

# Financing Sanitation For the Poor

## Household level financing to address the sanitation gap in India

September 2015

### PROBLEM STATEMENT

In India today, more than half of households lack access to improved sanitation. In rural areas, this proportion rises to over 70% percent, or about 620 million people<sup>1</sup>. In fact, India accounts for 60 percent of open defecation globally.

The health consequences of poor sanitation are substantial and contribute to over USD 50 billion dollars in GDP loss annually. Poor sanitation contributes to diarrheal disease, which in turn results in premature mortality, childhood malnutrition and stunting, high healthcare costs, and massive productivity losses. A recent World Bank Water and Sanitation Program (WSP) study in Maharashtra found that children living in villages with poor sanitation were significantly shorter than those living in villages with better access to sanitation<sup>2</sup>. Emerging research is showing that childhood stunting has lifelong effects on both health and cognitive ability.

While the up front cost of a toilet can easily equal a household's average monthly income, many are willing to purchase one if they can spread the cost over time by saving or borrowing. Finance institutions are beginning to help fill this gap by providing small water and sanitation loans to households and businesses. Sanitation financing provides significant social and economic benefits for financial institutions, helps governments and donors leverage private sector funds, and allows households to more easily access critical sanitation services.

<sup>1</sup> Progress on Sanitation and Drinking Water – 2015 Update and MDG Assessment. UNICEF and World Health Organization 2015.

<sup>2</sup> Coming Up Short without Sanitation: A Community Sanitation Program by the Indian Government Helped Children Grow Taller and Healthier in the State of Maharashtra. WSP 2013.

## Key Findings

- **USD 80 million in financial lending** has resulted in more than 315,000 household sanitation loans reaching more than 1.4 million people.
- **Sanitation loans have risk profiles comparable to other loans.** Approximately 80 percent of WaterCredit borrowers earn less than USD 2.00 per day, but have repayment rates of more than 99 percent.
- Household level sanitation lending **stretches the impact of each philanthropic dollar invested by 10 times.**
- The Reserve Bank of India recently added sanitation infrastructure to the priority sector lending, **which could release USD 40-50 billion into the sector.**
- **Loan recipients enjoy social and economic benefits:** 39 percent of borrowers reported increased safety and nearly 25 percent of women were able to increase incomes due to greater productivity.



Sanitation financing also shows strong promise of supporting the UN Open Working Group's ambitious Sustainable Development Goal (SDG) 6 to end open defecation and ensure basic access to water and safe sanitation to everyone, everywhere, by 2030. Meeting this goal in India will significantly advance the overall SDGs given that the country's population represents such a large portion of those without access to sanitation globally.

Financial institutions in India pioneered household level water and sanitation lending and have a strong track record of disbursing a large volume of toilet loans and working closely with local government and non-governmental organization (NGO) programs for social marketing and demand-generation. These examples provide positive evidence and useful lessons learned for the Government of India and development partners to further integrate household level financing into the Clean India Campaign.

## ADDRESSING THE WATER AND SANITATION FINANCING GAP

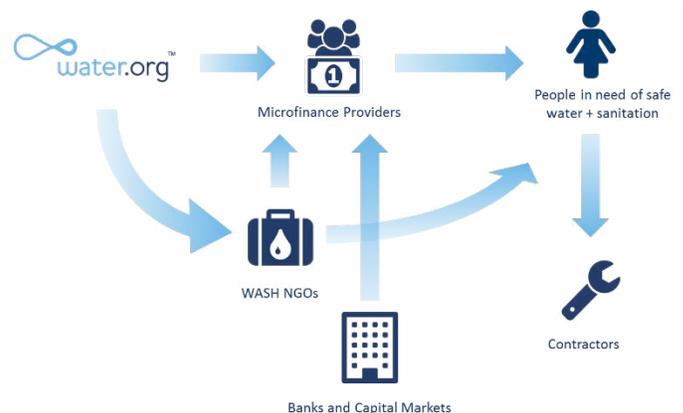
Water.org and the Water and Sanitation Program (WSP) of the World Bank's Water Global Practice are helping to expand access to sanitation in India and around the world, and have cooperated on this Learning Note to spotlight the promise sanitation financing offers the poor to meet their needs.

