MICROFINANCE AS A POTENTIAL CATALYST FOR IMPROVED SANITATION

A synthesis of Water For People's sanitation lending experiences in seven countries

water for people

Microfinance as a potential catalyst for improved sanitation: A synthesis of Water For People's sanitation lending experiences in seven countries

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CONTENTS

ACRONYMS

ACDIS	Community Association of Integrated Development (Guatemala)
APR	Annual percentage rate
ASFI	Authority of Supervision of the Financial System (Bolivia)
ASOFIN	Association of Financial Entities Specialized in Microfinance (Bolivia)
BDM	Business development manager
BDS	Business development services
BNR	National Bank of Rwanda
BOB	Bolivian Boliviano *(1 USD = 6.8 BOB)*
CBO	Community-based organization
CDOT	Center for Development Orientation and Training (India)
CGAP	Consultative Group to Assist the Poor
CREDIREF	Central Credit Bureau (Guatemala)
CSR	Corporate social responsibility
FSS	Financial self-sufficiency
GDP	Gross domestic product
GNI	Gross national income
GTQ	Guatemalan Quetzal *(1 USD = 7.8 GTQ)*
INR	Indian Rupee *(1 USD = 61 INR)*
JLG	Joint liability group
JMP	UNICEF/WHO Joint Monitoring Program
KJMUS	SHG federation Kandi Jibdharpara Mahila Unnayan Samiti (India)
LAR	Loans at risk
MDG	Millennium Development Goal
MFI	Microfinance institution
MFSC	Microfinance Support Center (Uganda)
MIS	Management information system
MIX	Microfinance Information Exchange
MWK	Malawian Kwacha *(1 USD = 330 MWK)*
NABARD	National Bank for Agriculture and Rural Development (India)
NGO	Non-governmental organization
OIBM	Opportunity International Bank of Malawi
PEN	Peruvian Nuevo Sol *(1 USD = 2.7 PEN)*
ROE	Return on equity
RMA	Rapid market assessment
RSM	Rural sanitary marts (India)
RWF	Rwandan Franc *(1 USD = 640 RWF)*
SACCO	Savings and credit co-operative
SBS	Superintendency of Banking and Insurance (Peru)
SERVIGUA	Foundation for Integrated Services of Guatemala (MFI)
SHG	Self-help group
SPADE	Society for Professional Action in Development (India)
UCSCU	Uganda Cooperative Savings and Credit Union Ltd (Uganda)
UGX	Ugandan Shilling *(1 USD = 2,500 UGX)*
USD	United States Dollar
VIP	Ventilated improved pit (latrine)
W4P	Water For People
WHO	World Health Organization

Definitions

Annual Percentage Rate: the annualized simple-interest rate. The term "Full APR", used by MF Transparency and in this report, refers to the annual interest rate that incorporates fees, insurance, compulsory savings, and the interest calculation method used (flat-rate or declining balance).

Capitalize: for the purposes of this study, to 'capitalize' refers to supplying capital or investment funds.

Commercial bank: for-profit institutions that usually serve middle-to-high income clients though some offer microfinance services as well. They are managed by a paid board elected by stockholders, and earnings are typically paid out to stockholders.

Community-based organization: a local non-profit organization typically operated by local community members and focused on supporting their community based on local knowledge and presence.

Declining balance interest calculation: In comparison to the flat-rate method, the declining (or diminishing) balance method calculates interest payments based on the outstanding loan balance at any given time. As the loan is repaid, the remaining balance declines over time. Using this method, interest is charged only on the remaining loan amount at each payment period.

Financial self-sufficiency: an indicator of lending profitability if there is/were no subsidy including soft loans, and other direct and in-kind subsidies.

Flat-rate interest calculation: unlike the declining balance method, when using the flat rate method, interest is charged on the full original loan amount throughout the loan term, rather than on the money that the borrower actually has in hand at any given time. Depending on the lender's policies, in the case of early loan repayment, borrowers are typically responsible for paying all future interest owed regardless *(personal communication, C. Waterfield, 2013).*

Line of credit: a loan that provides flexibility to borrow only what is needed at a particular time, up to a maximum amount. Unlike a term loan, lines of credit allow borrowers the option of borrowing, and paying interest on, only as much money as is needed at the time. They are typically intended for short-term borrowing to fund cash flow shortages or bridge needs while awaiting a standard term loan. *(see CGAP's 2006 technical guide to commercial loan agreements)*

Loans at risk: an indicator of loan repayment that measures the percentage of active loans that have at least one payment more than 30 days past due or that have been renegotiated.

Management information system: MIS refers to a system used by microfinance service providers to capture, store and process financial data to support operations and loan tracking. In commercial banks, specifically, the term "core banking system" (CBS) is also used which refers to portfolio management, while MIS refers to the reporting system. For simplicity, however, MIS will be used in this report to describe the entire system of data management and reporting regardless of the type of lending institution.

Market-driven: in this report, the term "market-driven" refers to there being incentives in place within and through the local sanitation and microfinance market without external subsidy or intervention.

Microcredit: small loans offered to low-income individuals or those who do not have access to typical bank lending. Amounts are usually in the range of a few hundred dollars, but the value of "micro" loans varies by country.

Microfinance: financial services for low-income individuals or those who do not have access to typical banking services, including loans, savings, and insurance. Microfinance service providers can include MFIs, commercial banks, SACCOs, SHGs, NGOs, and others.

Microfinance institution: MFIs are typically funded by external loans, grants and/or investors and target low-income clients. They tend to focus on microcredit, though some MFIs also offer savings and remittance services, and are operated by an appointed board of directors or salaried staff who regularly visit borrowers. Net income for MFIs is usually used to build reserves or is divided among investors.

Repayment rate: also known as the collection rate, the repayment rate used in this report is a measure of the amounts actually paid against amounts fallen due to date.

Return on equity: ROE is the after-tax profits divided by the starting equity for a financial portfolio. It is a commonly used indicator of profitability.

Savings and credit cooperative: also called a 'credit union', a SACCO is typically a democratic financial cooperative that is owned and governed by its members who agree to save their money together and make loans to each other at reasonable interest rates to cover the interest on savings and the cost of administration. They are managed by either volunteer members or salaried staff. Members are usually connected by a common thread, such as where they live or work, and earnings are applied to lowering interest on lending, raising interest on savings, or developing new products or services.

Self-help group: most common in India, a SHG is a small community-based group, typically of 10-20 women, who make regular savings contributions and lend money back to members or others in the community. They are often linked to banks or MFIs where they can take out larger loans as a group, resulting in lower interest rates, but the SHG is autonomous and members have their accounts with the SHG, not the larger bank or MFI. It is common for SHGs to aggregate themselves into federations (groups of SHGs) to share best practices and increase financial access, and they are often supported by SHG support organizations who provide guidance. SHGs provide an entry point for households into microfinance as most SHGs have formal bank accounts and borrow from formal institutions.

Soft Loan: a loan provided at below-market interest rate, usually to MFIs who use the funds as lending capital.

Solidarity group: also called a joint liability group, they are composed of a small group of bank, MFI, or SACCO clients who each have an individual account but facilitate the financial intermediation process by accepting joint liability for lending and managing savings at a group level. The groups are usually supervised by a bank or MFI worker and are not an autonomous financial institution.

Term loan: a loan that provides a particular amount of money to a borrower up front, which is to be repaid in installments over the term of the loan. In this report, a "loan" refers to a term loan.

SUMMARY

Sanitation microfinance has the potential to sustainably improve sanitation access in developing countries. Due to resource limitations, subsidy-based sanitation programs are typically unable to provide *desirable* sanitation products. This, among other factors, has frequently resulted in abandoned infrastructure and ineffective investment. Microfinance allows middle- and lower-income households to invest in a *desirable* sanitation product that meets their long-term needs and preferences through market-based structures. Their private investment, in turn, can free up public funding to reach the poorest.

To learn how best to facilitate sanitation microfinance, Water For People (W4P) has been piloting various lending models with diverse partners in seven countries (Bolivia, Guatemala, India, Malawi, Peru, Rwanda and Uganda). While there is no panacea for a successful sanitation microfinance program, this report aims to synthesize these experiences to inform general guidance for initiating and improving programs.

Overarching lessons

How can donors identify a strong sanitation financing partner? Echoing common sentiments in the sanitation microfinance sector, MFIs or financial institutions are often the most suitable partners. However, they are often unfamiliar with sanitation and require support from local sanitation NGOs and/or government campaigns. In cases where MFIs are uninterested or unable, NGOs or entrepreneurs themselves may be able to serve as an intermediary between financial institutions and household clients, or provide evidence of sanitation microfinance success through pilot programs to spark interest. Community-based groups such as SACCOs and SHGs could be a more appropriate entry point for lending to lower-income households, particularly federations of SACCOs or SHGs to reach scale. A strong **assessment of the financial market, including common players and lending structures, is critical** in the search for an appropriate partner.

How can donors incentivize sanitation financing? Effective incentives for lenders vary between institutions and contexts. MFIs may see sanitation loans as a way to improve their social performance, while SACCOs may view them as a means to increase their small portfolio. Assessment of the financial market should identify potential incentives, which may include profit potential based on demand and coverage, government incentives, or the ability of improved social performance ratings to increase access to capital, for example. Caution should be used in providing subsidized financial incentives. **Working through existing markets and incentives will take time, but will likely result in more sustainable and scalable lending schemes.**

How should donor funds be targeted to best support sanitation microfinance? For the same reasons that giving toilets away can distort the sanitation market, giving money away to capitalize sanitation lending can distort the sanitation microfinance market by undercutting more sustainable market-based capitalizing mechanisms. Loans and guarantees should be provided only when other capital sources are unavailable and should be structured to incentivize partnerships with more permanent sources. Capital loans should carry a reasonable interest rate and guarantees should be structured to share risk proportionately. **Capital support should not be used to buy down the interest rate.** Appropriate avenues for donor support may include: (1) facilitating a sanitation market and connecting stakeholders; (2) conducting industry assessment; (3) building lender capacity including data management and sanitation loan product development; (4) testing financing models and scaling up successes; (5) connecting partners to existing capitalization and monitoring sources; (6) monitoring, evaluating and sharing lessons and successes; and (7) influencing needed policy changes.

How should loans be disbursed for sanitation improvements? Sanitation loan funds can be disbursed directly to households or to sanitation product providers who then supply the product to households. There are pros and cons to both methods. The best approach to disburse sanitation loans depends on lender capacities and incentives to monitor toilet construction themselves, or if they have a capable partner such as a local NGO supported by the lending institution or other sustainable means. In either case, **competition between providers is crucial to ensure quality and timely construction and loan repayment.**

How can donor agencies exit sanitation microfinance programs? **A recurring theme in W4P's experiences was the importance of W4P remaining invisible** in the lending scheme to avoid appearing as a charity model and negatively impacting repayment and sustainability, as well as to ease W4P's exit. Utilizing market-based structures, including market interest rates and capitalization sources, will also ease W4P's departure. In general, an exit strategy should include: (1) evidence of success shared with other potential lenders; (2) a strategy for sanitation microfinance, with local market incentives, that could be adopted by others; (3) a solid plan for how local partners will be supported, replaced or no longer needed after W4P exits; (4) facilitation of long-term capital access, if needed, such as national and international lenders; and (5) engagement of national bodies to support promotion, capacity building, and monitoring.

What kind of lending scheme would be better, group or individual? Based on W4P experiences, **individual lending is usually preferable** unless groups already exist. Group loans are resource-intensive to arrange, evaluate and manage, and may only be fiscally appropriate when there are existing groups and capacities.

How should sanitation microfinance be monitored? Local ownership of monitoring is crucial. Ideas for minimum indicators to track are presented for consideration, based on themes identified in this study, but regardless of the indicators used, **incentives are needed to encourage regular and reliable monitoring.** Examples of incentives include: attaching payment of local partners to monitoring outcomes, leveraging monitoring requirements of existing capital or funding sources, identifying national monitoring bodies, and linking with organizations that have incentives to track financial and sanitation data.

Key Recommendations

Think like a business

- Identify and use market-based incentives to encourage sanitation lending
- Avoid donations or interest-free loans to capitalize sanitation loans
- Use guarantees or loans carefully and link with incentives to attract more permanent capital
- Be invisible to encourage sustainability and ease W4P's exit

Support lending institutions based on the microfinance climate and capacity needs

- Assess financial players & common lending schemes
- Connect stakeholders (lenders, suppliers, households, government) and link lenders with capital sources
- Link with national mechanisms and campaigns when possible
- Build lender capacity: support loan development and data tracking
- Use group loans only when there are existing groups and capacities to manage

Build an autonomous sanitation microfinance market

- Continue supporting sanitation market development as this is key to the success of sanitation lending
- Avoid monopolies and encourage competition for sanitation suppliers available to borrowers
- Have a clear exit strategy, including how NGO or BDS partners will be supported or replaced

Track progress and lessons

- Monitor regularly (monthly/quarterly) to identify concerns as the arise
- Share lessons and successes nationally to encourage adoption, and globally to improve the sector

1. Introduction

1.1 Background

Despite global efforts to improve access to safe sanitation services, the archetype of sanitation interventions in the development sector has often been ineffective at sustainably addressing this gap. In order to promote *lasting* solutions and increase global sanitation coverage, a paradigm shift is needed away from the traditional subsidy-based NGO model. Based on the success of the private sector in developing countries, including companies such as Coca-Cola and Tigo, working within a market-oriented structure, with associated incentives, may provide a more sustainable framework for improving sanitation coverage for the long-term. Accordingly, Water For People (W4P) has been awarded a grant from the Bill & Melinda Gates Foundation to explore different methodologies for catalyzing and facilitating sanitation business strategies targeting low-income markets. This program, generally referred to as Sanitation as a Business (SaaB), provides the opportunity to test whether the application of more market-oriented strategies leads to sustained household sanitation coverage, and if so, under what conditions.

A key component of this strategy is the facilitation of access to credit and other financial alternatives in order to support households in overcoming the financial barriers impeding them from purchasing the sanitation products and services that best suit their needs and desires. As a result, W4P is partnering not only with sanitation enterprises and businesses as implied in the name of the SaaB program, but also with micro-finance institutions (MFIs), banks, and local savings and credit cooperatives (SACCOs), among others, to help facilitate the flow of credit and to market sanitation finance opportunities as a means of increasing household purchasing power and the spread of access to sanitation services.

1.2 Objectives

Almost three years into the SaaB program, this study seeks to understand and synthesize experiences to date from W4P's household sanitation financing strategies worldwide. It is hoped that these catalogued lessons-learned will provide insight for improving sanitation financing approaches, particularly with respect to where and how organizations can best support financial access for low-income households wanting to purchase a sanitation product or service.

Specifically, this study examines:

Identifying and incentivizing lenders: how can appropriate lenders be identified and what strategies are effective to incentivize them to offer (and continue offering) sanitation loans?

Facilitating lending start-up: how are donor funds best targeted to facilitate initial lending for sanitation improvements?

Sustainability & scalability: how can financing approaches be sustained over time and scaled up without continued support from W4P or another NGO?

Monitoring & evaluation: what are best practices for creating accountability and a forum for learning with respect to improving financial access for household sanitation investments?

1.3 Audience, scope & assumptions

Audience. The intended audience of this report includes W4P sanitation program staff and SaaB partners worldwide as a means to shape best practices and future programming, as well as anyone interested in household sanitation financing strategies within middle- and lower-income, underserved market segments. The information presented assumes the reader is generally familiar with the sanitation sector and recommended background reading is provided in Appendix A for those unfamiliar with sanitation.

Scope. This study focuses on the household microfinance aspects of SaaB. Accordingly, there is very little discussion of other SaaB aspects despite their importance to the success of SaaB programs of which microfinance is only one component. These include, but are not limited to, technical design for low-cost on-site sanitation options, development of viable sanitation business models, and marketing and overcoming social stigmas surrounding sanitation to encourage people to *invest* in sanitation improvements.

Experiences from all seven countries where W4P is currently implementing the SaaB program are included: Bolivia, Guatemala, India, Malawi, Peru, Rwanda, and Uganda. Additionally, information from other programs and countries is included where applicable based on document review. Data are presented from project inception to date, with the understanding that these are not the final results of the SaaB program, but offer insight into current progress and lessons learned that will allow for programmatic changes before conclusion of the SaaB program. It should be noted that the starting date for the sanitation lending program in each country is different, ranging from just a couple months to a few years, and the program duration in each location should be considered when reviewing the experiences.

Assumptions. For the purposes of this study it is assumed that (1) there is a demand for sanitation financing in low-income communities and (2) household investment in sanitation products and services in cash or through financing mechanisms lead to more sustained sanitation service delivery. Though these assumptions deserve further investigation, this study focuses only on the sanitation microfinance side of SaaB.

1.4 Methodology

Information for this exploratory study was solicited from W4P staff and SaaB partners via a questionnaire and semi-structured interviews (see guide in Appendix B), in addition to document review.

1.5 Document structure

The report is divided into 11 sections, where each of the following 10 are intended to be stand-alone documents as well as components of this larger, more in-depth report.

- Section 2 provides a background on basic microfinance terms and concepts that will be discussed in later sections. Readers with a background in microfinance may opt to skip this section.
- Sections 3-9 summarize each of the seven country programs. These can be read independently, or together they provide an in-depth background to augment the synthesized lessons in section 10.
- Section 10 provides a summary of W4P's sanitation microfinance experiences to date including synthesized lessons learned, as well as a brief review of other sanitation microfinance programs.
- Section 11 presents guidance based on lessons-learned.
- Appendix A provides recommended reading on sanitation and microfinance
- Appendix B includes the questionnaire and interview guide used for data collection

2. Entering the world of microfinance

This section provides a background on basic microfinance terms and concepts for readers unfamiliar with the microfinance sector in order to better understand the subsequent sections documenting W4P's experiences with sanitation microfinance. However, the following information is not meant to be comprehensive and further reading can be found at the resources recommended in Appendix A.

2.1 What is microfinance?

The term microfinance refers to financial services aimed at low-income individuals or those who do not have access to traditional banking services. Microfinance includes small-value loans (called "microcredit"), savings and insurance. The emergence of microfinance stemmed from a need to address the gap in financial service provision where banks traditionally did not consider low-income clients to comprise a viable market, and the alternative for poor people was usually erratic, insecure, or informal moneylending at extremely high costs to borrowers. Microfinance service providers may include MFIs, commercial banks, SACCOs, self-help groups (SHGs), and NGOs, among others.

Commercial bank: Owned by stockholders, banks are for-profit institutions that usually serve middle-to-high income clients though some offer microfinance services as well. They are managed by a paid board elected by stockholders who are paid bank earnings.

