close geographical areas. This is unlike typical microfinance products where the nature of demand is generally similar across a geographical area. Most of the MFIs, currently do not have intensive market research function to capture such drivers of demand.
- Current appraisal systems of MFIs are mostly geared towards income generation loans, which may not be suitable for water and sanitation loans.
- Current RBI guidelines for classifying microfinance loans as priority sector lending may discourage MFIs to offer water and sanitation loans to their customers which would, most likely, not be classified as income generation loans.
- Most of the MFIs currently do not have the expertise to evaluate technical aspects of water credit loans which will be required for market research, product development and appraisal of loans.

In our opinion, the following steps should be taken so that water credit can sustainably become part of the MFI's portfolio.

- Sustained capacity building of the MFIs is essential to increase the level of awareness among MFIs about the nature of watercredit market and products, and for development of suitable appraisal system and product development.
- The present regulatory environment for microfinance in India does not specifically encourage MFIs to offer water and sanitation related loans to its clientele. Advocacy with the regulators may help change the perception of the regulators regarding watercredit.
- Awareness building among banks and other financial institutions is required so that they favourably view MFIs offering loans for water and sanitation.
- Network organisations can help in building awareness among various stakeholders regarding water and sanitation loans. They may also help in channelizing capacity building efforts.