Water.org, through its WaterCredit program, provides a variety of capacity-building grants and technical assistance to create, pilot, and scale water and sanitation financing. Currently, WaterCredit provides funding to NGOs and microfinance providers for capacity building and technical assistance. These partners then leverage funding from banks and capital markets to disburse loans to people in need. Borrowers pay water and sanitation service providers for products and services. Going forward, this approach has the potential to scale through various financial institutions, including small banks, regional rural banks, and co-operative banks, among others.

The average duration of a partnership with Water.org is three to seven years. Supported activities may

include, but are not limited to: market assessments, client demand surveys, loan product development, staff training, marketing, community-based outreach, sanitation and hygiene education, and strengthening loan monitoring systems. The WaterCredit model integrates with local economies, building capacity for communities to meet demand and maintain solutions.

**Figure 1. WaterCredit Model**



*WaterCredit uses philanthropic funding to drive credit for water and sanitation – raising access to safe drinking water and sanitation in a scalable model.*

To date, Water.org has provided USD 11.3 million in subsidies to financial institutions and NGO partners worldwide, which in turn have disbursed over USD 120 million in loans reaching 2.4 million people<sup>3</sup>. The rapid growth of the WaterCredit program suggests strong interest from financial institutions in developing and growing their water and sanitation loan portfolios (see Table 1). Factors leading to successful sanitation financing have included financial institutions' ability to leverage capital and offer viable products, strong client demand and commitment and ability to repay their loans, as well as functioning supply chains enabling quality design and build by sanitation entrepreneurs.

Complementing Water.org's sanitation financing work, WSP helps catalyze markets for sanitation services by providing technical assistance to governments, businesses, and financial institutions<sup>4</sup>. In countries such

<sup>3</sup> People reached are defined as the borrowers and members of their household.

<sup>4</sup> Sanitation businesses can include masons and small sanitation entrepreneurs, latrine manufacturers, and others

as India, WSP provides support to the government, local financial institutions and other financial institutions to pilot sanitation financing programs for small businesses and households. WSP also strengthens the broader operating environment for sanitation service delivery by building the capacity of sanitation entrepreneurs, supporting research and development of new low-cost toilet designs, and generating demand through education and marketing.

Emerging evidence from the joint work of Water.org and WSP demonstrates the viability of WASH microfinance and is supported by a robust database of water and sanitation loan performance.

Number of Countries <sup>5</sup>	6
Number of financial institution partners	53
Total subsidies to financial institutions provided by Water.org	USD 11.3 million
Total WASH loans disbursed by financial institutions partners	USD 120 million
Number of loans disbursed	573,000
Number of people reached	2.4 million
Average loan size	USD 210
Average effective interest rate	14.5%
Repayment rate	~99%
Portfolio at Risk over 30 days <sup>6</sup>	1.3%

This learning note includes a portfolio analysis conducted in 2014 of one of the largest water and sanitation loan portfolio data sets available, as well as an independent impact assessment of Water.org's WaterCredit program, offering insights into the viability of WASH lending. The portfolio analysis included a sample of more than 245,000 loans in India. About half of these loans were for sanitation—primarily for household toilets. The WaterCredit portfolio analysis, along with WSP analysis, help show why development partners, governments, and financial institutions should work together to scale water and sanitation loans as part of the solution to the sanitation crisis in India.

<sup>5</sup> Countries include Bangladesh, India, Indonesia, Kenya, Philippines, Uganda, with most of the loans being concentrated in India.  
<sup>6</sup> Defined as % of total outstanding loan portfolio more than 30 days past due.