Microfinance institution: MFIs are typically funded by external loans, grants and/or investors and target low-income clients. They usually focus on microcredit, though some MFIs also offer savings and remittance services, and are operated by an appointed board of directors or salaried staff who regularly visit borrowers. Net income for MFIs is usually used to build reserves or is divided among investors.

Savings and credit cooperative: also called a 'credit union', a SACCO is typically a democratic financial cooperative that is owned, governed and managed by its members who agree to save their money together and make loans to each other at reasonable interest rates to cover the cost on savings and the cost of administration. Earnings are usually applied to lowering lending interest, raising savings interest, or developing new products or services.

Self-help group: most common in India, a SHG is a small community-based group, typically of 10-20 women, who make regular savings contributions and lend money back to members or others in the community. They are often linked to banks or MFIs where they can take out larger loans as a group, resulting in lower interest rates, but the SHG is an autonomous financial institution and members have their accounts with the SHG, not the larger bank or MFI.[1]

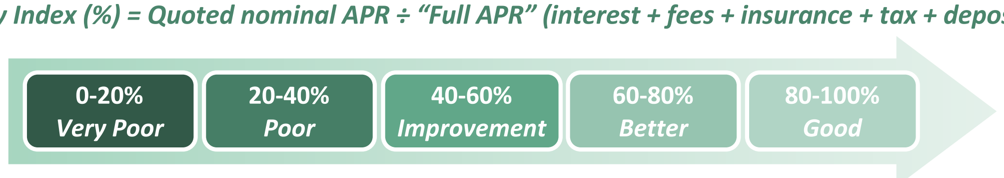
Solidarity group: a solidarity group (or joint liability group) is composed of a small group of bank or MFI clients who each have an individual account but facilitate the financial intermediation process by accepting joint liability for lending and managing savings at a group level. They are usually supervised by a bank or MFI worker and are not an autonomous financial institution.

2.2 Understanding microfinance interest rates

At first glance, microcredit interest rates may seem outrageously high leaving one to question if microcredit is a way of exploiting the poor. However, the cost of managing a large number of small-value loans is much higher than the cost of managing a small number of high-value loans, resulting in higher operating costs for microfinance in comparison with traditional financial services. In this light, microcredit lenders necessarily charge higher interest rates in order to cover their expenses and be able to continue providing microfinance services to their clients; particularly considering that many MFIs borrow lending capital from banks and need a sufficient margin between the interest they charge and the interest they are paying themselves. On the other hand, the discussion of ensuring financial sustainability begs the question of "how much is too much?" MF Transparency suggests a Return on Equity (ROE)[2], which is a measure of profit, of between 6% and 15% as a healthy double bottom line, balancing the lender's financial sustainability and incentives with a fair opportunity for microfinance clients.[3]

In addition to finding a fair balance with profitability, the transparency of lending terms is another area for potential borrower exploitation. There are a number of fees, calculation methods and other loan terms that can greatly influence the actual cost of borrowing money beyond the quoted interest rate. Hence, the transparency of these charges to the borrower is crucial. Accordingly, a "true" interest rate, or "Full APR"[4], which includes fees, insurance, mandatory savings and other costs can be calculated for a more realistic comparison between microcredit opportunities. This value can then be compared to the quoted interest rate to provide a measure of transparency such as the index developed by MF Transparency shown below, where the higher the transparency index rating, the more transparent the price.**Error! Bookmark not defined.**

Transparency Index (%) = Quoted nominal APR ÷ "Full APR" (interest + fees + insurance + tax + deposit) × 100



The following provides an example of how the APR can vary *substantially* from the quoted interest rate by looking at the effect of some of the potential additional costs[5]:

Box 2-1. Example of the effect of calculation methods, fees and mandatory savings on the true or "Full APR"

A bank offers a loan of $500 at 4% per month over a one year loan term with amortized (equalized) payments. At 4% per month, the nominal *annual percentage rate* (APR) would be 4 × 12 months = 48%.

How is interest charged over time – decreasing or flat? For an interest rate of 4% monthly, if interest is calculated on the *decreasing-balance*, the client pays only 4% on the remaining balance (spread out over the course of the loan if amortized). However, if the lender calculates interest as a *flat-rate*, 4% is charged on the entire loan amount each payment, regardless of how much has already been paid off. This would raise the APR from 48% to 79%.

Are there any additional fees to borrow? If there is an upfront fee of 2% in order to take out the loan, this would increase the APR from 79% to 84%.

Is there forced savings or security deposit? If the lender requires borrowers to hold 20% of the loan in a savings account at 10% interest annually until the loan is repaid, it would raise the APR from 84% to 116%.

Transparency Score = (48 ÷ 116) × 100 = 41% *("improvement" on the MF Transparency scale)*

2.3 Microfinance best practices

In the midst of the controversy around microfinance, CGAP developed microfinance best practices which were endorsed at the G8 Summit in 2004.[6] These include:

1. Poor people need not just loans but also savings, insurance and money transfer services;
2. Microfinance must be useful to poor households helping them raise income, build up assets and/or prepare themselves against external shocks;
3. Microfinance should be integrated into a country's mainstream financial system;
4. Microfinance can and must pay for itself as subsidies from donors and government are scarce and uncertain restricting sustainability and scale-up;
5. Microfinance means building permanent local institutions;
6. Microcredit is not always the answer and other support mechanisms may be more appropriate for those who are without income or means of repayment;
7. Interest rate ceilings hurt poor people by preventing microfinance institutions from covering their costs, which chokes off the supply of credit;
8. The job of government is to enable financial services, not to provide them;
9. Donor funds should complement private capital, not compete with it;
10. The key bottleneck is the shortage of strong institutions and managers and donors should focus on capacity building; and
11. Microfinance institutions should measure and disclose their performance—both financially and socially.

3. BOLIVIA

3.1 Context

Sanitation in Bolivia

National sanitation coverage	46%
Rural sanitation coverage	*24%*
Urban sanitation coverage	*57%*
Increase in coverage since 1995	22%
On-track to meet MDGs?	no

Bolivia has the lowest sanitation coverage in South America; estimated at 46% nationally with lower coverage in the rural areas (24%) than urban centers (57%).[7] Coverage has increased by 22% between 1995 and 2011, but currently, Bolivia is not on-track to meet the 2015 sanitation Millennium Development Goal (MDG).[8] The cost to meet the sanitation MDG in Bolivia was estimated at 1.13 billion USD in 2010; an amount likely well above subsidy-based intervention capacities suggesting the need for private sector involvement.[9]

However, there are challenges to private sector involvement in sanitation in Bolivia as the government has declared that water and sanitation should be public services and to make them private sector commodities would be a violation of human rights. Under this belief, the government is formulating a water and sanitation law called *Agua para la Vida* (Water for Life), but capacities are likely insufficient to meet the sanitation needs in Bolivia.[10] In the urban areas, water and sanitation services are managed by the municipal governments, directly or through Water and Sewer Service Providers (*Empresas Prestadores de Servicios de Agua Potable y Alcantarillado*, EPSA). These are typically public-run businesses or cooperatives. In the rural areas, water and sanitation services are managed by local water committees comprised of volunteer community members. These contextual factors will influence how sanitation microfinance should be approached in Bolivia.

Microfinance in Bolivia

Population[11]	10.1m
GNI per capita[12]	$2,020
Loans[13]	$3.0b
Active borrowers	1.0m
Deposits	$2.6b
Depositors	2.0m

Originally facilitated by NGOs, Bolivia's microfinance sector has been going strong since the early 1980s surviving national debt and economic fluctuations. As of March 2012, the average annualized return on equity (ROE) was 21.6% and 13.6% for regulated and non-regulated MFIs, respectively; suggesting a strong microfinance market.[14] Microfinance has become an important component of Bolivia's financial system: the microcredit portfolio comprises about 37% of the national financial system[14] and a number of players offer microfinance services, including commercial banks, cooperatives, mutual savings and loan societies, and NGOs.[15]

The main regulatory body for microfinance is the Central Bank of Bolivia which is responsible for the financial sector in general. In addition, the Authority of Supervision of the Financial System (ASFI) is responsible for licensing and regulating financial institutions. The ASFI has disclosure standards that all regulated institutions offering microfinance services are required to meet, including the disclosure of interest rates, fees, charges and their prices expressed as an Annual Percentage Rate (APR) in loan agreements. Unregulated institutions, such as NGOs engaged in microfinance, are also under the supervision of the ASFI, but have not been fully integrated into the national regulatory framework and have weaker legal requirements. However, progress is being made toward transitioning NGOs to fully regulated microfinance service providers, and there is significant self-regulating among NGOs providing microfinance services through the Association of

Development Financing Institutions (*Asociación de instituciones financieras de desarrollo* - FINRURAL).[14] In addition to regulatory frameworks, both public and private credit bureaus are strong in Bolivia providing high coverage and reporting even very small amounts of credit data.

According to MF Transparency's analysis of the microfinance sector in Bolivia, the microfinance market is operating in an open and competitive market where prices, but not profits, are higher on the smaller loans. They also note a high concentration of NGOs among the institutions offering the smallest loans, but interestingly the prices charged by the for-profit institutions on the smallest loans are generally lower than the prices charged by the NGOs. MF Transparency provides a few hypotheses: (1) the larger scale of the for-profit institutions results in higher efficiencies (although MF Transparency's analysis generally does not support this), (2) the for-profit institutions are subsidizing the smaller loans with profits made from larger ones, and (3) the for-profit institutions are generally offering credit-only, whereas the NGOs tend to have credit-plus which includes social services such as discounted health care and literacy courses.[15]

3.2 W4P experiences with sanitation microfinance in Bolivia

W4P-Bolivia has piloted sanitation microcredit in peri-urban Cochabamba and the rural municipality of Tiraque in the Cochabamba Department. After these two small pilots, W4P has contracted the Business Development Service (BDS) provider, IMG Consulting, to support the development of a sanitation market in Cochabamaba that will include the facilitation of autonomous financing mechanisms for both the start-up of small sanitation businesses and household sanitation purchases.

Initial sanitation lending trials

In 2009, W4P-Bolivia, Habitat for Humanity and other sector partners, developed a sanitation microcredit program in districts 9 and 14 in peri-urban Cochabamba. Habitat for Humanity provided household loans for sanitation and W4P supported the program through technical support and promotion. At program inception, the loans were provided at 9% (declining) annual interest; well below market rates of 18-24%. In the second phase, they were raised to 13% annually (declining) in order to cover operational costs. The loan term was one to four years and the only associated fees were notary costs of around 90 BOB (app. 12 USD), resulting in a full APR of 13.7-15.5% and a high transparency rating of 84-95%[16], depending on the loan term. Toilets were purchased and constructed at eight households through the program, including two that purchased composting toilets with a sink for 5,433 BOB (app. 780 USD) and six who purchased composting toilets with a sink and shower for 7,000 BOB (app. 1,000 USD). Unfortunately, the payback rate is only 70% and sustainability and scale-up are unlikely due to the conflict of Habitat for Humanity directly offering sanitation credit since they are a subsidy-based organization with no incentives around profitability, the location of Habitat for Humanity's office being inconvenient for households to bring their repayment, and the use of below market interest rates which detract market-based institutions from adopting the model.

Location	*Cochabamba (peri-urban)*	*Tiraque (rural)*	*Cochabamba (peri-urban)*	*Cochabamba (peri-urban)*
Lending partner	*Habitat for Humanity*	*Tiraque municipality*	*SISE (sani business)*	*various*
Program start date	*2009 (since closed)*	*2012*	*2012*	*in progress*
Sanitation product	*composting toilets (with sink & shower)*	*composting toilets*	*composting toilets*	*various*
Interest	*13% annually (declining)*	*<1% annually (inflation only)*	*24% annually (declining)*	*18-24% annually (declining)*
Transparency	*84-95% (full APR=13.7-15.5%)*	*100%*	*100%*	*will vary*
Loan term	*1-4 years*	*4 years*	*1 year*	*will vary*
Average loan amount	*6,600 BOB (950 USD)*	*3,019 BOB (440 USD)*	*7,850 BOB (1,135 USD)*	*will vary*
Number of loans	*8*	*16*	*4*	*0*
Repayment	*70%*	*1st payments due Mar 2014*	*unknown*	*N/A*
W4P start-up capital	*0 USD*	*28,300 BOB (4,100 USD) matching funds*	*0 USD*	*0 USD*
W4P support	*technical & promotional*	*technical & operational*	*technical & promotional*	*technical & promotional*

In 2012, in rural Tiraque (about 60 km east of Cochabamba), W4P worked with the local municipality and the water committee to capitalize a rotating fund for sanitation lending. W4P provided 28,300 BOB (app. 4,100 USD) and the municipality contributed 20,000 BOB (app. 2,900 USD) as seed capital. The local water committee manages the fund and provides household loans for sanitation under the guidance of the municipality and W4P, including a manual to support fund management provided by W4P (Figure 3-1). Sixteen toilets have been constructed to date with the idea that more loans can be provided, and hence more toilets built, as the loans are repaid and the funds revolved. Each loan is 3,019 BOB (app. 440 USD), which covers around 66% of the total toilet cost. The loan term is four years with one payment expected each year between October and March, corresponding to the local harvest, though households can pay early or more frequently if preferred. Interest is not charged other than a small amount to keep up with inflation, which is estimated at less than 1% annually. Additionally, there are no fees, resulting in a transparency of basically 100%.[16] The first payments of 772 BOB from each family for the first year for the 16 initial toilets are expected between October 2013 and March 2014, totaling just over 12,000 BOB (app. 1,750 USD) if fully repaid, which could be revolved for additional loans.

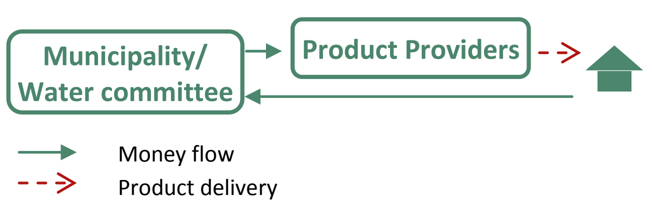


Figure 3-1. Diagram of the lending model in Tiraque, Bolivia

Direct lending from sanitation businesses

In early 2012, *Servicios Integrales de Saneamiento Ecologico* (SISE), one of the sanitation businesses that was working with W4P as part of the SaaB program in Cochabamba, decided to offer financing for their sanitation products by allowing clients to purchase a toilet on credit. SISE charges 2% monthly interest (declining) over a one year loan term with no fees or hidden costs. They have financed four toilets to date, with five additional toilets currently under construction. The exact repayment rate is unclear based on loose agreements with the initial clients who were all known to SISE. Timely repayment appears to be a challenge, but SISE is confident that the loans will eventually be paid in full, and that with stricter loan terms specified in a legal contract, timely repayment will improve. Although these experiences represent a small sample and there have been challenges with repayment, direct lending from sanitation businesses presents a potentially promising alternative, particularly for clients unable to access formal microfinance and/or to provide financing while larger-scale financing programs are being developed.

An integrated approach led by IMG Consulting

Currently IMG is meeting with various financial institutions in Cochabamba to coordinate agreements for additional sanitation lending schemes based on an integrated approach with sanitation microfinance as one piece of a larger independently functioning sanitation market. These strategies are still in the initial phases and will focus on peri-urban Cochabamba.

3.3 Identifying lending partners

Despite microfinance service providers' initial interest in sanitation credit, nothing concrete resulted from preliminary discussions. Over time, IMG changed their strategy by (1) appointing one person at IMG responsible for communicating with financial institutions and (2) involving other actors in discussions with microfinance providers, including sanitation businesses and potential clients. With these changes, financial sector involvement has greatly improved and agreements are in progress with a number of institutions to lend seed capital to small sanitation businesses and provide credit for household investment in sanitation.

There are more or less three types of financial institutions in Bolivia: commercial banks, MFIs (including NGOs), and cooperatives/SACCOs:

Commercial banks. Though commercial banks have shown interest, they often prefer to offer products within their current lending packages since changes are difficult to execute at the scale they work. Under current policies and borrower requirements, their lending packages are inappropriate for the majority sanitation loan clients. There may be potential for group lending if the group is legally registered.

MFIs. IMG has had the most success incentivizing MFIs to offer sanitation loans as they are often the most flexible of the three. Agreements are in progress with five MFIs: *Banco de los Andes* (a subsidiary of ProCredit), *Banco FIE*, *Banco Sol*, *Fondo de la Comunidad*, and *EcoFuturo FFP*. All of these MFIs have lending capital from their portfolios and clients from the target area (peri-urban Cochabamba). Additionally, *Banco de los Andes*, already has a credit program for ecological improvements, such as cleaner burning machinery, and a sanitation lending scheme may fit under this pre-existing program. *Fondo de la Comunidad* has agreed to offer individual sanitation loans if IMG manages the process of identifying credible borrowers. With the hope of increasing evidence of the potential of sanitation lending in the market, IMG has agreed to perform this role for the initial pilot. *EcoFuturo FFP* is the most recent MFI to show interest and has become very active in the process of developing a new sanitation loan product thanks to the interest of one of their loan officers, highlighting the potential of a champion for sanitation loans within the institution.

Cooperatives. Cooperatives in Cochabamba tend to have more specific products or a commercial focus though there may be opportunities for sanitation lending within cooperatives as well. A cooperative of milk producers approached by IMG is interested in providing household sanitation loans at a lower than market interest rate of 18-20% annually for their members whom they know personally and trust. One of the small sanitation businesses working in the SaaB program is also hoping to form a cooperative to potentially lend to households for their sanitation products.

3.4 Facilitating access to affordable sanitation microfinance

A challenge noted by IMG is the high cost of borrowing for a non-income generating or consumer loans. While a loan for small business start-up capital at 24% annually would likely only cost the borrower 2% monthly for four to six months as income is generated for repayment, a sanitation loan may take two to three years to repay resulting in high costs to borrow funds for sanitation improvements. With this in mind, IMG is focusing initial efforts on lending to small sanitation businesses to pilot lending models on a shorter time-scale with potentially lower risk due to the lower total cost to borrow funds, before expanding to household loans.

Fostering an autonomous sanitation lending market

The goal of initial household lending is not to facilitate a large number of sanitation loans, but to pilot sanitation lending with around five to 10 households in the first year to evaluate different lending mechanisms and hopefully provide evidence of successful sanitation lending models that other sector players will adopt within the sanitation market. IMG and W4P's goal in this phase is to facilitate the development of an autonomous sanitation value chain that includes microfinance. Culturally, sanitation is not a common priority and the market is almost non-existent. To overcome this barrier, IMG is in the process of creating a "platform" of actors in the sanitation sector including sanitation businesses, microfinance service providers, government representatives, universities, marketing agencies, and clients. IMG is hoping the platform will serve as a way for players in the nascent sanitation market to work together to solve problems as they arise and strengthen the sanitation market in Cochabamba serving the interest of all actors and hence increasing the likelihood of sustainability.