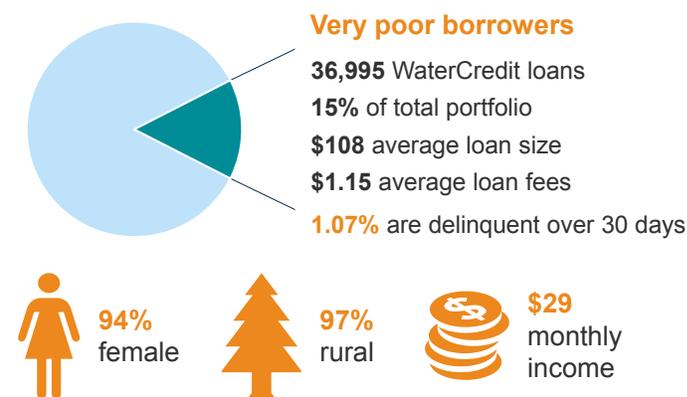
## KEY FINDINGS

### Sanitation financing breaks down barriers separating the poor from improved sanitation

WaterCredit in India has facilitated over 545,000 water and sanitation loans while maintaining a repayment rate of over 99%. This demonstrates a large demand for water and sanitation loans, which financial institutions are well-positioned to meet. A recent study by Monitor Deloitte<sup>7</sup> estimates the sanitation market represents a USD 10-14 billion need nationally, assuming that value chains can deliver toilets and that partial subsidies are available. Consumer finance makes up USD 1.6-4.2 billion of that estimate, with post-construction bridge funding accounting for USD 4.6 billion<sup>7</sup>. The market is likely to grow as the rural incomes rise.

Equally important, water and sanitation financing targets very poor individuals who earn less than \$1.25 per day. In India, the WaterCredit portfolio analysis found that around 15% of loans from Water.org's financial institution partners went to very poor borrowers (see Figure 2)<sup>8</sup>, and more recent data finds that approximately 80% of clients are living in household earning less than \$2 per day. Not only did these borrowers decide to take loans, but, they also demonstrated the ability to repay. Only one percent of very poor water and sanitation loan recipients were delinquent over 30 days, compared to 0.45 percent of all other loan recipients<sup>9</sup>.

Figure 2. WaterCredit India Loan Analysis Portfolio



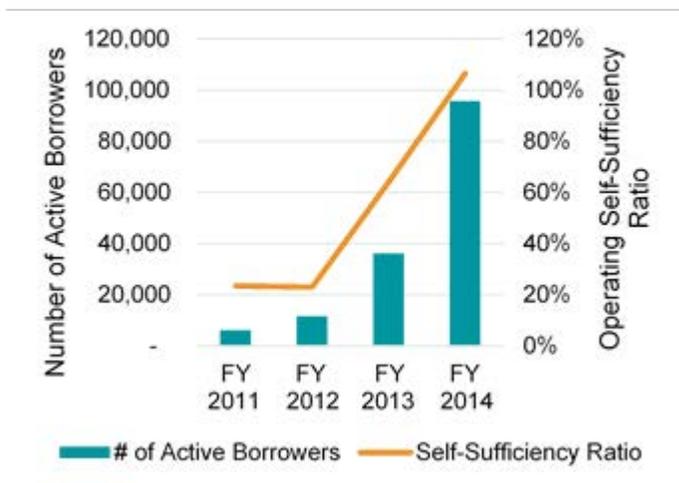
<sup>7</sup> A Market Led, Evidence Based, Approach to Rural Sanitation. Prepared by Monitor Deloitte on behalf of the Bill and Melinda Gates Foundation. November 2013.  
<sup>8</sup> Defined as % of total outstanding loan portfolio more than 30 days past due  
<sup>9</sup> Very poor borrowers fall below the global poverty line of \$1.25 per day.  
<sup>10</sup> WaterCredit loan portfolio analysis.

### **Sanitation loans provide economic and social value to financial institutions and show risk profiles comparable to other microloans**

Water and sanitation loans have not posed more risk than other loans, including income-generating loans. For three major partners, the percentage of the water and sanitation loan portfolio at risk over 30 days ranged from 0 - 1.38 percent, well below the industry benchmark of 3-5 percent and the 13.66 percent average for all financial institutions in India<sup>10</sup>. Many WaterCredit partners further reduce risk by lending only through existing clients in joint liability groups.

Grameen Koota, a financial institution that has collaborated with Water.org, expanded its water and sanitation financing program from a small pilot to reaching 187 branches which comprises 9.1 percent of their total loan portfolio. Over time, as the number of active water and sanitation borrowers grew, the operating self-sufficiency ratio<sup>11</sup> specifically for water and sanitation loans grew as well (see Figure 3). Today, the operational self-sufficiency ratio is 106.6%, indicating that at least the costs of offering water and sanitation loans can be covered by the interest income on these loans.

**Figure 3. Grameen Koota WASH Financing Growth**



<sup>10</sup> MIX Market All India Benchmark Tables FY13-14.

<sup>11</sup> Operational Self-Sufficiency (OSS) indicates whether operating income covers operating expenses, i.e. whether the loan portfolio is financially sustainable. It is calculated as  $\text{Operational Revenue} / (\text{Financial Expense} + \text{Loan-Loss Provision Expense} + \text{Operating Expense})$ .