W4P is not involved in the platform and is behind the scenes of all business and microfinance transactions and programs with the idea of increasing the ease of their exit strategy from a self-sufficient sanitation market. Under a similar sentiment, IMG is part of the platform, but only as a provider of technical support and business development services. They are hoping to coordinate the platform in a way that they will not be the leaders, but only members of a group of actors each with roles in the sanitation market.

In this process, IMG has faced skepticism from some financial institutions who question IMG's role and their incentives to support the sanitation market. Their concern is that IMG is taking advantage of them by playing the intermediary between households and financial institutions. In response, IMG has two approaches: (1)

active support such as their role with *Fondo de la Comunidad* to manage the selection of credible borrowers, and (2) passive support where they will only connect neighborhoods with lenders and sanitation businesses.

Loan disbursement

In all the proposed/planned financing schemes, the sanitation loan would be distributed directly to the client, who can then purchase a toilet or other sanitation product from one of the sanitation businesses emerging into the market through W4P and IMG support (Figure 3-2). The sanitation businesses will be responsible for marketing and promotion. The appropriate use of sanitation loan funds will be ensured through existing mechanisms used by the financial institutions to monitor funds for similar purchases such as home loans. Through these mechanisms, disbursement will likely be provided in quotas based on work progress.

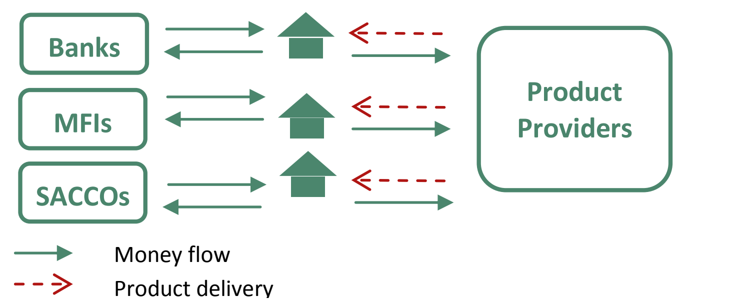


Figure 3-2. Diagram of the sanitation microfinance model in Bolivia

Leveraging support from corporate social responsibility programs

In order to incentivize households and lending institutions to enter the sanitation market, IMG is working with several companies to leverage funding through their corporate social responsibility (CSR) programs to cover 20% of the cost of sanitation products purchased through sanitation businesses in cash or on credit. It is hoped that this will be a more impactful use of CSR funds as well as help to ignite the sanitation market in Cochabamba. This subsidy may be replaced by reduced product costs as the sanitation market grows or may continue if companies remain interested in supporting sanitation improvements through their CSR programs.

3.5 Sustainability and scalability

The pilot sanitation lending models with Habitat for Humanity and the Tiraque water committee had limited potential for sustainability or scale without continued external support. The local water committee managed sanitation rotating fund (capitalized by W4P and the local municipal government) may be a promising approach for limited government resources to reach a greater portion of the population if the approach is adopted by the Government of Bolivia as an alternative or addition to subsidizing household sanitation infrastructure. However, the fact that the loans are practically interest-free, without consideration for operational costs, may limit the longevity of the scheme. Government-led microfinance is not usually recommended within the microfinance sector with the concern that politics, rather than sound credit administration, may drive decision-making, but there may be potential in the lending scheme and repayment and the ability of the water committee to revolve the funds should be evaluated over time.[17]

Direct financing through SISE to provide their sanitation products to clients on credit has pointed to limited sustainability due to unreliable repayment, but stricter loan terms may improve repayment and result in a more sustainable (i.e. profitable) model. For the long-term, SISE hopes to connect their clients with financial institutions to offer their products on credit through existing microfinance models.

Though it is too early to definitively conclude, IMG's integrated approach has high potential for sustainability and scale as it is based in the existing market with the associated mechanisms to continue sanitation microfinance. IMG hopes that their initial support to coordinate and encourage the sanitation microfinance market will highlight this gap in the market which will be filled by market-driven entities for the long-term as seen in the table below. One potential barrier to sustainability and scale of the private market for sanitation may be government subsidy programs which despite the inability to reach everyone in need of sanitation in the country may provide the hope of free sanitation services and restrict household willingness to invest in sanitation improvements leaving them waiting without access to improved sanitation and the associated health and economic consequences in the interim.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Encourage and coordinate with microfinance service providers	IMG	W4P	Market-driven	Market-driven
Facilitate a sanitation market platform including microfinance partners	IMG	W4P	Market-driven	Market-driven
Support banks in the identification of credible borrowers	IMG	W4P	Market-driven	Market-driven
Connect neighborhoods/borrowers with microfinance providers	IMG	W4P	Market-driven	Market-driven
Subsidize 20% of toilet costs to incentivize households	companies' CSR	companies' CSR	Market-driven or CSR	Market-driven or CSR

3.6 Lessons learned

According to IMG, sanitation microcredit in Bolivia should not require seed capital or guarantee funding due to the context of microfinance in Bolivia which has been successfully integrated into the markets and on the whole provides a fair and transparent service that has become part of Bolivia's financial culture. Despite this advantage of working in the Bolivian context, there are challenges with the perception of private sector involvement in sanitation service provision which is seen as a human right that should be provided by the government. Additionally, a few challenges have been noted by W4P based on their experiences, including:

- A lack of awareness that loans exist for sanitation. There is a local microcredit culture and households are aware of opportunities to borrow funds, but they typically only think of business associated microcredit and most households are unaware of the possibility to apply for a sanitation loan.
- Hesitation from the microcredit providers to offer non-income generating loans such as credit for sanitation improvements, particularly for the low-income market segment who are often unable to provide a guarantee.
- The high requirements and procedures to qualify and take out a sanitation loan are a barrier to scale-up and effective results.

W4P and IMG are hoping to address these barriers through the sanitation platform and other market-based mechanisms that will provide a collective voice to those within and interested in this market segment. Additionally, IMG recommends that microfinance providers have a financial manager dedicated to ensuring that sanitation loan borrowers comply with the legal and institutional regulations. Though it is still too early to judge the success of these approaches, working within existing market structures appears to have a higher likelihood for sustainability and scale-up than W4P's initial sanitation lending pilots.

The importance of other SaaB program components in the process of fostering access to sanitation microfinance should also be noted. Specifically, this includes overcoming cultural paradigms to encourage lower-income households to demand and pay for improved sanitation through participatory processes and marketing that show that it is possible to access a better quality of life, and developing affordable sanitation products that meets the desires of the lower-income market segment.

4. GUATEMALA

4.1 Context

Sanitation in Guatemala

National sanitation coverage	80%
Rural sanitation coverage	*72%*
Urban sanitation coverage	*88%*
Increase in coverage since 1995	35%
On-track to meet MDGs?	yes

The JMP estimates that 80% of Guatemalans have access to improved sanitation; 72% in rural areas and 88% in urban areas.[7] The country is on track to meet the sanitation MDG with a 35% improvement in coverage between 1995 and 2011.[8] Despite the hopeful numbers captured in the JMP, according to W4P-Guatemala, the reality of sanitation services is less optimistic as many "improved" toilets don't actually meet government standards and are in partial or complete disrepair, particularly in the rural areas. WHO estimates that 58 million USD is needed to meet the 2015 sanitation MDG in Guatemala, with an estimated return in benefits (e.g. improved health and productivity) of over five times the investment.[9] The National Water Agenda clearly states that sanitation is a human right, but concrete actions have not been taken to ensure this right is secured for all Guatemalans. Despite well-intended government policy, due to limited resources, private sector involvement, including credit access, is needed to improve coverage at scale.

Microfinance in Guatemala

Population[11]	14.8m
GNI per capita[12]	$2,870
Loans[13]	$201.5m
Active borrowers	382,173
Deposits	$461,454
Depositors	149

In 2010, Guatemala's microfinance sector had the highest growth rate in Central America with an increase of 40% and 28% for total loan and borrower portfolios respectively.[19] The majority of loans are provided to support small businesses, though approximately 20% are non-income generating loans such as home, consumer, and commercial loans. Banks and SACCOs are the most common microfinance service providers in the country, comprising over 80% of the industry, but NGO-managed MFIs also provide services. Other than SACCOs, which are well-regulated, one of the biggest industry challenges is insufficient regulation, particularly NGO-managed MFIs for which there are currently no regulations.[19] Regulatory legislation is in progress but has been slow and client protection norms including pricing transparency is weak.[14] [14]

4.2 Program background

Since December 2012, W4P-Guatemala has been piloting sanitation microfinance in the rural and peri-urban areas of Santa Cruz del Quiché with the NGO Community Association of Integrated Development (*Asociación Comunitaria de Desarrollo Integral,* ACDIS) acting as the lending institution. Over 50 toilets have been sold, with 12 households purchasing the toilet on credit. Of these loans, nine are connected to an income-generating activity in addition to financing the sanitation purchase. All loans are provided based on individual liability; ACDIS does not offer group loans with joint liability.

Microcredit is provided for 6-12 months with a monthly interest of 1.5-2%, depending on if the borrower is part of the ACDIS association which households can join for an upfront fee of 50 GTQ (app. 6 USD). For households associated with ACDIS, the loans carry a 1.5% monthly (flat) interest rate, while for new households, they carry a 2% monthly (flat) interest rate. Additionally, there is an upfront fee of 1% and 20 GTQ (app. 2.50 USD). Comparing the quoted APR of 18-24% to the "Full APR" of 35-46% (depending on the loan term and interest rate), the transparency is 50-53%.[16] The main contributing factor to the low transparency is the use of the flat calculation method. ACDIS felt more comfortable using the flat method as they perceived it as easier to calculate, and are accordingly offering a lower interest rate than offered by loans that use the declining balance method, which are typically around 36% annually. With the same fees, a 36% (declining) loan would be a full APR of 39%, roughly in the range of the full APR of the loans offered by ACDIS. W4P is also encouraging and supporting transparency of the flat calculation method to clients. Whether clients would need to pay all future interest owed in the case of early payment of the loan in full (common for flat-rate loans) is not currently included in ACIDS's credit manual and will need to be considered by the board.

Based on lessons-learned in the small-scale pilot with ACDIS, in August 2013 W4P expanded the sanitation financing program to include two large local SACCOs: *Cooperativa Maya Procredit* and *Fundacion de Servicios Integrales de Guatemala* (SERVIGUA). The SACCOs will offer sanitation loans using their regular processes and will decide the interest rate and fees accordingly. The loans will likely carry a 3% monthly (declining) interest, which is common in Guatemala, over a term of 6-18 months. They will not be involved in product sales.

Location	*Santa Cruz del Quiché (rural & urban)*	
Lending partner	*ACDIS (local NGO)*	*Maya Procredit & SERVIGUA (SACCOs)*
Program start date	*Dec 2012*	*in progress*
Sanitation product	*composting latrine, various*	*various*
Interest	*1.5-2% monthly (flat)*	*likely 3% per month (declining)*
Fees	*1% & 20 GTQ (app. 2.50 USD)*	*will vary*
Transparency	*50-53% (full APR = 35-46%)*	*will vary*
Loan term	*6-12 months*	*likely 6-18 months*
Average loan amount	*3,500 GTQ (app. 450 USD) (including business & 200-250 USD for sanitation)*	*N/A*
Lending method	*individual*	*individual*
Total applicants	*17*	*N/A*
Number of loans	*12*	*N/A*
Repayment	*98%*	*N/A*
W4P start-up capital	*25,000 USD donation*	*20,000 USD loan (each) (very low interest – inflation only)*

4.3 Identifying and incentivizing lending partners

W4P-Guatemala decided to pilot sanitation lending with ACDIS based on their existing relationship with them from previous water and sanitation interventions within the Quiche department. The idea for the sanitation lending scheme came from the ACDIS Board with advice and encouragement from W4P. ACDIS management says their incentive is the hope of reinforcing their business by providing household financing for all or part of the purchase of their sanitation products. The benefits of partnering with ACDIS include that they have sanitation knowledge and experience, and they are small-scale and therefore challenges can be addressed on a relatively quick timescale in comparison to larger institutions. However, ACDIS's lack of microfinance experience has been a challenge. They are a small organization comprised of residents from the communities near Santa Cruz del Quiche and have little experience providing microcredit.

In search for partners with microfinance experience, W4P selected two partnering SACCOs based on a qualitative and quantitative assessment which evaluated their ability to provide quality service at a fair and transparent price. Legally-binding contracts between W4P and the SACCOs were also developed and signed by each party.

4.4 Facilitating lending start-up

The sanitation loans offered by ACDIS were capitalized using recovered funds from a 200,000 GTQ (app. 25,000 USD) interest-free loan that was provided to a nearby community to improve their water services. In September 2011, W4P provided the community with the loan through ACDIS who managed repayment. The recovered 200,000 GTQ was then used to capitalize the sanitation loans. Essentially, these funds were indirectly donated to ACDIS by W4P as ACDIS managed and recovered the funds. In addition to providing seed capital, W4P facilitated meetings to collect ideas for the sanitation loan program, developed a credit manual, defined the sanitation credit process, connected ACDIS with the central Credit Bureau (*Central de Referencias Crediticias* - CREDIREF) to obtain credit information on loan applicants, provided a Microsoft Access-based management information system (MIS) software called *Administracion Financiera* (AFIN) that was created by CREDIREF, and conducted on-going training regarding financial management and client services. The hope is that this initial support and pilot testing has laid the foundation for ACDIS to continue sanitation lending with little and eventually no external support.

The sanitation loan was first piloted with ACDIS members, or those already known to ACDIS, allowing them to evaluate the idea on a manageable scale. These clients were already aware of the composting toilet technology offered by ACDIS. If the program is to be scaled-up to non-ACDIS partners, support of promotional activities for the loan and technology may also need to be considered.

In the program expansion to include SACCOs, instead of donating start-up funds, W4P provided a two-year soft loan (below-market interest rate) of 20,000 USD each to SERVIGUA and Maya Procredit. The interest on the soft loan is based on annual inflation such that the loan is recovered at the same value at the end of the loan term. W4P provided the loan for two reasons: (1) to capitalize the sanitation loans because the SACCOs are small and did not have sufficient capital, and (2) to incentivize the development of a new loan product which takes additional time and resources from the lending institution. W4P decided on $20,000 USD as an amount they felt would be enough to entice the SACCOs, but not so much as to become unmanageable. The 20,000 USD should provide less than 50 loans, which W4P felt was a manageable portfolio for this pilot. In order to access the soft loan, each SACCO had to sign a contract regarding the use of funds which will be tracked until loan recovery. In addition to financial support, W4P created a guidance document to support the development of the new loan product. The hope is for this small, manageable pilot to serve as an example, with concrete results, and provide evidence to other financial institutions, including banks and MFIs.

The SACCOs will identify customers and apply their regular credit processes that they are accustomed to. This will include utilizing their existing marketing channels to promote the sanitation loans; however, W4P will support the development of sanitation-specific marketing strategies. W4P is not dictating the interest rate, term, warranties, or other aspects related to the sanitation loans.

4.5 Household access to sanitation financing

The majority of the 52 toilets sold have been purchased with cash. However, 17 households applied to purchase the toilet on credit. Over half the loan applicants qualified, with some rejected due to existing microfinance debt, a poor credit record with CREDIREF, or a low score on a qualitative analysis conducted by ACDIS that includes personal references from the community and evaluation of entrepreneurial capacity (for the sanitation loans that are attached to an income-generating loan).

All the sanitation loans to date have been individual loans. W4P feels that group loans may have greater potential for community water service investment, but in Guatemala, individual loans may be more appropriate for sanitation since the toilet is a household decision. In general, the microfinance sector in Guatemala (and the Americas in general) is moving away from group lending schemes. This is likely due to (1) increasing assets in poor households which makes individual loans more accessible; (2) mistrust of group members and fear that they will not pay their share; (3) more individualistic social norms than many parts of Africa, for example; and (4) group loans are harder for microfinance service providers to track and evaluate their ability to repay and investigate their current debts before approving a loan. This could be seen as a scale of microfinance lending structures where credit access becomes more consolidated, starting with community banks and other group loans, then smaller solidarity groups, and finally individual credit access.

4.6 From loan distribution to improved sanitation

The process between loan application and disbursement normally takes between three and 10 days. Once the funds are secured, ACDIS provides the fiberglass toilet pan, the household gathers local materials, and the toilet is constructed in two to three weeks, typically by a mason referred to the household by ACDIS. ACDIS and W4P are also currently developing a toilet kit with a self-build option. Initially, the loans were distributed in full in cash directly to the households. This resulted in a very slow and difficult to monitor construction process. To overcome this and ensure that funds are used to improve sanitation, ACDIS coordinates design and construction with local contractors to install the toilets directly at households whether purchased with cash or credit (Figure 4-1). All the toilets purchased to date are dry composting latrines, but households have the option to choose another technology if they prefer.

Figure 4-1. Diagram of the NGO microfinance model in Guatemala

In program expansion, disbursement of sanitation loans through MFIs, banks, or SACCOs is expected to follow each lending institution's existing policies and procedures, likely separate from any specific sanitation product (Figure 4-2). The success of this model is yet to be seen, but the idea is that MFIs, banks, and SACCOs have more capacity to monitor the use of funds and review clients in the application process than NGOs, such as ACDIS. Additionally, these financial entities are viewed by households differently than NGOs and the usage of funds borrowed may be taken more seriously.

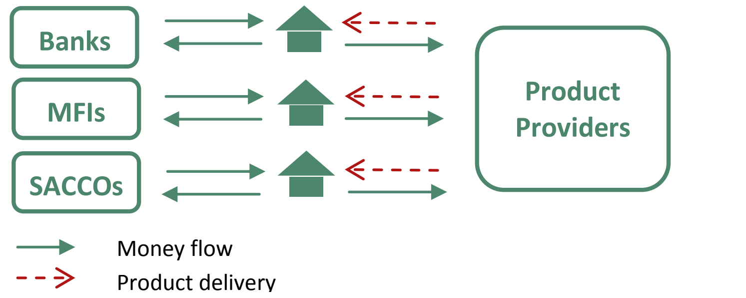


Figure 4-2. Diagram of expanded microfinance model in Guatemala

4.7 Sustainability and scalability

Sanitation is a subject infrequently discussed in Guatemala. So far, the only way to create a functional sanitation lending program has been for W4P to provide start-up funds and operational support. However, the idea is for these support mechanisms to provide the "initial spark" that will encourage others to offer sanitation loans on their own without additional capital or incentives from W4P.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Provide sanitation loans	ACDIS / SACCOs	W4P	ACDIS / SACCOs (& other MFIs, SACCOs, banks)	ACDIS / SACCOs (& other MFIs, SACCOs, banks)
Training on loan management	W4P	W4P	ACDIS / SACCOs (& other MFIs, SACCOs, banks)	ACDIS / SACCOs (& other MFIs, SACCOs, banks)
Operational support	W4P	W4P	Market-driven	Market-driven

To smooth W4P's exit from the sanitation lending strategy, it is a *critical* rule of the program that W4P is never involved directly with clients (i.e. households) and their actions are behind the scenes. Partnering organizations do not mention W4P when speaking with current or potential clients based on the concern that NGO presence will distort how sanitation lending will function in the market for the long-term, at scale. This should also ease W4P's exit once the two 20,000 USD loans are repaid. At that time, W4P plans to provide a similar loan to two more organizations under the same methodology. If an initial spark is created in which other lending institutions begin to offer sanitation loans of their own accord, W4P will provide loans to two organizations in a different geographical area in the hopes of "sparking" sanitation lending elsewhere.

In order to entice other lending institutions to offer sanitation loans within a functioning market and bring the program to scale, sanitation loans must be profitable without subsidy. Subsidized microcredit programs will have the same sustainability weaknesses as subsidized sanitation programs. Although it is too early in the program to quantitatively evaluate financial sustainability, profits are likely based on the interest rate and other charges associated with the sanitation loans. So far, the repayment rate has been high (98%), however, late payment has been common despite charging late fees. Reasons for late payment include: undependable income, emergencies or other unexpected costs, and cultural norms.

The government is not currently directly involved in the sanitation lending program, however they are influential as they dictate the enabling environment for microfinance and sanitation business activities. In that sense, a government subsidy program (or non-government) could disrupt the emergence of small sanitation businesses at the municipal and departmental levels.

4.8 Monitoring and evaluation

At the moment, W4P is monitoring loan repayment and construction. As more toilets are built, additional monitoring is planned including financial indicators adapted from the microfinance sector, and maintenance and use of the sanitation products over time. To date, the toilets that have been built through the sanitation lending program are in use and borrowers seem satisfied, but the program is still very young.

4.9 Lessons learned to date

- Sanitation demand creation should be supported before investing in a sanitation financing scheme, including a market analysis and technical development of suitable and affordable sanitation products.
- W4P, as an NGO, should remain behind the scenes and not visible to clients in order to encourage a more sustainable market-driven model.
- The mixed (business and sanitation) loans have been functioning well, but also present certain challenges including higher assessment costs as there are two aspects to monitor as opposed to one, and conflicting credit conditions such as timeframe, amount and interest rate (e.g. a sanitation loan may require a longer payback period than a small business loan).
- In the NGO model, it was most appropriate to disburse loan funds to the toilet supplier rather than the client to avoid delays and the risk of funds diversion to non-sanitation purchases. MFIs, banks and SACCOs, which have greater capacity to review applicants and monitor funds usage (and are often taken more seriously by clients), may be able disburse the loans directly to households who can then purchase sanitation products from private sector providers.
- Funds to create the "initial spark" should be on a loan basis, not a donation as it basically was with ACDIS, to encourage greater likelihood for scale within the financial market.
- A legally-binding contract for the use of "soft loan" funds should be employed for the time period that SACCOs have the loan from W4P. The contract should be reviewed and legalized by an attorney.
- Initial evaluation of lenders is crucial to encourage client protection. This should consist of quantitative and qualitative assessment of how the lender treats their customers including fair, transparent pricing.
- Work with and train SACCO staff until they are self-sufficient in lending, tracking and recuperating sanitation loans, including periodically monitor *jointly* with the SACCO.
- Piloting the lending concept with a small local organization allowed for lessons to be generated at a manageable scale to support improvements that can then serve as examples for larger organizations.
- Community loans for water systems may help open the door to household sanitation lending. Many communities in Guatemala need to build or improve their water system and want to do so in a shorter timeline than government intervention. This may allow lenders to enter the market at a more manageable level than household lending as a starting point.

5. INDIA

5.1 Context

Sanitation in India

Sanitation coverage in India is estimated at 35%, with significantly lower coverage in the rural areas compared to urban centers at 24% and 60% respectively.[7] Despite an increase in coverage of 19% from 1995 to 2011, India is not on-track to meet the 2015 sanitation MDG.[8] In order to meet the MDG, WHO estimates a needed investment of 24.7 billion USD.[9]

National sanitation coverage	35%
Rural sanitation coverage	*24%*
Urban sanitation coverage	*60%*
Increase in coverage since 1995	19%
On-track to meet MDGs?	no

As one approach to address the gap in sanitation coverage, the Government of India has established Rural Sanitary Marts (RSMs) as part of the national Total Sanitation Campaign. RSMs manufacture and sell government-subsidized toilets to facilitate rural household access to improved sanitation facilities. The program has been successful at improving sanitation at some households, but limitations have been noted including the lack of design options, the absence of technical support to households for construction, poor quality materials, limited accessibility of the RSMs, and that financing is not available. Despite this and other public and civil subsidies, current aid falls far short of the projected investment need and private sector involvement is likely necessary to meet the sanitation MDG in India, in addition to potentially being a more sustainable market-driven approach. A market study commissioned by Water For People (W4P) estimates the worth of the sanitation market in just the three districts targeted in their initial SaaB program at 100-150 million USD which may encourage private sector involvement.

Microfinance in India

Population[11]	1.24b
GNI per capita[12]	$1,420
Loans[13]	$4.3b
Active borrowers	26.5m
Deposits	$135.9m
Depositors	2.2m

India's microfinance sector has had a turbulent history. After the Government's failed attempts at social banking programs in the 1970s and 1980s, the microfinance sector emerged in the late 1980s. The industry saw rapid expansion culminating in the public offering (on the Bombay Stock Exchange) of the largest MFI, called SKS, in 2010. Unfortunately, the aggressive growth and commercialization led to client over-indebtedness, bad lending practices, and resulting poor quality portfolios.[15] Since SKS went public and the subsequent fall-out, the sector is recovering with increased regulation, consumer protection, pricing transparency and a focus on social performance.[20] Despite a decline in borrowers, estimated at 20 million in 2012 from 32 million borrowers in 2010, India still has one of the largest microfinance industries in the world.[15] In response to the 2010 crisis, the Reserve Bank of India instituted a new regulatory framework including a maximum interest margin cap and loan fees.[15] There are credit bureaus in India which have helped to identify clients with multiple loans, but have been ineffective in detecting over-indebtedness as there are many informal financing sources not captured by the bureaus.[1414]

Microfinance in India includes community group models, such as SHGs, and replications of the Grameen/MFI model. In the SHG model, groups of around 20 women are trained by NGOs and are eligible to be linked to a local financial institution branch once they have saved regularly for at least six months, rotated funds through small interest-bearing loans to each other, and have kept acceptable records. This is managed through the SHG Bank Linkage Program (SBLP) regulated by the Government-initiated National Bank for Agriculture and Rural Development (NABARD) who refinance banks for the loans given to SHGs. Based on the Grameen model in Bangladesh, the MFI model typically consists of microfinance NGOs using public funds and borrowing from banks to provide loans to Joint Liability Groups (JLG). JLGs usually consist of around five members and unlike SHGs, do not manage their own accounting, but all five members have responsibility for repayment.[21]

5.2 Piloting sanitation financing models

W4P-India is piloting sanitation financing as part of their SaaB approach in the states of West Bengal and Bihar. Working with multiple partners and various sanitation financing models, experiences from India provide a number of examples and lessons-learned within a single national context. The program aims to complement and address the limitations of the government RSM program by providing households with more technology options, technical expertise and support, more accessible hardware supply chains, post-implementation support, and financing options so that families can afford the sanitation option that best suits them.

Location	*South 24 Parganas, West Bengal (rural)*	*Murshidabad, West Bengal (rural)*	*Bihar (rural)*
Lending partners	*local NGOs & CBOs*	*KJMUS (SHG fed) & CDOT (MFI)*	*CDOT (MFI)*
Program start date	*2007*	*May 2010*	*December 2012*
Lending method	*Individual*	*Group (SHG)*	*Group (JLG) & individual*
Interest	*0%*	*18% annually (declining)*	*18% annually (declining)*
Transparency	*0-100%*	*73%*	*0%*
Loan term	*12-18 months*	*18 months*	*18 months*
Loan amount	*1,500 INR (24 USD); ~40% of toilet cost*	*3,500-7,500 INR (57-121 USD)*	*12-20,000 INR (200-330 USD)*
Number of loans	*6,000*	*450*	*20*
Number of applicants		*450*	*30+*
Repayment	*unknown*	*90%*	*100%*
W4P start-up capital	*~135,000 USD, donated*	*300,000 INR (5,000 USD), donated*	*500,000 INR (8,000 USD), guarantee*

The NGO/CBO model in South 24 Parganas, West Bengal

W4P's first sanitation lending program started in 2007 focusing on two community development blocks, Sagar Island and Patharpratima, in South 24 Parganas district, West Bengal. In this first model, W4P worked with local NGOs to connect with community-based organizations (CBOs) in their networks who then managed revolving funds for household sanitation financing. The loans were provided for 12-18 months with 0% interest and in most cases no fees. Due to the nature of CBOs' social mission, they can't be seen as profiteering from grant funding. As a result, it was difficult for them to charge interest. In some cases a 15% service fee was charged to try and cover operational expenses, which was seen as a more socially-minded charge than interest. With the service fee, the loan transparency score is technically 0%, while for the loans without a fee it is 100%.[16]

Facilitating lending start-up

Since W4P is not registered as a lending institution with the Government of India, they are not able to lend capital for sanitation loans. In order to facilitate lending start-up, W4P therefore donated over 130,000 USD seed funding to the NGOs to capitalize revolving funds. The CBOs then distributed the loans to households to finance sanitation improvements, with the expectation that repayment would be revolved to provide additional household sanitation loans. In addition to the seed capital, W4P supported the salaries of loan repayment collection officers and other operating costs for sanitation lending.

Loan disbursement

The NGOs established agreements with local sanitation vendors from which households could "purchase" the materials needed to construct a toilet on credit (Figure 5-1). The households then brought the receipt from the vendor to the CBO who paid the vendor for the materials (1,500 INR, app. 24 USD). At that point, it was the households' responsibility to pay the remaining construction costs (typically 2,000 INR, app. 32 USD, depending on add-ons), either build the toilet themselves or contract a local mason, and repay the loan for the basic materials in 12-18 months. The loan was meant as an incentive to trigger household investment in sanitation, and cash was not transferred to households directly. Originally, the CBOs distributed the materials to households, but as a means to create more ownership and connect households with local vendors, the scheme was changed so that households coordinated more with vendors in the community.

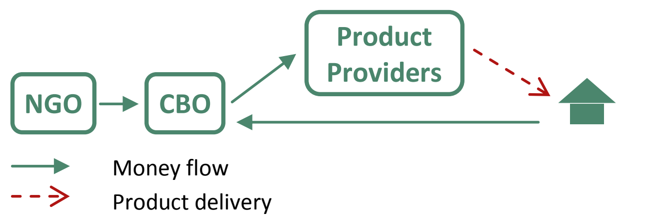


Figure 5-1. Diagram of the NGO/CBO lending model in India

Sustainability and scalability

Approximately 6,000 latrines resulted from the program, but a number of challenges were encountered along the way, including rapidly dwindling rotating funds, that suggest a low probability of sustainability or scalability. Repayment rates are unknown, particularly since some loans may have been written off for a number of families following cyclones in 2009 and 2010, but high repayment is unlikely. However, these experiences provide an opportunity for learning, which is a critical component of the SaaB program. The main limitations of the NGO/CBO model included:

- The NGOs and CBOs lacked microfinance experience resulting in high overhead costs to manage and operate the loans. Their operational expense ratios were estimated at around 20% while most MFIs run at 8-12% efficiency.
- By nature, the NGOs and CBOs view households as beneficiaries, not as clients or customers. And, vice-versa, households view NGOs and CBOs as social organizations who should not be making a profit. As a result, loan repayment was not strictly enforced and the sanitation lending scheme was seen as "soft".

Additionally, because W4P gave the funds as a donation and they were not accountable for repayment, there was little incentive to ensure repayment.

- The NGOs did not have an incentive to revolve the funds for profit as they can't be seen as "profiteering" due to their status as social organizations, and a reasonable profit margin would be less than they are likely to receive from socially-motivated grants.
- Since the NGOs and CBOs are not official financial service providers, there is no external accountability and the lending scheme required a high level of monitoring by W4P to ensure that repaid funds were actually revolved for additional household sanitation loans, particularly since there was no agreement to return the funds to W4P and the NGOs considered the money as their own.
- At 0% interest, operational costs to manage the sanitation loans needed to come from the lending capital itself and revolving funds began to quickly erode.
- Each NGO has a limited number of CBOs within its network, and these vary greatly in size and capacity. Even large NGOs usually only cover one or two community development blocks and a relatively small population. Scaling this model to one district alone would require 20-30 good-sized NGOs, all of which would need capacity building, overhead support, staff employed, and constant supervision.
- The partnering NGOs are not financial institutions and their Management Information Systems (MIS) are poor: they were not tracking or recording the loans well and their financial data was often unreliable.
- The main incentive for CBO involvement seemed to be the potential to become legally registered and able to accept foreign investment, and NGOs appeared to be motivated by the financial opportunity to access foreign money without spending restrictions. These incentives are not market-based and the program would therefore depend on continued foreign investment.

The SHG federation model in Murshidabad, West Bengal

In 2010, learning from experiences in South 24 Parganas, W4P partnered with the SHG federation, *Kandi Jibdharpara Mahila Unnayan Samiti* (KJMUS), through a Kolkata-based NGO, Society for Professional Action in Development (SPADE). As a federation of established SHGs, KJMUS has experience with microfinance, higher operational efficiency than CBOs or even individual SHGs, and a strong member base. The lending structure was developed with the support of SPADE, who managed the 300,000 INR (app. 5,000 USD) seed capital donated by W4P. SPADE, being a Self-Help Promoting Institution whose primary role is to support the growth of SHGs, also facilitated SHG sanitation-related trainings and promotional activities financed by W4P.

The SHG federation says their incentive to provide sanitation loans to households is the hope that improved sanitation will reduce the need to provide medical loans which carry a lower interest rate. They also see sanitation lending as a long-term opportunity to meet the growing demand for sanitation loans from their members.

Through this lending model, all the SHG member households that applied were granted financing for sanitation improvements. However, despite high repayment rates, the scalability of the model is limited as it relied on W4P to capitalize the sanitation rotating fund. The fact that the lending capital was donated also has the potential to distort the local microfinance market limiting sustainability if market-driven funding mechanisms are undercut by unreliable external sources.

Increasing sustainability and scale through MFIs

In search of a more market-driven approach, W4P-India has since partnered with an MFI called the Center for Development Orientation and Training (CDOT). W4P identified CDOT through a review of the local MFIs including a detailed assessment of their accounting system, micro-financing activities, capacities, and capabilities. CDOT has more than 30,000 microfinance clients in two districts of Bihar with a loan portfolio of roughly 90 million INR (app. 1.5 million USD). In addition to microfinance experience and a large client base, they also have a good MIS and an incentive to ensure household repayment in order to maintain profits and stay in business.

Incentivizing lenders & facilitating start-up

W4P approached CDOT with the idea of sanitation lending as a business opportunity: banks in India are not prioritizing household sanitation lending and this provides an opportunity for MFIs to fill this gap in the market. CDOT was interested in adding a sanitation loan product to their portfolio and did not require W4P to capitalize sanitation lending. Instead, the sanitation loans are financed through CDOT's existing market-driven funding mechanisms including commercial bank loans. However, CDOT was hesitant to offer the loan to those outside of their current client base, especially lower-income households such as the members of the KJMUS SHG federation. In order to encourage access to sanitation financing for lower-income households, W4P has provided a 500,000 INR (app. 8,000 USD) guarantee to CDOT as security.

CDOT now provides the lending capital to SPADE through a 3-year loan at 15% (declining) annual interest which SPADE disburses to KJMUS SHG Federation to finance household sanitation to their members at 18% (declining) annual interest. Between May 2010 and March 2013, 450 KJMUS members have taken out a sanitation loan, providing financing to all those who applied. So far, repayment has been high (over 90%). To further secure repayment, all KJMUS members are required to keep at least 20% of the loan amount in savings which they lose if they default on the loan, as is the case with all loans they offer. With this savings requirement, the loan transparency is 73%.

From loan disbursement to toilet construction

Once the loan is distributed to the household, they usually build their toilet within a month. It is up to the household which sanitation provider they choose to work with to construct the toilet (Figure 5-2). There are specific providers connected to the SaaB program, but the sanitation loans are kept separate from any specific product and households can purchase sanitation improvements from any provider they wish including any outside the SaaB program, which some households have done. CDOT feels that linking the loan with any specific product would be risky because if anything happens with a specific toilet product, they don't want to be held responsible; the bank doesn't promote specific sanitation products, and the sanitation providers don't discuss details of the loan. They loan and toilet are not attached; they are kept separate so that if anything goes wrong with either one, the other is not held responsible. W4P is coordinating with community health workers, who are also promoting the sanitation products and loans, to monitor and ensure that the loans are used for sanitation improvements. Although CDOT wants their sanitation loans to remain autonomous from a specific sanitation product in the market, after their involvement in the sanitation sector through financing and seeing the business opportunities, they are considering creating their own sanitation enterprise (with PSI support).