These results support similar outcomes from WSP programs in Cambodia, where operational self-sufficiency of the water and sanitation portfolio at two financial institutions grew over time to exceed 100%<sup>12</sup>. It is also notable that the structure of the loan affects portfolio performance. Financial institutions offer a variety of loan terms (see Table 2). The India water and sanitation loan portfolio analysis revealed that poor loan repayment is most closely correlated with higher total loan amounts, higher fees, and longer loan repayment terms (over 18 months). Financial institutions can design sanitation loans for low-income customers as a viable and profitable product by offering smaller loans with shorter repayment terms. Donors and government can support this process by subsidizing financial institutions' operating costs to design, refine, and scale these loan products.

While sanitation loans are unlikely to be major profit drivers for most financial institutions, they have other business value and can help meet the social objectives of the organization. A client having the dignity and safety of a household toilet can strongly align with a financial institution's social mission to address their clients' pressing needs for improved health and wellbeing.

Household toilets enhance dignity, privacy and safety, particularly for women and girls. It has been well-documented that sanitation contributes to good health which is essential to social and economic development. A target market for financial institutions, as well as comprising key demand for improved sanitation, sanitation financing is a well-suited mechanism to improve the lives of women and girls, as well as society as a whole.

Financial institutions have been successful in providing education to community members about the benefits of improved sanitation. These types of consumer education functions can be managed directly by the financial institution, with an NGO or government partner, or through a subsidiary organization. For example, Grameen Koota established a separate NGO in India to educate clients and local communities on the health

<sup>12</sup> Loan Portfolio Performance Analysis-VisionFund. PATH and Price Waterhouse Coopers (Cambodia) Ltd. November 2013.

Table 2. Summary of MFI Water Supply and Sanitation Loan Offerings Characteristics (March 2015)			
Characteristic	GRAMEEN KOOTA	HAND IN HAND	GUARDIAN
Loan Type	Joint Liability Group loan	Joint Liability Group loan	Joint Liability Group loan
Location	187 branches across 43 districts and 3 states	24 branches across 3 districts of Tamil Nadu	9 branches in 4 districts of Tamil Nadu state
Number of Loans	282,673	29,957	32,544
Total Amount Disbursed	INR 2.2 billion	INR 174 million	INR 170 million
Water and Sanitation Loans as % of Portfolio	9.10%	13.5%	100%
Loan Size	INR 5,000-10,000	INR 5,803 (avg.)	INR 5,233 (avg.)
Repayment Period	24 months	12 & 18 months	18 months
Repayment Frequency	Weekly, bi-weekly or monthly	Monthly	Monthly
Processing Fee	1%	0%	1%
Interest Rate (p.a.)	22% (declining)	18% (declining)	21% (declining)
Portfolio Growth (CAGR*)	475% (March 2010-2014)	97% (March 2009-2013)	53.6% (March 2009-2013)
PAR> 30 (%)	0.091%	0%	1.38%
*Compound Annual Growth Rate			

hazards of open defecation and consumption of unsafe water (see Grameent Koota Case Study for more).

Beyond improving the health of customers, sanitation loans help attract and retain clients. Retaining clients by offering additional loan products is a key channel through which these loans support core business. For financial institutions driven by a strong social mission, sanitation loans are proving to be an effective investment.

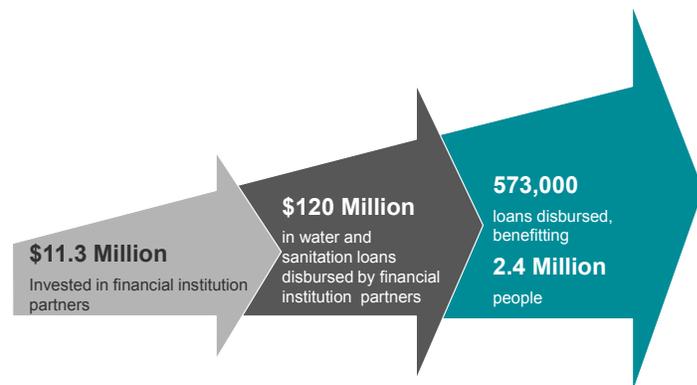
One of Water.org’s partner financial institutions, Hand in Hand, offered water and sanitation financing in 2006 to support a local government sanitation program. Hand in Hand considered water and sanitation loans as income enhancing, because of health benefits and increased productive time. The water and sanitation loan product is also the only product that aligns with all five of Hand in Hand’s pillars, enhancing its strategic and social value.