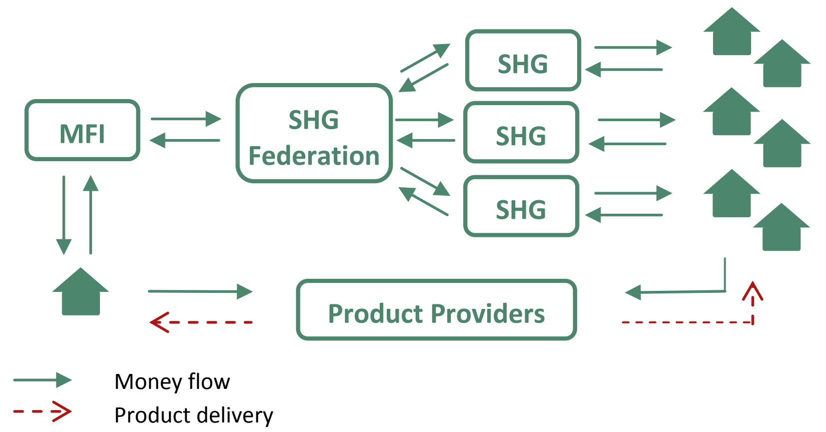


FIGURE 5-2. Diagram of MFI/SHG and MFI direct to client lending models in India

Scaling the model to Bihar

Expanding on the lending model in Murshidabad, since December 2012, CDOT has started offering sanitation loans directly to their clients in Nalanda district, Bihar. Initial client surveys and discussions revealed surprising demand for sanitation financing among CDOT's clients. W4P developed a catalogue to help CDOT initiate the sanitation discussion with their clients and generate interest in constructing an improved toilet and more than 30 loan applications were received after their first few client visits. Loans are disbursed in a group lending scheme with JLGs of five clients who share liability for loan repayment as well as individually for clients that qualify. Interest on the loan is 18% annually (declining) over a loan term of 18 months. The transparency of the loans is less than 1% due to a mandatory savings requirement of 100% of the loan amount, but there are no other associated fees or commissions. So far, 20 toilets have been financed with 100% repayment to date. As part of a larger-scale effort based on experiences to date, the international NGO PSI is leading a new lending program with the goal of 490,000 toilets in eight districts of Bihar over four years (2013-2017). PSI is supporting CDOT as the program lending institution through a guarantee and guidance, with W4P sub-contracted to provide technical support.

Another idea to scale the program in the state of Bihar is working with entrepreneurs to provide their products on credit directly to households. W4P is hoping to pilot this model in Sheohar district with the BDS/MFI, BASIX. W4P has been working with BASIX as a BDS, but they also have a microfinance arm which may support greater borrowing opportunities in Sheohar. Sheohar is a very low-income area and identifying a lending institution to provide credit directly to households has been challenging. There are government incentives for household sanitation but households are required to construct a toilet before they can receive the incentive funds. In this situation, entrepreneurs could borrow capital from BASIX and sell toilets to households on credit at a slightly higher cost, which clients could then repay after receiving the government incentive funds.

5.3 Sustainability and scalability

W4P's role in the process has included providing capacity building and technical support to the SHG federation regarding the sanitation aspects of the program, promotional materials and activities, seed capital to the SHG federation to facilitate start-up of the new sanitation loan product, and established a credit linkage between the SHG federation and CDOT including a guarantee fund to CDOT to back stop a loan to the SHG federation for continued sanitation lending. Additionally, they are discussing the potential long-term business opportunity of sanitation financing with additional MFIs with the hope of scaling up. As a point of reference for financial planning, W4P support in Murshidabad totaled approximately 600,000 INR (app. 10,000 USD), including 300,000 seed capital, resulting in 450 toilets with an investment of just over 22 USD each. Considering the quality of the sanitation facilities, this is much lower than direct subsidy based programs. Additionally, this investment serves to spark the sanitation financing market such that even these reduced costs can be covered by the market itself increasing the probability of meeting the 2015 sanitation MDG.

Since the purpose of initial external support is to spark market-driven sanitation access, W4P hopes to eventually remove themselves from the lending scheme. W4P is visible to CDOT, the SHG federation, and the government department, but their role is behind the scenes at the community level in an effort to ease their exit from the lending strategy. As part of their exit strategy, they are providing the necessary technical support to the SHG federation to run the sanitation credit program as one of their regular microfinance activities. Expected future roles and responsibilities to sustain and scale the MFI/SHG lending model post-W4P support, are presented in the sustainability matrix below.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Provide seed capital to the SHG federation	W4P	W4P	MFI	MFI/SHG fed
Conduct training for SHG federation	CDOT/SPADE	W4P	Market-driven	Market-driven
Provide guarantee fund to the MFI	W4P	W4P	Market-driven	Market-driven
Link MFIs with SHG federations	W4P	W4P	Market-driven	Market-driven

Financial sustainability – will the market drive sanitation lending?

There is potential for a reasonable profit margin from the sanitation lending program for both the SHG federation and CDOT. The SHG federation provides the loan to clients at 18% annual interest and payback the loan to CDOT at 15% annual, resulting in 3% revenue annually. The money that CDOT lends is borrowed from a bank at 12% annual interest, also leaving 3% annual revenue. However, due to high operational costs to develop a new loan product and challenges in the sanitation supply chain, sanitation loans are currently being provided by CDOT at a loss. Increasing the interest rate in order to improve profit margins is not a viable option as 18% is already high compared to other non-income generating loans in the market and a higher rate would likely significantly reduce the sanitation loan client base. However, CDOT plans to continue financing household sanitation seeing the development process as a learning experience that will result in a profitable loan product eventually.

In order to support the ability of sanitation lenders to cover operational costs and see a profit from sanitation loans, the National Bank for Agriculture and Rural Development (NABARD) may be a potential longer-term capitalization source for intermediate lending institutions such as CDOT and SPADE working in sanitation lending. NABARD is a national program that offers loans for development purposes at an annual interest of 8-11%. At these lower interest rates, sanitation loans could be offered at competitive rates while still providing a reasonable profit margin to lenders, and within existing national structures.

Sanitation financing schemes must be profitable in order to be sustainable in the market. However, excessive profitability and borrower exploitation should be avoided. As with all microfinance products in India, the sanitation lending market is regulated through existing national regulation where all SHGs and MFIs who provide loans must follow the microfinance norms of the Government of India.

5.4 Monitoring and evaluation

W4P collects monitoring data on the sanitation lending schemes through their partners, who in turn collect data from households. CDOT, as an MFI, has their own MIS which they use for all their loan products and have applied to track the sanitation loans as well. SPADE pays for field officers who collect financial information from the SHG supervisors on a monthly basis, and conduct household visits to gather sanitation/hygiene related data via a monitoring worksheet created by SPADE. Quality of construction and toilet usage, in addition to financial indicators, are of particular interest to SPADE due to the strong social components of their mission. In addition, SPADE hosts monthly meetings to discuss any issues that arise from the sanitation loans specifically. In the NGO/CBO model, the loans were not well monitored and it was difficult to track program spending.

According to W4P and PSI, success of sanitation financing models should not be measured by counting the number of toilets, but by tracking confidence in the sanitation lending market through questions such as: Is the lending partner thinking of continuing?; Is enrollment in sanitation lending being influenced?; Do others want to jump in the sanitation lending market?; How do customers respond to sanitation financing – are they taking out loans?; Are they being repaid on time? This requires a shift from counting "beneficiaries" to evaluating the program's impact on the sanitation market.

5.5 Considerations and lessons learnt

The MFI/SHG versus the NGO/CBO model. Although both models have resulted in greater coverage per dollar than pure subsidy-based interventions, W4P invested heavily in the seed capital and management costs for the NGO/CBO revolving funds (which declined over time), whereas in the MFI model, household sanitation is improving with much less investment from W4P suggesting a higher likelihood for taking the model to scale. Working with CDOT, money is traceable and not necessarily lost, but with the NGOs, the return on investment, in terms of increased sanitation coverage per dollar spent, was much lower and difficult to track. In the end, despite a larger investment in an initial rotating fund, fewer toilets were constructed than expected through the NGO/CBO model due to dwindling revolving funds, while the MFI/SHG model is on-track to meet targets and repayment is high.

Consider the larger landscape. Banks need to work in a big area to be operationally sustainable. Accordingly, W4P needs to consider the larger landscape. Lending institutions will be more comfortable working in a big area and on a portfolio basis with different loan products (e.g. income generating, education, health, sanitation, etc.). Banks don't want to finance everyone in one area or put all their money in one area because it puts their investment at a higher risk if anything happened in that location. With this in mind, in order to provide everyone with access to sanitation financing in one location, multiple lending institutions are needed. This is another area where W4P can provide support by asking and incentivizing experienced MFIs to open branches and enter the sanitation lending market in a target area (being cautious not to oversaturate the market). Over time, if sanitation financing proves successful, other institutions will likely join the market, increasing household access to sanitation financing and creating competition amongst lenders.

Avoid donated lending capital. In the first two pilot models, lenders were capitalized through donated seed money from W4P. This limited sustainability and potential for scale as donated funds may undermine more permanent market-driven funding sources. Alternatively, credit enhancements such as providing a guarantee and facilitating a capitalizing loan from a larger permanent funding source such as the national housing board may increase the likelihood for sustainability and scale.

Engage the banks. The involvement of banks should be explored as a funding source for SHGs instead of only MFIs. Typically, MFIs borrow their lending capital from a bank and then provide loans to SHGs. This process increases the final interest rate offered to households as the MFI needs to charge sufficient interest to cover the interest the bank charges on their loan in addition to their operating expenses. For example, CDOT borrowed lending capital from a bank at 12% interest, which they lend to the SHG federation at 15% and households pay 18%. Working through banks directly should be explored as an opportunity to connect community-groups such as SHGs with lower interest rate loans by removing the MFI as the "middle man". The counter argument to this is that banks don't have the capacity to manage a high volume of small loans and have not established links to lower-income households as well as MFIs may have, which would likely reduce the potential savings by cutting out the MFI middle-man. Despite this argument, there is some evidence of SHGs borrowing directly from banks at lower interest rates warranting further exploration.

Consider lending through sanitation product providers. Depending on the local context, there may be promise in sanitation product providers offering toilets on credit directly to households. In the case of Sheohar where household lending institutions could not be identified and there is a government incentive program based on households having a new toilet, entrepreneurs could borrow capital from an MFI and sell toilets to households on credit to be repaid with interest when clients receive government incentive funding.

Successful toilet financing schemes depend on demand and a functional supply chain. Sanitation financing is a new concept in most places and marketing and demand creation is *crucial* to sanitation loan uptake. Similarly, the sanitation supply chain plays a critical role as toilet loans without toilets available in the market won't improve sanitation coverage.

Sanitation loans should not be the first loan disbursed to clients. Better repayment rates have been observed when sanitation financing has been a second or top-up loan.

Sanitation lending requires a different loan appraisal system. Given that sanitation loans are non-income generating and extend into the social realm, loan appraisal should capture social aspects including customer satisfaction.

6. MALAWI

6.1 Context

Sanitation in Malawi

National sanitation coverage	53%
Rural sanitation coverage	*53%*
Urban sanitation coverage	*50%*
Increase in coverage since 1995	26%
On-track to meet MDGs?	no

Coverage of improved sanitation in Malawi is estimated at 53% nationwide.[7] Unlike most countries, urban sanitation coverage is just as low as in the rural areas at 50% and 53%, respectively. Access to improved sanitation has improved by 26% between 1995 and 2011, but the country is still off-track to meet the 2015 sanitation MDG.[8] This has significant financial consequences. The World Bank estimates that Malawi loses 8.8 billion MWK (app. 27 million USD) each year due to poor sanitation, mainly from premature deaths, followed by greater healthcare costs.[22] Unfortunately, the cost to remedy this is also high, with an estimated investment need of 103 million USD to meet the sanitation MDG.[9]

Microfinance in Malawi

Population[11]	15.4m
GNI per capita[12]	$360
Loans[13]	$33.2m
Active borrowers	148,705
Deposits	$39.4m
Depositors	488,881

The microfinance sector in Malawi consists of banks, NGOs, SACCOs, and other money lending companies. Unfortunately, despite efforts of the government and others to increase financial access for Malawians since the early 1990s, the 2009 financial demand-side report estimates that 55% of the population is excluded from formal or informal financial mechanisms.[15]

Microfinance activity in the country is regulated by the Reserve Bank of Malawi and the Malawi Micro-Finance Network. The regulatory framework has been formalized through the Financial Service Act 2010, the Microfinance Act 2010, and the Cooperative Act 2010. The new Malawi Microfinance Bill aims to ensure transparent pricing by requiring microfinance institutions to clearly communicate their lending terms and fees. However, full pricing disclosure is a challenge: interest on the majority of loans in Malawi (about 60%) is calculated using the flat method, and additional charges are common yet rarely disclosed in repayment schedules.[15]**Error! Bookmark not defined.** Microcredit in Malawi is mostly intended for businesses development, with 75% of loan products aimed at income-generating activities, which may limit lender interest in sanitation loans.

6.2 W4P-Malawi experiences with sanitation microfinance

A market assessment in peri-urban Blantyre revealed high demand for latrines, but low ability of households to pay cash for sanitation improvements. In response, the SaaB program began coordinating sanitation financing in Blantyre in September 2011. They partnered with Opportunity Bank (OIBM) who has provided 210 loans for the construction of household latrines through a solidarity group lending scheme, and one loan to a local sanitation entrepreneur to expand his sanitation center.

The OIBM sanitation loans have a payback period of six to 12 months (with one month grace period) and carry an interest rate of 24% annually (flat); well below the commercial market rate which is currently over 48% annually (flat) for group business loans at OIBM.[15] OIBM also charges administrative fees of 2.5% upfront in addition to requiring 20% of the loan amount to be deposited in a savings account earning 8% annual interest to serve as security. Considering fees, the flat calculation method, and compulsory savings, the Full APR is 58-60% depending on the loan term, for a transparency rating of only 40-41%.[16] The repayment rate, measuring the amounts actually paid against amounts fallen due, has been 88% with 32% of the total sanitation loans offered having had at least one payment 30 days or more delinquent (32% loans at risk).

Location	*Blantyre (peri-urban)*
Lending partner	*Opportunity Bank*
Program start date	*September 2011*
Sanitation product	*various*
Interest	*2% monthly (flat)*
Fees	*2.5% + 20% mandatory savings*
Transparency	*58-60% (Full APR = 40-41%)*
Loan term	*6-12 months*
Average loan amount	*49,000 MWK (app. 150 USD)*
Lending method	*Solidarity group*
Number of loans	*25 groups (210 households) + 1 business*
Number of applicants	*30 groups + 1 business*
Repayment	*88%*
W4P start-up capital	*3.2 m MWK (was app. 20,000 USD) guarantee*

Selecting a lending partner

To initiate conversations with lending institutions, W4P developed and hand delivered a sanitation financing concept paper to five banks (NBS Bank, FMB Bank, FDH Bank, MSB Bank, and OIBM), and one MFI called Micro Loan Foundation. The paper outlined the market size for on-site sanitation including demand in each low-income area as well as itemized costs for an array of latrine technologies. After delivering the concept paper, W4P made several follow up visits to each bank to discuss the idea further.

FDH Bank and Micro Loan Foundation felt their institutions were still growing and lacked the capacity to manage a new loan product. NBS Bank had the capacity but their minimum loan per individual was 200,000 MWK (app. 600 USD), far higher than the maximum anticipated sanitation loan size of 60,000 MWK (app. 180 USD), and they were not interested in managing smaller loan amounts. FMB had just introduced a Small and Medium Enterprises (SME) Department which would offer small loan amounts, but the manager was not comfortable with sanitation financing, citing it as a high risk product, and preferred to offer business loans. MSB would need to out-source field officers to manage the sanitation loans due to their lack of experience in group lending schemes. As a result, OIBM was eventually selected due to their vast experience in microfinance and group loans as well as their vision and mission to target the lower-income market segment.

Incentives to finance sanitation

OIBM was incentivized by the market size for latrine loans as presented in the concept paper, in addition to a 3.2 million MWK (was app. 20,000 USD, now worth less than 10,000 USD due to currency devaluation) guarantee provided by W4P and held in an OIBM investment account. The investment account itself increased their portfolio size. Additionally, OIBM saw the short-term benefits of sanitation lending as a way to increase their client base, and a potential long-term benefit of offering subsequent business loans to sanitation financing clients without the need to train or mobilize the groups since members would already be in their system through W4P-supported liability group mobilization.

Facilitating sanitation lending start-up

All the banks W4P approached rated sanitation lending as a high risk product and therefore required a guarantee to initiate lending. Without the guarantee, W4P-Malawi felt it was impossible to convince a lending institution to administer sanitation loans. The guarantee was also used to negotiate a reduced interest rate of 24% per annum. This is a substantial reduction from the commercial rate at the time of 39%, which is now higher at over 48% due the currency devaluation in Malawi. The original thought behind the reduced interest rate was to entice households to borrow for sanitation improvements, as well as manage pressure from local NGO partners who felt sanitation should be subsidized and advocated for an even lower interest rate. OIBM used their own funds for the sanitation lending capital up to an equivalent of the initial guarantee. The loan repayments were then revolved as loans to other applicants.

In addition to providing a guarantee, W4P created a catalogue of latrine options to support promotion and construction in a competitive market with multiple suppliers, supported the local NGO Hygiene Village to promote the loans and mobilize and manage lending groups, and provided a spreadsheet to OIBM for sanitation loan tracking, although it wasn't used and the loans have been tracked monthly by W4P. W4P also conducted several training sessions for sanitation entrepreneurs which OIBM staff were invited to, but did not attend. This was attributed to the same reason that the bank did not include sanitation loans among monthly targets for their field officers – there was no profit incentive due to the low interest rate.

Loan disbursement & toilet construction

With W4P funding, Hygiene Village is working with 17 small-scale sanitation product providers which W4P identified and trained in business and construction. The masons were certified and presented to households as recommended builders in community promotional campaigns. Loan disbursement was temporarily deposited into an account held by Hygiene Village who managed payment to the mason once construction was complete (Figure 6-1). None of the borrowers chose to contract masons outside of the 17 recommended providers, and so far, there have been no complaints from households or masons.

However, there were a few challenges along the way. The main challenge was the rise in raw materials costs due to the instability of the currency in Malawi. This meant clients had to augment loan funds since there was no provision for going back to the bank for additional funding. The timing of loan disbursement was another challenge as the loans took one month to approve and disburse since OIBM didn't prioritize the low interest sanitation loans. Due to this delay, the contracted builder may be in the middle of another construction job by the time the sanitation loan is disbursed as they couldn't turn down employment while awaiting latrine loan approval. This affected the timely construction of the latrines.

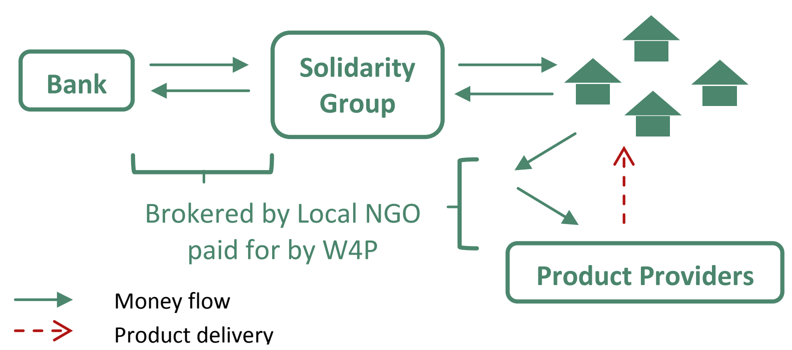


Figure 6-1. Diagram of the sanitation lending model in Malawi

6.3 Effectiveness of the sanitation financing pilot in Blantyre

The scheme was effective in that it provided an opportunity for a segment of the population without sufficient cash to purchase a desirable latrine and pay for it over time. Through this model, 210 improved latrines were constructed, valuing 55,000 USD, for an investment of 20,000 USD (which will be returned to W4P at current value of less than 10,000 USD, though none of the guarantee has been used to cover default) and business development and operational support. W4P hopes this support will be market-driven in the future once an attractive lending model is developed.

Monitoring has shown that the latrines are being well-maintained and used suggesting that the program may more sustainably addressed sanitation needs among this market segment than traditional subsidy models which have often resulted in abandoned services in a short timeframe. There is also some evidence of satisfaction and spreading demand for the sanitation loans as evidenced by one group who mobilized themselves without Hygiene Village intervention and requested the sanitation loan.

Although the focus on this report is on the financing aspects of SaaB, it should be noted that toilets purchased on credit comprised about 5% of the total toilets purchased from SaaB partners. This suggests that sanitation microfinance is only one, and not usually the most essential, component of SaaB and the importance of demand-creation and technology development should not be underestimated.

In addition to providing households a financing option to purchase their latrine, one mason took out a business loan from OIBM, amounting to 30,000 MWK (app. 90 USD). He used it to expand his sanitation center with more of his products and repaid the loan in six months. OIBM offered him a subsequent loan, but he rejected it as he felt the first loan was sufficient for his business. This sanitation business loan enabled the entrepreneur to improve what his business offers to households looking to improve their sanitation.

Sanitation loan accessibility

The financing scheme with OIBM utilizes the group liability approach which assumes that peer-pressure will encourage higher repayment rates, reducing lender risk and allowing clients with fewer material assets to access a loan. The groups consist of seven to 14 self-selected homeowners from within the same area. Eligibility was based on (1) owning their home, (2) being from and having roots in the target area (social capital), and (3) approval from the community leader who could disqualify members based on knowledge of their behavior. Most applicants were approved, with 25 of the 30 applicant groups qualifying.

One innovation of the program was that each latrine loan group was offered the opportunity for a subsequent business loan if they paid the sanitation loan on-time. Ordinarily, accessing a business loan from banks is not easy, so this was a strong incentive for households to repay the sanitation loans. In this way, an additional potential impact of the sanitation loans is improved household access to financial services in general.

From microcredit to improved sanitation

In addition to challenges during construction, a greater challenge was that not all sanitation loans translated into improved sanitation and one "sanitation loan" was disbursed and repaid in full without construction of a latrine. Unlike W4P-Malawi, OIBM was not concerned by this. There is a difference of priorities and incentives between W4P and OIBM, with W4P's intention to improve sanitation, while OIBM is more interested in increasing their client base and loan repayment.

6.4 Sustainability & scalability

W4P support in the pilot lending scheme with OIBM was intended to be temporary and will be ending in 2013 after two years. W4P will withdraw the guarantee fund and close the investment account in coordination with the last sanitation loan repayment. Unfortunately, despite some promising program successes, OIBM does not plan to continue offering the sanitation loans. They perceive the loans as high cost and risky because of the high operational costs required for group mobilization and management that was subsidized by W4P through Hygiene Village, and the fact that sanitation is considered a consumer loan which is thought to be higher risk and rare in Malawi.

The visibility of W4P is a threat to providing evidence of sanitation loans as low risk since high repayment is unlikely if clients know an NGO is behind the scheme. W4P tried to remain invisible other than informing communities about the sanitation financing opportunity with OIBM, giving the impression that W4P had simply linked them with the bank. However, the W4P guarantee was disclosed to three of the lending groups which led to higher loan default due to the perception that NGOs give things away for free and repayment shouldn't be necessary. The disclosure of W4P participation and support may have stemmed from lack of buy-in from local partners who did not believe in the loan product considering it to be too expensive and that W4P should have brokered a better deal with the bank suggesting charity culture underpinnings.[30]

Although sanitation lending with OIBM will not be sustained, there are valuable lessons from this pilot that will inform improvements moving forward. TEECs Limited, the business development service (BDS) provider partnered with W4P in the SaaB program, has created a microfinance subsidiary called TEECs Microfinance. They have recently been certified as a microfinance service provider and will lead a new financing program learning from experiences with OIBM. W4P has offered support as needed with respect to capacity building and technical needs, as well as a line of credit since TEECs does not have sufficient capital to provide sanitation loans and more permanent sources have not been secured at this stage. The adoption of sanitation financing by TEECs will also remove reliance on Hygiene Village whose role is currently subsidized by W4P. TEECs will charge a typical local MFI interest rate (around 55% APR) to cover operational expenses allowing them to manage all loan processes themselves, and be profitable.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Sanitation financing promotion	Hygiene Village	W4P	TEECs	TEECs
Facilitate the formation of lending groups including documentation	Hygiene Village	W4P	HHs / TEECs	HHs / TEECs
Broker deal between bank & borrowers	Hygiene Village	W4P	N/A	N/A
Conduct loan group training	Hygiene Village & OIBM	W4P	TEECs	TEECs
Provide guarantee for sanitation loans	W4P	W4P	Market-driven	Market-driven
Issue the loans to households	OIBM	OIBM	TEECs	TEECs
Manage household to builder payment	Hygiene Village	W4P	Market-driven	Market-driven
Follow-up of loan payments	OIBM	OIBM	TEECs	TEECs
Verification of constructed latrines	W4P	W4P	TEECs	TEECs

6.5 Monitoring & evaluation

W4P-Malawi has been monitoring the following indicators on a monthly basis: (1) time for loans to be disbursed; (2) whether every disbursed loan translated into a latrine; (3) how long it took to build; (4) loan repayment; and (5) follow-ups conducted by OIBM and Hygiene Village. W4P staff suggestions for improving monitoring include: (1) removing indicator 3 (how long it took to build the toilet) which may have been an unnecessary indicator, particularly since they have worked to build a competitive sanitation supplier market with many options for households and this has become an issue between client and builder, and (2) tracking *why* one of the loans was not used for sanitation, and how to improve from this.

Other sanitation microfinance experiences in Malawi

The Centre for Community Organization and Development (CCODE), a local NGO, has also been offering sanitation loans in Blantyre as well as 13 other regions; specifically for their EcoSan product. According to the latest data reported to MF Transparency, 54% of their borrowers (870) have sanitation loans which comprise 86% (133,000 USD) of their portfolio.[15] Their sanitation loans range from 40,000 to 100,000 MWK (app. 120-300 USD) at 12% annual (declining) interest over 24 months with no fees for a transparency of 100%. The extremely low interest rate compared to market rates suggests that this model depends on external subsidies.

6.6 Lessons learned

Pilot sanitation financing at market interest rates: Due to the reduced interest rate, the current model with OIBM is not sustainable without external subsidy and unlikely to be taken to scale. Additionally, the deflated interest rate may distort the sanitation microfinance market making it challenging for more sustainable mechanisms to compete with subsidized, temporary lending models. Because the first sanitation financing pilot was based on a deflated interest rate, it is unknown if sanitation loans would have been successful at market rates which may have been more likely to be adopted by others in a market-driven environment.

Lending partners need market-based incentives: OIBM did not have incentives rooted in the sanitation market, particularly with the reduced interest rate. OIBM was more incentivized by W4P support to formalize lending groups to add to their client base and to add guarantee funds to their portfolio. This led to OIBM not prioritizing or adequately tracking the sanitation loans and ultimately to OIBM's plan to discontinue the loans when W4P removes the guarantee.

Loan taken ≠ constructed latrine*:* Ensuring that sanitation loans are used for their intended purpose poses the question of who should be responsible for monitoring latrine construction in sanitation microcredit programs. This oversight resulted in one latrine not being constructed even though the loan for this latrine was repaid in full and on time. Whether monitoring is conducted by the lending institution, a government partner, or other organization, monitoring responsibilities should be interwoven into the market or public strategy with associated incentives. This issue may also be resolved by offering sanitation loans at market interest to discourage borrowing for other uses simply because the interest rate is lower than other loans.

NGOs distort expectations: The loan experiment underestimated the power of perception. In Malawi, public perception is that NGOs provide products or services at no cost to households. The involvement of Hygiene Village and the unintentional disclosure of W4P's guarantee funding distorted customer expectations and some groups intentionally defaulted on their loans. Additionally, this subsidy can create a dependency on NGOs and undermine the commercial partners' capacity. Commercial partner ownership in *every* stage of the loan process is necessary for program sustainability.

Profit potential is just as important as social impact: OIBM was an ideal partner for the loan experiment as their vision, values and mission are in line with social aims targeting marginalized Malawians. As such, the sanitation loan product addressed one of their core business values and theoretically should have created appeal and ownership of sanitation loans by OIBM. However, as much as the sanitation loans facilitate social impact, OIBM must generate sufficient returns in order to sustain any lending model. Providing loans for social good is still a business and must be evaluated on business principles as well as social principles.

Marketing and other SaaB components are crucial: Improved marketing, product development, and delivery through business development and sanitation value chain support are crucial. Sanitation financing without a solid sanitation value chain, that meets the needs and desires of households, will be ineffective. The impact of financing on household sanitation uptake will depend on the cost of what households consider desirable compared to the resources they have available. In other words, loans become essential when the option that households are willing to invest in, costs beyond the household's liquid capital.

The cost to form and manage new lending groups should not be underestimated. It can be costly to develop new group lending schemes. Hygiene Village, with W4P funding, provided significant support coordinating solidarity groups. The associated costs should be considered in the development of a new sanitation loan product as group loans may not be a sustainable mechanism where groups do not already exist.

Local partner buy-in is crucial. Efforts to create an autonomous sanitation lending market may be compromised if local partners don't believe in the idea or the specific loan product. Time spent upfront identifying and sensitizing local partners who believe in the program will likely pay off in the long-term.

7. PERU

7.1 Context

Sanitation in Peru

National sanitation coverage	72%
Rural sanitation coverage	*38%*
Urban sanitation coverage	*81%*
Increase in coverage since 1995	24%
On-track to meet MDGs?	yes

Sanitation coverage in Peru is estimated at 72% nationally with much lower coverage in the rural areas.[7] However, on a national-level, they are on-track to meet the 2015 sanitation MDG.[8] According to the Peruvian National Statistics and Informatics Institute (*Instituto Nacional de Estadística e Informática - INEI*), in 2009 approximately 57% of the population had access to sewerage and the government reported a goal to increase sewerage access to 79% by 2021 in their *Plan Bicentenario.*[23] According to WHO, an investment of 285 million USD is needed to meet the sanitation MDG in Peru.[9]

Microfinance in Peru

Population[11]	29.4m
GNI per capita[12]	$5,150
Loans[13]	$8.8b
Active borrowers	3.6m
Deposits	$6.6b
Depositors	3.5m

The microfinance market has been growing steadily in Peru in recent years due to national economic growth, increased access to international financial markets, and efficient financial regulations. Client deposits are the primary source of MFI financing comprising more than 60% of microfinance funding in Peru.[19] MIX[19], an NGO that provides one of the most comprehensive global microfinance data sets available, considers the microfinance sector in Peru to be highly developed including a number of microfinance institution associations and networks, with the Superintendency of Banking and Insurance (*Superintendencia de Banca* y *Seguros* , SBS) as the main regulating body.[19] Savings and Credit Cooperatives (SACCOs), specifically, are also regulated by the Peru National Federation of Savings and Credit Cooperatives (*Federación Nacional de Cooperativas de Ahorro y Crédito del Perú* - FENACREP).

In Peru, there is no interest rate cap, low capital requirements to initiate microfinance services, and various supportive legal structures are available, making entry into the microfinance market relatively easy thereby increasing competition within the market.[19] Additionally, SBS monitors interest rate transparency, financial statements, and client disputes, which they publish in newspapers and online. Peru has also been a pioneer in the microfinance industry with respect to client protection and education: the SBS and the Ministry of Education have developed financial literacy curriculum that is taught in schools.[14] Financial literacy among adults still remains low but both the public and private sectors are working to address this.

Despite many promising aspects of Peru's microfinance sector, there are still a large number of loans in default (called non-performing loans, NPL). This is thought to be due to the rapid expansion of banks and municipal savings MFIs offering low interest rate loans leading to over-indebtedness among some clients.**Error! Bookmark not defined.** SBS is attempting to remedy this and borrowers with more than one active loan are subject to more rigorous credit analysis.

7.2 Program background

In Peru, W4P is working with sanitation microfinance in peri-urban Arequipa and rural Majes, with plans to pilot financing in Trujillo as well. The program in Arequipa is furthest along, though still fairly young, starting in March 2013 with five sanitation loans disbursed to date; four households and one preschool in peri-urban Cono Norte. Two additional sanitation products have been purchased in cash. Of these seven clients, six purchased only an evacuation system, consisting of a biodigestor or septic tank, connections, and infiltration trench or leach pit for 2,500 PEN (app. 900 USD), while the remaining client purchased a full bathroom (superstructure, toilet and evacuation system) for 5,500 PEN (app. 2000 USD).

Due to challenges identifying a strong local BDS partner, W4P is currently leading program development with a SACCO called GESTIÓN and technical support from a sanitation entrepreneur in Arequipa. The loans are provided for 18-36 months depending on the product purchased and carry an annual interest of 30% (declining). The loan is highly transparent with no fees, commissions, or other costs apart from a mandatory savings of 10% of the total loan amount which receives 15% annual interest and is accessible after the loan is repaid in full. Taking into account the mandatory savings the Full APR is 33.4% for a transparency of 90%.[16]

Location	*Cono Norte, Arequipa (peri-urban)*
Lending partner	*GESTIÓN (SACCO)*
Program start date	*March 2013*
Sanitation product	*biodigestor or septic tank (various)*
Interest	*30% annually (declining)*
Transparency	*90% (Full APR=33%)*
Loan term	*18-36 months (varies by product)*
Average loan amount	*3,100 PEN (app. 1,150 USD)*
Lending method	*individual*
Number of loans	*5*
Number of applicants	*100+*
Repayment	*100%*
W4P start-up capital	*0*
W4P support	*technical support, training, promotion*

7.3 Identifying and incentivizing lenders

The first challenge in Arequipa was finding a microfinance partner to pilot a sanitation lending approach. W4P was looking for an institution that met the following criteria: (1) has an office in the lower-income peri-urban zone of Cono Norte so the target population would have easy access to services and the institution would have easy access to borrowers, (2) no or reasonable requirements for the amount of time that clients must be institution members before they can apply for a loan, (3) no requirement for borrowers to have the title to their home which many clients in the target population do not have, and (4) they are interested in developing and piloting a new sanitation loan product. Of the 17 microfinance institutions with an office in Cono Norte, some required a land title and some required a long membership time before lending services became available, but the biggest hurdle was a lack of interest in developing and piloting the idea. All the lenders approached were interested in providing sanitation loans, but none of them wanted to lead the effort to develop a new loan product which would likely be only a small part of their portfolio. Most expressed an interest in offering sanitation loans once a lending scheme was developed and tested, however.

Eventually, W4P identified GESTIÓN, a new subsidiary of the national SACCO federation, PrestaSur, who had the incentive to develop a new loan product as a means to increase their portfolio and get their foot in the door to the competitive local microfinance market. Additionally, they don't require borrowers to have a land title but instead ask for a minimum of three years of residence in clients' current home, there is no minimum membership time before a client can apply for a loan, and their office opened in Cono Norte in January 2012.

One of the main objectives of the pilot with GESTION is to provide an opportunity to test a new sanitation microfinance product, adjusting as necessary along the way, until a solid business model is developed that can cover expenses and generate profit. As a result, W4P will have a concrete argument, with evidence, to motivate other financial institutions and the Ministry of Housing who is responsible for the sanitation policies and programs in Peru. As more evidence and a strong business model are emerging, the regional MFI Caja Arequipa has shown interest in sanitation microfinance and are planning to work with two of the local sanitation businesses, Dipolsur and Agua EcoSan Peru, to provide sanitation loans in 2014.

7.4 Facilitating lending start-up

In the sanitation lending scheme with GESTIÓN, they are responsible for construction as well as financing, with the idea that this will decrease the risk of poor quality construction that could lead to dissatisfaction with the sanitation product and result in loan default. In order to support this new SACCO function, W4P provided technical support through a partnering entrepreneur who designed multiple toilet models and sourced materials including the identification of Dipolsur, a biodigestor company attached to the plastic tank manufacturer Rotoplas, whose sole product is biodigestors and is therefore highly incentivized to support sanitation market growth. Households can elect to do or contract the labor themselves outside of the loan, or PrestaSur has a number of construction partners that GESTIÓN could access. In addition to technical support, W4P supported marketing and promotion, including the provision of a free water tank as part of a start-up promotion for the first households to serve as exposition toilets. The total cost to facilitate start-up has been around 8,000 USD, including 500 USD for promotion and marketing, 500 USD for promotional water tanks, and roughly 7,000 USD for technical support including the entrepreneur's salary which W4P is covering.

7.5 Effectiveness

Though the loans appear to be effective at improving sanitation access for qualifying households, the biggest challenge has been the inaccessibility of microcredit for much of the target population. Of the approximately 100 loan applications received by GESTIÓN, about 50 applicants were disqualified due to a bad credit rating with SBS from previous default on high interest (80-120% annually) credit card schemes that accompanied the recent growth of the consumer industry in Arequipa. Currently, there is no bail-out or redemption scheme available to those with poor credit in Peru and the majority of this population segment no longer have access to credit, as the amount they owe has increased to an impossible amount to repay. Of the approximately 50 loan applicants remaining, about 25 did not meet the requirement of living at the same residence for a minimum of three years and 20 did not have sufficient evidence of their income as is common for small product and service providers such as taxi drivers. Of the five households that qualified, two declined based on concerns about microcredit after seeing neighbors suffer under high credit card bills.

The toilets constructed to date have been high quality. Vandalism was an issue with the first installation just after construction, but the entrepreneur made repairs and there have been no issues since. In the future, once the program has been verified, repairs will be the responsibility of the homeowner. In order to encourage high quality and well-maintained facilities, W4P is creating a protocol for lending institutions to verify construction as well as a maintenance manual for clients. From loan application to toilet completion, the process takes less than a month: 2-3 days to qualify for the loan assuming all requested documentation is in order and 15 days to construct the toilet. The households do not see the cash in the process and payments being one month after construction is finished when the household is given the key (Figure 7-1).