Another Water.org partner, Gramalaya Urban and Rural Development Initiatives and Network (Guardian), was established in 2007 to help poor households gain access to improved water and sanitation facilities. Guardian works closely with Gramalaya, the NGO from which it was created, which supports monitoring and implementation of non-lending water and sanitation activities such as community mobilization, community needs assessment, health education, and technical support to Guardian.

**Household level sanitation financing effectively leverages funding for social outcomes by facilitating more efficient investments from government and development partners**

Governments and donors have ambitious targets, yet limited funding, for water and sanitation. Water and sanitation lending multiplies the impact of a traditional subsidy by leveraging capital for loans from the private sector and social investors, recycling capital back into the system and freeing up government and philanthropic funds for the very poor (see Figure 4).

**Figure 4. WaterCredit Leverages Funding**



For every \$100 Water.org invested, 21 people gained access to improved sanitation. A traditional model would require ten times the funding.

India provides an ideal environment to try this approach. The Clean India Campaign, or Swachh Bharat Abhiyan (SBA) aims to eliminate open defecation by 2019. The SBA guidelines recognize that the sanitation challenge is too large to be solved by government alone; it requires a network of stakeholders to address the challenge and fill funding gaps.

This provides a prime opportunity for expansion in the sanitation market. Financial institutions which lend for household level water and sanitation have an important role to play in supporting SBA's objectives by:

- Reaching people above the poverty line in urban areas who cannot afford toilets but are ineligible, or only partially eligible, for direct SBA assistance
- Providing bridge financing for people who are eligible for subsidies, but await their delivery
- Multiplying the impact of a traditional grant by recycling capital back into the system and freeing up government funds for the very poor
- Targeting water improvements; water and hand washing are needed to meet open defecation free criteria but are not fully supported by SBA
- Providing additional financing where government funding is insufficient – evidence suggests that construction of a complete toilet with the limited subsidy amount has led to poor quality of construction

Leveraging these opportunities to maximize the reach and impact of government and donor funding will help improve social outcomes.

Participation of financial institutions in the water and sanitation sector can be facilitated by government policy. The Reserve Bank of India recently added sanitation infrastructure to the priority sector lending, a positive sign likely to spur additional capital for credit-enabled household sanitation lending. Priority sector lending by banks provides credit in sectors of the economy that are important for development but would otherwise lack adequate funds. Analysis suggests that continued robust advocacy for this policy change in India alone could

### Grameen Koota Case Study

Grameen Koota is a financial institution in India that offers income generating and consumption loans, including a specialized loan product for water supply and sanitation. The sanitation loan has an interest rate of 22 percent, lower than the 26 percent interest rate charged for income generating loans, while maintaining comparable performance and repayment rates. After piloting in a few branches, water and sanitation loan products now deploy across their network, making up 9.1% of Grameen Koota's portfolio as of May 2015.

Over time, Grameen Koota realized that improving the socioeconomic wellbeing of its clients required more than credit. For a more holistic solution, Grameen Koota's NGO wing Navya Disha was launched in 2005 to educate clients about health and hygiene. Grameen Koota contributes 5% of its annual profits to NavyaDisha for water, sanitation, and hygiene activities.

Water.org supported Navya Disha to provide awareness campaigns, train masons, and promote the WaterCredit loans offered by Grameen Koota. Water.org also provided guidance on product design and funded market surveys, awareness building, product development and marketing, and monitoring and evaluation. Since 2010, Grameen Koota's WASH lending portfolio has grown at almost 380 percent per year, a reflection of high client demand.

release an additional USD 40-50 billion<sup>13</sup> into the sector, significantly reducing the reliance on philanthropic aid and unlocking critical funding for water and sanitation financing for the poor.

<sup>13</sup> Considering the Inclusion of Water and Sanitation as a Priority Sector, Albright Stonebridge Group, India.