Figure 7-1. Diagram of the sanitation lending model in Arequipa, Peru

7.6 Sustainability and scalability

The idea of the current sanitation lending scheme is to spark a sanitation financing market that is driven and sustained through the market itself. W4P is therefore not providing direct financial support to GESTIÓN to capitalize the loans. The technology development and marketing support they are currently providing is hoped to be market-driven and conducted by the lending institution or sanitation entrepreneurs/businesses in the future; no longer relying on W4P intervention as seen in the sustainability matrix below. To support this aim, a fundamental component of the approach is that W4P is *not visible* to clients. W4P-Peru feels this is so critical to program success that when W4P staff visit the field, they wear vests with the GESTION logo.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Provide seed capital	PrestaSur, savings	PrestaSur, savings	PrestaSur, savings	PrestaSur, savings
Technical training of lender staff	W4P, entrepreneur	W4P	Dipolsur	Dipolsur
Monitor and evaluate lending	W4P, Gestión	W4P, Gestión	Gestión	Gestión
Market the loans	Gestión	W4P, Gestión	Gestión	Gestión
Manage & monitor construction	Gestión	W4P, Gestión	Gestión	Gestión
Technology development	W4P, entrepreneur	W4P	market-driven	market-driven

GESTIÓN is financing the sanitation loans from their savings accounts for which they pay 4-15% annually (depending on amount deposited and savings term) and a loan from PrestaSur at 12% annually. At 30% annual interest, the sanitation loan is competitive within the local market while still being profitable for GESTIÓN providing an incentive to continue to offer the loan. The most significant cost is coordinating and verifying construction. Currently, this cost is manageable, but as the number of loans increase, a more simple and rapid process may be required. The sanitation loans appear low-risk so far with 0% Loans at Risk (LAR) and a 100% repayment rate to date, but the loans were provided just a few months ago.

7.7 Monitoring and evaluation

W4P is currently monitoring the loans through GESTION's MIS, which covers an array of financial indicators. GESTIÓN has a good MIS through PrestaSur and all accounts are tracked reliably and information is accessible. W4P-Peru is also hoping to develop a monitoring and evaluation framework based on W4P experiences in other countries as presented in this report.

7.8 Future plans and addressing the challenges

In order for SaaB to be effective, the toilets, and hence the finances needed to purchase them, must be accessible. W4P is currently working toward removing these barriers through a number of mechanisms and ideas. The first is to lower the cost of the sanitation products through further technology development, but it is expected that financial access will still be a barrier for a number of clients and the aforementioned barriers to credit access for a substantial portion of the population also need to be addressed.

For those households who have not been living in the same residence for the previous three years, and those who are unable to show proof of income, W4P is developing a savings scheme called *Ahorro-Baño* (Bathroom Savings). Households would open a savings account dedicated to investing in sanitation. Once pre-defined savings goals are fulfilled, such as weekly deposits for eight months, GESTION would provide the saved amount to a local sanitation supplier (adding a loan in many cases) who would be responsible for construction under the supervision of GESTION. By making regular savings payments, the household demonstrates they have sufficient income to repay a loan and would then be eligible to borrow the remaining amount.

Households with a poor credit rating could follow a similar *Ahorro-Baño* plan only without the option to take out a loan for any remaining amount. In this scenario, households would commit to regularly deposit an amount of money into a savings account until their goal is met. At the end of the savings term they could (1) use the money to purchase a sanitation product, or (2) use the money to pay their debts, clearing their credit rating and making them eligible for a sanitation loan from the financial institution, which will have already verified their ability to repay through their regular savings deposits. If *Ahorro-Baño* is successful, W4P will have evidence to motivate others to offer savings schemes for sanitation, and encourage national efforts to promote sanitation savings programs through the Ministry of Housing.

Another idea that is being considered to address this market segment is called *Pandero-Baño*. Pandero is a common lottery-based collective savings mechanism in Peru where groups, typically of friends or family, contribute a certain amount of money which is used to purchase an item that is then raffled off within the group. For example, 10 neighbors could contribute 20 soles per week for a prescribed period of time, after which a drawing would be held and the winner would receive a new toilet.

A third potential option is a combined sanitation and business loan program, where households without sufficient proof of income could apply for a sanitation loan that would be backed by a guarantee from W4P (for the pilot), and then after full repayment of the sanitation loan, they would qualify for a small business loan with business development services provided by a BDS contracted by W4P or preferably lender staff who could be trained by W4P. Small lenders may also have an incentive in this scenario as they rarely have business development services like the larger banks and this may be a way to compete in the market.

7.9 Lessons learned

Despite W4P's nascent experiences with sanitation microfinance in Peru, the fact that no guarantee or seed capital was provided to GESTION is encouraging for the sustainability and scale of the program. Additionally, there are creative mechanisms to reach the market segments with limited to no access to financial services, which may provide ideas to other programs, particularly once sufficient time has passed to gather more detailed lessons-learned from the approaches.

8. Rwanda

8.1 Context

Sanitation in Rwanda

National sanitation coverage	61%
Rural sanitation coverage	*61%*
Urban sanitation coverage	*61%*
Increase in coverage since 1995	41%
On-track to meet MDGs?	no

Nationally, 61% of households in Rwanda have access to improved sanitation.[7] Vast improvements have been made since 1995 with a 41% increase in coverage, but Rwanda is still off-track to meet the 2015 sanitation MDG.[8] The cost of poor sanitation to Rwanda's national economy is estimated at 54 million USD every year; equivalent to 0.9% of the GDP.[24] To meet the sanitation MDG in Rwanda, WHO estimates an investment of 114 million USD is needed.[9]

The government is promoting improved sanitation and there are government campaigns throughout the country run by district and sector authorities. Every mayor has a contract with the president regarding four key areas: health, education, development, and good governance. Health includes sanitation coverage and the national standard is that every household has a toilet with a fine for open defecation. To facilitate adherence to this standard, the Vision 2020 program run by the Government of Rwanda is building toilets for extremely poor households where the head of household is unable to earn an income (e.g. elderly, disabled). These recipients are identified by the community through the government program. The program also offers jobs to poor households that do have someone capable of working such as road or school construction or similar public sector work. Government support of the very low-income households is promising as it allows the market to address the population segments that have the capacity to purchase a toilet directly or through credit strategies likely resulting in greater sanitation coverage improvements despite limited resources.

Microfinance in Rwanda

Population[11]	10.9m
GNI per capita[12]	$570
Loans[13]	40.2m
Active borrowers	80,838
Deposits	33.6m
Depositors	346,838

Informal financing, such as self-help organizations called *tontines* or *ibimina*, is commonly used in Rwanda for local investments such as agriculture. Additionally, the government and international donors have been supporting the development of microfinance as a part of the rebuilding process after civil conflicts in the 1990s. The sector has grown rapidly with an MFI in every sector, but is challenged by a poor loan repayment culture, issues of financial sustainability, and the need for consumer practices to promote responsible lending.[15] Additionally, access to and competition among microfinance providers in the rural areas remains relatively limited.[14] In response, the government has prioritized extending microfinance services to rural areas, however there is distrust of financial institutions, particularly among the rural poor, following the collapse of several MFIs in 2006.[14] Individual lending is most common, followed by solidarity groups. The declining balance interest calculation method is slightly more common than flat-rate, but most microloan products are considered to have low transparency with a number of additional fees, insurance and other charges.[15]

The microfinance sector is regulated based on the Banking Law No. 08/99 that was enacted in 1999, which gives the Bank of Rwanda supervisory responsibility for the microfinance sector. Specific guidelines are in place to regulate MFIs, cooperatives and SACCOs. In 2011, parliament passed the Consumer Protection and Competition act which is expected to protect poor households and increase awareness of consumer rights. Despite very clear regulations, many MFIs struggle to understand and achieve the requirements, and capacity building and time to understand and adapt will be needed.[14]

8.2 W4P sanitation lending program background

W4P is working with the BDS company Boundless Consultancy Group Ltd to facilitate sanitation lending as part of the SaaB program in Ntarabana sector; one of the 17 sectors forming Rulindo district in the north of the country. They are working with SACCO-Inganza to provide household loans for composting (EcoSan) and biogas latrines which are dispersed through solidarity groups. To date, three groups (48 households) have been approved for the loan, with 17 loans disbursed. The average loan is 69,500 RWF (app. 110 USD) which is to be repaid over 9- 12 months with 2% monthly (declining) interest. The loan also carries a 1% loan fee upfront, an on-going 1% commission, a 1500 RWF (app. 2.50 USD) loan approval fee (for approval from the sector executive secretary), and a negotiable 15% compulsory savings at 3% annual interest (up to 8% interest depending on the amount). Including the fees and savings, the "Full APR" is 42.3-45.4% depending on the repayment period, for a transparency of 53-57%.[16] Some borrowers felt these fees were not clearly communicated upfront, but so far this has not impacted repayment.

Location	*Ntarabana sector (rural)*
Lending partner	*SACCO-Inganza*
Program start date	*May 2013*
Sanitation product(s)	*Ecosan & biogas latrine*
Interest	*2% monthly (declining)*
Loan transparency	*53-57%*
Loan term	*9-12 months*
Average loan amount	69,500 RWF *(app. 110 USD)*
Number of loans	*17*
Lending method	*Solidarity group*
Number of applicants	*51*
Number who qualified	*48*
Repayment	*100%*
W4P start-up capital	*0*

8.3 Identifying and incentivizing lenders

There are three financial institutions in Ntarabana sector: Banque Populaire, SWOFT MF, and SACCO-Inganza:

Banque poplaire is a commercial bank with around 1,000 customers from Ntarabana sector, but only 10% of these are active. Additional customers come from other areas. Microcredit interest rates are between 17 and 20% annually and they do not have solidarity groups. Securities accepted are fixed assets such as land, tree plantations, and homes with documentation. The borrowing ceiling is 3 billion RWF.

Swoft MF has more than 1000 customers and they provide commercial loans with a ceiling of 3.5 million RWF. Their lending requirements include that the customer should be a member for at least two weeks before taking out a loan, equity should not be less than 20%, and they accept fixed assets as security.

SACCO-Inganza is a local savings and loan cooperative with 4,100 members. They have several voluntary solidarity groups of about 20-30 members each and provide loans to individuals and solidarity groups depending on the borrower profile. They charge 2% declining or 1.5% flat monthly for microcredit with a one year payback period. Borrowers need to be members for at least three months before they can access credit and acceptable guarantees include fixed assets for individual loans, while non-fixed assets (e.g. domestic animals, money from the solidarity group bank account) are accepted for group loans. They report to the Rwanda Cooperative Agency (RCA) and the National Bank of Rwanda (BNR), and the loan ceiling is fixed by the BNR at 2.5 million RWF for both individual loans and solidarity groups.

Although all three lenders were willing to support the program, Boundless recommended SACCO-Inganza because they seemed to be the most interested in offering sanitation loans, had a clear policy, and based on household visits, many people in the area felt more comfortable working with them than other lending institutions. From initial visits with 15 households, 12 (80%) had a bank account; mostly in SACCO-Inganza.

W4P and Boundless approached SACCO-Inganza with the idea of sanitation loans as a business opportunity based on a rapid market assessment (RMA) previously conducted by Boundless and they liked the idea. The RMA included an analysis of the financial potential of sanitation lending as a way of profitably increasing their lending portfolio: based on the estimated local market for improved sanitation, with an interest rate of 2% per month, the RMA estimated a potential profit of between 40.6 million RWF (app. 62,000 USD) and 60.6 million RWF (app. 93,000 USD), depending on the type of toilets constructed.

8.4 Facilitating lending start-up

W4P is not capitalizing the sanitation lending scheme. SACCO-Inganza is using its own money from savings deposits. They say they receive enough deposits to cover all the loans (up to approximately 1,000 loans at a time). The sanitation loans, with an average amount of 69,500 RWF, are average/small loans within their portfolio. They offer other non-income generating loans as well, including home improvement and education.

Supported by W4P, Boundless has been coordinating the technical side of the loan by facilitating the creation of a local masons' cooperative who were trained and linked to the sanitation loans. Through the process, Boundless worked with the masons' co-op to create a budget for the toilets depending on the type of technology. Households can then decide which toilet they want (or which is appropriate to their geography), and how much they want to pay through a loan and how much they can contribute themselves through local raw materials and unskilled labor such as digging the pit.

8.5 Loan disbursement

Individuals can apply for the sanitation loan, but they need to provide proof of a job with a contract. So far, the sanitation loans have all been applied for through a group lending scheme with existing solidarity groups typically of 20-30 people. The loan is then guaranteed through the following arrangement: one member provides security in the form of a fixed asset (home, land, etc.) to the SACCO and the other members provide non-fixed asset security (goats, cows, etc.) to that member. In this way, peer-pressure and shame is used to ensure that everyone pays their share. These agreements are enforced by the sector government through signed agreements. Additionally, being a local microfinance provider, they know their clients well and are therefore aware of people's reputation based on previous experiences within the community.

The first group applied for the sanitation loan in early May and the loan was disbursed through the masons' co-op (Figure 8-1) in late June. While for this first round, the process took almost 2 months, the SACCO estimates this process will normally take three weeks but has taken longer as it is a new addition to their portfolio and it takes time to track down everyone from the groups and formalize securities.

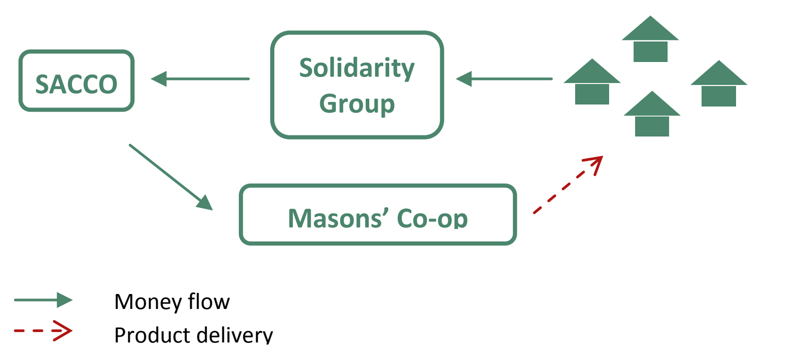


Figure 8-1. Diagram of the SACCO sanitation lending model in Rwanda

8.6 Sanitation loan access

Fifty-one people have applied for the loan (in three solidarity groups). Two people were removed because the SACCO had bad experiences with them previously or felt they didn't have the capacity to repay the loan. The first group to apply was a group of 18 households from Kajevuba cell, one of three cells in Ntarabana sector. Of these 18 households, 17 of them have been accepted and the toilets have been built. The one household who did not quality already had a "new and good" latrine according to Boundless and the SACCO during household visits investigating if clients who opted to provide local materials or dig the pit themselves were prepared for loan disbursement to the masons' co-op to complete latrine construction.

In the RMA, all respondents said they would prefer to pay for the latrine by monthly payments through a bank. However, 87% said they felt they could repay a loan, while 13% said they could not afford to repay. While these households are outside of the scope of this sanitation lending approach, they may be eligible for the government Vision 2020 program. Additionally, in the RMA, 73% reported they were willing to save for an improved latrine and this idea was backed by the local Vision 2020 manager who said mattresses were previously purchased through a savings strategy. This suggests that a toilet savings scheme may be a promising option for some households unable to access credit to purchase a toilet.

8.7 Sustainability and scalability

The idea of the pilot program is to gain sector and district interest and share results with other sectors and districts to bring the idea to scale. This is an opportune time as there is a culture of microfinance in the rural areas and local leaders have been involved in trainings and awareness campaigns about microfinance. It is hoped that W4P and Boundless involvement in the scheme will be market-driven in the future based on a successful pilot. The current and anticipated future roles and responsibilities for the sanitation lending scheme is presented in the table below. In addition to creating the initial spark for sanitation lending by connecting stakeholders and incentivizing the lender, Boundless (supported by W4P) promoted the toilet loans to households in the pilot. In the future, marketing will be the responsibility of the masons' co-op and the lender. To facilitate this transition, W4P is encouraging the SACCO to talk to customers about the sanitation loans and the masons' co-op has agreed to include a 1,000-2,000 RWF (app. 1.50-3 USD) marketing fee for every toilet to be paid to the existing community health workers to promote the idea of purchasing a toilet, through a loan if needed.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Connect stakeholders (HHs, local authority, gov, SACCO, masons)	Boundless/W4P	W4P	Market-driven	Market-driven
Incentivize lenders	Boundless/W4P	W4P	Market-driven	Market-driven
Market sanitation to households	health workers	government	health workers	government
Market the loans to households	Boundless/health workers/sector campaign	W4P	health workers/ sector campaign	Masons/SACCO/ government
Monitor and evaluate the approach	health workers	government	health workers	government
Appraise, disperse & follow-up loan	SACCO	SACCO	SACCO	SACCO
Designate contractor to build latrine	SACCO	SACCO	SACCO	SACCO
Pay builder after latrine completion	SACCO	SACCO	SACCO	SACCO

W4P is not visible in the lending scheme. The approach is led by Boundless and SACCO-Inganza. The sector authorities and the SACCO are aware of W4P's involvement, but at the household-level this is a business approach, not an NGO approach, in the hope that it will sustain and even improve over time through market-based incentives. In order to encourage a smooth exit for Boundless, the SACCO loan officer is working closely with Boundless in this pilot phase in order to take over their role after 1,000 toilet loans.

8.8 Monitoring and evaluation

W4P is coordinating with government community health workers who monitor the toilets recently constructed through the SACCO sanitation loan program. The health workers visit households each month and submit monthly reports to the sector government which includes sanitation, among other health-related monitoring. Additionally, W4P recently conducted a customer satisfaction survey to help the SACCO and sanitation entrepreneurs improve their approach, as well as provide information to neighboring sectors to spark replication without additional external investment (market-driven). The following results were revealed through the study:

- All clients reported that they are satisfied with the sanitation loan
- 95% of clients felt the price was affordable (the other 5% were neutral on this point)
- All respondents agreed that the latrines were installed efficiently and are high quality
- 28% felt the construction was complete, while 28% were neutral and 44% felt it was incomplete. This appears to be due to a lag in the supply chain from the door supplier to the masons
- All respondents said they would request the same services in the future and 94% said they would definitely recommend the service to another customer (6% said probably)
- 67% of customers learned about product providers through a sector-level campaign/meeting, indicating the potential for linking with larger existing campaigns

- 78% of the clients earn between 30,000 and 60,000 RWF (app. 45-90 USD) per month, with 17% earning less than 30,000 RWF monthly and 5% earning between 60,000 and 100,000 RWF per month. This suggests that lower-income (<1.50-3 USD/day) clients are being reached through the loans

8.9 Lessons learned

The sanitation lending pilot is still young. Accordingly, lessons learned to date are preliminary based on only the initial program phases. Additionally, the context of Rwanda and the areas where the sanitation lending strategy is being piloted have a strong influence and should be considered in the transferability of lessons. However, with these caveats in mind, the initial lessons learned include:

Ensure transparency. SACCO-Inganza deducted fees that were unclear to Boundless and borrowers when applying for the loan. As a lesson for identifying future lending partners, clear communication of fees and high transparency are important characteristics to consider in partner selection. SACCO-Inganza's sanitation loans have a fairly low transparency rating of 53-57% and more transparent pricing should be encouraged with transparency ratings of 80% or higher. Lobbying for national regulations to support transparency is another area where NGOs, such as W4P, may be able to leave a larger-scale impact.