### Sanitation loans have a strong social impact for borrowers and their families

Investment in improved access to sanitation produces substantial returns for households, including socioeconomic and health impacts. Nearly one in four WaterCredit borrowers reported reduced illness, and extensive academic studies have shown that reducing illness improves children's school attendance and lifetime earning potential. Access to improved sanitation also reduces the incidence of chronic diarrhea—improving cognitive functioning and reducing the risk of impaired growth. Research suggests that impaired growth decreases the likelihood that children will lead healthy, economically productive lives. These health impacts can have direct financial returns; around one in five WaterCredit borrowers reported reduced medical expenses.

Access to improved on-site sanitation brings dignity, safety, and privacy to the family, especially for women, children, and the elderly. Research shows that nearly all WaterCredit borrowers are women, and women with a toilet in the home are safer and have more privacy than those who must find isolated locations far from the home to defecate. WaterCredit's impact analysis indicates that as a result of gaining access to water and sanitation, 39 percent of borrowers reported increased safety<sup>14</sup>.

### Sanitation loans bring economic benefits to borrowers

By facilitating access to sanitation, household level sanitation financing contributes to increased household income. Before taking a loan, only 53% of WaterCredit borrowers in India made at least 3,000 Rupees (\$47.30 USD<sup>15</sup>) per month; after the loan, this proportion nearly doubled to 97%, suggesting that the investment in water and/or sanitation may have contributed to households' abilities to generate income. According to the WaterCredit impact analysis, nearly one quarter of borrowers were able to increase income due to extra time for women, and one in five were able to increase income due to increased productivity<sup>16</sup>.

<sup>14</sup> Evaluation completed in 2014 by NR Management Consultants India (NRMCI).

<sup>15</sup> Using May 15, 2015 exchange rate (1 USD = 63.42 Indian Rupees).

<sup>16</sup> Evaluation completed in 2014 by NR Management Consultants India (NRMCI).

Figure 5. Young Woman with Loan Card



## WHAT WE STILL NEED TO KNOW

In addition to the findings of the WaterCredit loan analysis, financial institutions and development partners are encouraged to explore the following:

- **Other products-** While experience to date has focused primarily on microcredit for water and sanitation, microfinance now includes a much broader range of financial products that address the varied needs of consumers. More research is needed on the roles that savings, remittances, and other financial products play in financing water supply and sanitation services.
- **Market distortions-** Although many in the microfinance industry advise against subsidies, some level of initial support from donors or governments may be necessary to encourage financial institutions to offer water and sanitation loans. We need to know more about how development partners can support financial institutions without distorting the market.
- **Reaching scale-** Financial institutions are testing several different types of approaches, and are still learning about the types of loan products that scale effectively and the conditions that support their success.

- **Estimating impact-** Many financial institutions are interested in the specific economic value of their social missions. However, quantifying the economic benefits of customers' improved water and sanitation status on financial institutions is complex, and merits further investigation.

## CONCLUSIONS

Evidence from Water.org's existing programs demonstrates that finance for sanitation is a significant opportunity for the Government of India, donors, financial institutions, and clients. Sanitation lending works and also leverages funding to achieve greater reach than traditional grant based models. By directly integrating financial institutions as part of the strategy for the Clean India Campaign as both demand generators and financiers, and unlocking funding for social infrastructure and priority lending for sanitation, India can better utilize financial institutions as a development partner in reaching sanitation goals. Evidence from Grameen Koota, Hand in Hand, and Guardian illustrate how financial institutions in India are able to work closely with donors, NGOs, and local groups to improve access to sanitation.

By John Ikeda and Heather Arney

The Water and Sanitation Program (WSP) is a multi-donor partnership created in 1978 and administered by the World Bank to support poor people in obtaining affordable, safe, and sustainable access to water and sanitation services. WSP's donors include Australia, Austria, Canada, Denmark, Finland, France, the Bill & Melinda Gates Foundation, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, and the World Bank.

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## ABOUT THE COLLABORATION

In 2014 WSP and Water.org jointly conducted a loan portfolio analysis based on data from over 245,000 loans administered by Water.org partners. The analysis was done with two goals: 1) to better understand the demographic characteristics of households borrowing finance for water and sanitation and 2) to identify differences in delinquency rates and characteristics for low income clients. Building off of these findings and other existing case studies led by WSP (such as efforts in India to scale market-based approaches to rural sanitation), the partnership prepared this learning note to highlight the key findings of the loan analysis and other case studies to present the available evidence for sanitation microfinance as a viable financial and social opportunity for developing countries.

## Contact us

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