Coordinate with government partners. The involvement of district partners has contributed to the success of the lending scheme and increases the likelihood for sustainability and scale. The government Vision 2020 program appears to be complimentary to sanitation as a business and sanitation microfinance as it addresses the sanitation needs of the population unable to purchase a latrine through credit or otherwise. The district government also plays a crucial role in the facilitation and enforcement of lending agreements between the solidarity groups and the SACCO. Additionally, district health workers have an incentive to promote sanitation in general and provide an existing avenue to promote the sanitation loans. So far, this approach provides an example of a complimentary partnership with local government in sustaining sanitation microfinance.

9. Uganda

9.1 Context

Sanitation in Uganda

National sanitation coverage	35%
Rural sanitation coverage	*35%*
Urban sanitation coverage	*34%*
Increase in coverage since 1995	17%
On-track to meet MDGs?	no

Sanitation coverage in Uganda is estimated at 35% nationwide and the country is not on-track to meet the 2015 sanitation MDG.[7,8] The cost of poor sanitation to Uganda's national economy is estimated at 177 million USD annually, equating to 1.1% of the GDP.[24] WHO estimates an investment of 1.35 billion USD needed to meet the sanitation MDG in Uganda.[9]

Specifically, in Kapchorwa district where W4P first piloted sanitation microcredit, there are approximately 120,000 households and while official figures suggest that there is 61% sanitation coverage in the area, the actual condition of the latrines is quite poor as they are mainly constructed from mud and river grass which has to be repaired annually due to the harsh mountain conditions (elevation over 2500m). Taking this into account, W4P estimates that the market for improved sanitation in the area is about 80-90%.

Microfinance in Uganda

Population[11]	34.5m
GNI per capita[12]	$510
Loans[13]	295.9m
Active borrowers	289,186
Deposits	322.3m
Depositors	539,279

The microfinance sector in Uganda is growing and stable due to a strong market enabling environment, economic stability, and sound international donor commitment.[15] Microfinance started in Uganda in the early 1980s when a number of NGOs piloted microfinance programs as a means to create social impact through access to financial services, and the sector has grown since. The main microfinance providers in Uganda are commercial banks, credit institutions, microfinance deposit-taking institutions (MDI's), savings and credit cooperative organizations (SACCOs), and non-governmental organizations (NGOs).[15]

Within the formal microfinance sector in Uganda, there is a well-established regulatory environment with clearly defined legislation regulated by the Bank of Uganda. Because of the strong regulations, many MFIs choose to remain in the informal sector, and the majority of microfinance service providers including SACCOs and informal NGO-MFIs, are unregulated. This has resulted in a number of scams involving SACCO managers stealing members' deposits.[14] **Error! Bookmark not defined.**

There is a private credit bureau in Uganda, called Compuscan, which is used by most formal financial institutions, but their high costs deter smaller lenders from accessing data.[14] Additionally, because the majority of outstanding loans in Uganda are provided by SACCOs, Compuscan has been unable to effectively provided information on over-indebtedness or clients with multiple loans since they have very limited coverage of the informal sector.

9.2 W4P sanitation microfinance program background

In Uganda, W4P has contracted the BDS provider Captiva to coordinate SaaB. W4P and Captiva are working in a number of rural locations, but the first experiences with sanitation microcredit are from Kapchorwa district in Eastern Uganda. Starting in August 2012, they partnered with a Kapchorwa-based SACCO, called KOSACCO, to provide household loans of 400,000 UGX (app. 150 USD) for improved pit latrines. The loans were to be repaid in 24 months, with a 2-month grace period, although a 6-month loan term was reported in recent monitoring visits and the actual payback period is unclear. They carry 0% interest with no fees, resulting in a pricing transparency of 100%.[16] To date, 48 sanitation loans have reportedly been disbursed through KOSACCO, though only 24 have been verified by W4P based on latrine construction. All the sanitation loans are provided to individuals or institutions; although group loans are common in Uganda, group loans are not available in the sanitation loan pilot due to high monitoring and management requirements. Repayment is unclear due to insufficient tracking, but is likely 50% or lower.

Expanding on the initial program in Kapchorwa, W4P and Captiva began working with six additional SACCOs: Asamuk, Kamuda, Wera and Ejok in Soroti district, Nkokonjeru in Mukono, and Zibumbe SACCO is pioneering sanitation lending in western Uganda, in Kamwenge. The new sanitation loans are typically 615,000 UGX (app. 235 USD) based on increased transport costs as well as labor costs that reflect the level of commitment and skills required for quality latrine construction. The loan-term ranges from 6-12 months, based on the SACCOs' perspective that a shorter term is lower risk. All the new SACCOs are charging interest, typically 2% monthly (flat), as well as varying amounts of fees, and mandatory savings as a general requirement to be a SACCO member. Loan terms, and hence pricing transparency vary between the SACCOs. Repayment rates are unknown as the first loan payments are not yet due. At least 14 loans have been provided through the new SACCO partners, with nine in Kamwenge. There may actually be more loans disbursed, but the status of some latrines is unclear due to collapsed or oversized pits where households are not expected to start repayment. One of the newer SACCOs also reported confusion regarding the pre-constructed latrine superstructures delivered by suppliers since the SACCO did not pay for them and the financing source was unclear.

Location	*Kapchorwa district (rural)*	*Soroti, Mukono, Kamwenge (rural)*
Lending partner	*KOSACCO*	*6 additional SACCOs*
Program start date	*August 2012*	*August 2013*
Sanitation product	*improved pit latrine*	*Improved pit latrine*
Interest	*0%*	*2% monthly (flat)*
Transparency	*100%*	*varies*
Loan term	*6-24 months (unclear)*	*6-12 months*
Average loan amount	*400,000 UGX (app. 150 USD)*	*~615,000 UGX (app. 235 USD)*
Lending method	*Individual*	*Individual*
Number of applicants	*53 (unclear)*	*unknown*
Number of loans	*24 (additional unclear)*	*14+ (unclear)*
Repayment	*<50% (unclear)*	*not yet due*
W4P start-up capital	*5,000 USD (2-year interest-free loan)*	*3m UGX (app. 1,150 USD) +*

9.3 Identifying and incentivizing lenders

In order to initiate sanitation lending in Kapchorwa, Captiva and W4P met with two local SACCOs, KATOSBEC and KOS-KOSSEN SACCO (KOSACCO), each with over 1,000 clients and willing to partner with W4P to offer a sanitation loan product to their members. Captiva selected KATOSBEC based on their popularity within the community compared to KOSACCO.

Captiva met with KATOSBEC and the partnering sanitation product providers/entrepreneurs to discuss plans moving forward and make a formal agreement. Captiva presented the idea of the SaaB model, including the paradigm shift away from the typical NGO "hand-out" model, and it was agreed that the product providers would be responsible for marketing the latrine with training from Captiva, and KATOSBEC SACCO would be responsible for the financing aspects of household lending so clients could purchase the latrine. Unfortunately, the following month, KATOSBEC decided not to offer sanitation loans as three of their 10 board members did not agree with the market-based approach and felt toilets should be given to households for free under the understanding that sanitation is a human right. As a result, Captiva and W4P partnered with KOSACCO despite some hesitation based on client feedback that included rumors of dishonesty, though no evidence or specific instances were noted.

SACCO incentives to offer sanitation financing: common reasons given by SACCOs for offering a sanitation loan product are health and productivity-based. SACCO management have reported that every household should have an improved toilet as this leads to improved health and productivity which SACCO management found important because they are also members of the community. Zibumbe SACCO reported a more business-oriented motivation, saying they see sanitation loans as an opportunity to grow their loan portfolio and membership in general. They contributed to the loans by managing the contracting process for pit digging and supporting demand creation, such as radio announcements. However, along with the SACCOs' apparent willingness and ability to invest in a sanitation loan product came expectations that Captiva (funded by W4P) would provide financial support through capitalization loans to boost their portfolios. Accordingly, many of the SACCOs are currently awaiting financial support before moving forward.

9.4 Facilitating lending start-up

The abilities of SACCOs to invest in sanitation loans depends on the capital available in their portfolio as well as willingness and abilities of community members to purchase latrines on credit and repay the loan. A lack of capital seems to be the biggest challenge for rural SACCOs developing a sanitation loan product.

Providing seed capital

"Capitalization" (providing the necessary capital) was identified as a key barrier for KOSACCO's development of a sanitation loan product. In response, an agreement was signed August 2012 between W4P and KOSACCO for a 5,000 USD loan repayable as a lump sum after two years at 0% interest. The agreement includes the construction of 48 toilets which, at around 150 USD per latrine, the 5,000 USD loan will not cover and KOSACCO is expected to revolve the fund so that over the two years, more loans can be given out from the repayment. In addition to the 5,000 USD capitalizing loan, W4P also subsidized research and development for the latrine model, masons' training for latrine construction, marketing, and organizational support to set-up the loans. The process was coordinated by Captiva.

Based on the sustainability challenges of providing KOSACCO with an interest-free loan (as discussed subsequently in the section on sustainability) additional SACCOs joining the program are now required to self- or co-capitalize, with W4P mainly supporting technical and operational training. However, the new SACCOs have invested very little, if anything, in the sanitation loans and are awaiting capitalization and guidance from Captiva as they are unsure how to initiate and manage the new loan product and expectations have not been clearly defined regarding financial support.

Training

In order to support the SaaB program in Kapchorwa, including the sanitation lending program, Captiva held a training session for SACCO staff, four carpenters and 25 marketers responsible for building and marketing the latrines, respectively. The training was intended to achieve the following:

- Provide the SACCO, marketers and carpenters with a harmonized understanding of the SaaB model;
- Give the marketers knowledge of the latrine product and skills on how to market it;
- Determine the monitoring mechanism and clarify roles and responsibilities of each party.

During the training session, a number of issues were discussed including the need for improved sanitation, the willingness of people in the area to pay for this need, and the strategy of working through the SACCO to develop a loan product to improve households' purchasing power. After the initial training workshop, Captiva felt KOSACCO, marketers and carpenters could see the potential income for all the players in the market as a business opportunity in addition to providing a social good in their own communities. Nevertheless, SACCO training on loan and data management was insufficient based on experiences over time. Accordingly, each of the new SACCOs should be trained by Captiva regarding how to select appropriate sanitation technologies and masons to connect with, as well as operational support including templates and guidance to support information management. This process has been unclear, however, and SACCOs report feeling unsure of how to progress, suggesting inadequate training and communication. There are MOUs between the BDS and some of the SACCOs which outline who will contribute what and how many latrines should be constructed, but *how* the process should unfold is not included.

9.5 Loan disbursement & construction

Loan applications were received from 53 households soon after program inception, indicating a high level of demand for the latrines and sanitation loans. However, as of August 2013 (one year after program inception), of the 48 latrines reportedly purchased through the sanitation loan program, 24 were in use, 12 delivered to clients, but not installed, and 12 constructed, but not delivered to clients despite the installation deadlines having past months previously. Six of the 12 delivered latrines were not installed due to pits that caved-in due to improper excavation, and poor road conditions due to heavy rains were reported as the reason for the 12 undelivered latrines stored at the SACCO office.

Additionally, KOSACCO started receiving complaints about the quality of the latrines constructed. They would like to offer more sanitation loans, and had 51 pending applications as of April 2013, but due to these challenges with construction, they suspended applications and promotions in order to focus on clearing the backlog of incomplete latrines. To support this process, Captiva hired a mason from the town of Mbale about 60 km away to install the superstructures and remedy this issue. However, there are sustainability issues with this solution that will need to be addressed for the long-term.

With the new SACCOs, Captiva is hoping to address the challenge of construction quality by training more masons for the SACCOs to select from, creating competition between providers. Additionally, one mason in Soroti and the technical school in Kamwenge are offering a one-year guarantee on the latrines, providing reassurance to both the household and the SACCO. In all the current lending models, the SACCO should be responsible for selecting and monitoring the masons, which the SACCO will pay directly instead of the household receiving the loan in cash (Figure 9.1). During monitoring visits, however, it became clear that this process is not well-defined and masons had delivered pre-constructed latrines to SACCO offices which the SACCOs did not select or pay for, and weren't sure what to do with. Additionally, there have been a number of latrines delivered that are not usable, and hence repayment has not started, due to collapsed or over-sized pits and technical support and incentives are needed to ensure proper pit construction.

One challenge identified in the construction process has been households and masons digging oversized pits which results in increased slab costs. At program inception, W4P concentrated on design of the latrine superstructure, but experiences have highlighted the importance of ensuring accurate dimensions of the latrine pit. Latrine pit excavation has now been included in masons' training in Kamwenge.

Figure 9.1. Diagram of the sanitation lending model in Uganda

9.6 Sustainability and scalability

Currently W4P is providing substantial support in the form of technical and operational training, and in some cases financing seed capital through Captiva who is also paid for by W4P. With the goal that this initial support results in a model that can sustain without W4P intervention and be scaled without additional support, W4P is searching for an exit strategy where sanitation lending will continue independently. Accordingly, sanitation lending needs to be a profitable business with market-based incentives in place.

Profitability of sanitation lending

For sanitation financing to be profitable, borrowers must repay the loans and lenders must charge sufficient interest/fees to cover their operational costs. In Kapchorwa, because no clear repayment schedule was developed and shared with households, clients are depositing repayments in varying amounts almost at random, making the repayment rate difficult to track. Unfortunately, KOSACCO would not be able to cover operational expenses to manage the loans regardless of repayment rates due to the fact that they are not charging interest. In a board meeting with SACCO members, it was determined that because an NGO was behind the initial loan capital and they were not charging interest to KOSACCO, KOSACCO should not charge interest to households despite the original plan to charge 3% per month. KOSACCO intends to cover transaction costs for the sanitation loans by supplementing from other interest-bearing loans such as the agriculture loans they offer. This need to cross-subsidize in order to offer a sanitation loan product greatly reduces the incentive and sustainability of SACCO lending for latrine construction. Because interest is not being charged on the sanitation loans, it is unlikely that this lending model will be revolved or replicated beyond the original agreement with W4P. This is an interesting lesson learned in structuring future arrangements with SACCOs and if the intent is to test a model that scales-up and is sustainable via the incentives created through interest rates, then the initial agreement may need to be more explicit about this arrangement. Otherwise, without those incentives in place, like in Kapchorwa, it is unlikely that the project will grow beyond the scope specified in the original agreement.

Learning from this experience, the new SACCOs coming on board, which should be co- or self-capitalizing, should treat the sanitation loan like any other loan product they offer. So far, these arrangements are hazy and in most cases the SACCOs do not have a clear plan to initiate and manage the sanitation loan product.

Scaling up – addressing the lack of capital

Nkokonjeru SACCO in Mukono approached Captiva of their own accord with an interest in offering sanitation loans suggesting potential for scale-up. However, it is still unclear if the incentives behind this demand are market-based or because an NGO is visible and seen as a source of funding. Assuming SACCOs are interested in offering sanitation loans for market-based reasons, lack of capital is still a dilemma.

As a potential longer-term solution to capitalizing SACCOs, Captiva is in communication with KIVA to discuss the idea of them capitalizing SACCOs in Uganda. In the proposed arrangement, KIVA would provide the new SACCOs in the program with a loan to support initial lending for a household sanitation loan product, with the idea to scale-up and include more SACCOs in the model. Captiva will manage the process, but KIVA will not provide funding for their role. The unknown source of funding for Captiva's involvement once W4P exits from the lending model begets questions of sustainability which will need to be addressed for long-term impact and scale.

There may also be an opportunity to capitalize SACCOs through national sources, specifically the Micro-finance Support Center (MFSC). MFSC has funding to capitalize SACCOs through low interest loans and have the capacity to evaluate, train, and monitor SACCOs themselves and in partnership with the Uganda Cooperative Savings and Credit Union Ltd (UCSCU). They currently lend at 9% annually over 2 years and have around 60 billion UGX (app. 23 million USD) to support capitalization of environmentally-focused loan products, which sanitation falls under. MFSC and UCSCU already have experience supporting SACCOs in the start-up process including trainings such as loan appraisal and risk management. These collaborations are key based on the fact that UCSCU and MFSC are important microfinance players in Uganda. The anticipated transition from W4P to integrated market players, such as MFSC and UCSCU, is presented in the following sustainability matrix, though a clear plan and progress toward this transition is still needed.

Functions[18]	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Provide seed capital	Captiva	W4P	MFSC, KIVA	MFSC, KIVA
Train SACCO staff	Captiva	W4P	UCSCU	UCSCU
Market the loans	SACCO, Captiva	W4P	SACCO with UCSCU support	SACCO with UCSCU support
Manage KIVA loans to SACCOs	Captiva	W4P	??	??
Promote sanitation lending to SACCOs	W4P/Captiva	W4P	Market-driven	Market-driven
Manage & monitor latrine providers	Captiva	W4P	Market-driven	Market-driven
Connect SACCOs with latrine providers	Captiva	W4P	Market-driven	Market-driven
Track & report sanitation loan status	W4P/SACCO	W4P	SACCO	SACCO
Externally monitor & evaluate	W4P	W4P	UCSCU, MFSC	UCSCU, MFSC

9.7 Monitoring and evaluation

One of the biggest challenges in the process of piloting the SACCO sanitation lending model, and trying to learn from it, has been poor monitoring and information management. Initial findings from customer satisfaction surveys in Kapchorwa showed discrepancies between what the enumerators found and what KOSACCO was reporting, particularly with respect to the status of latrine construction post- loan approval. This points to the larger issue of the need for more robust monitoring and verification systems to provide dependable figures. Monitoring is often a weak point with SACCOs and a reliable system is needed that is not overly detailed or cumbersome. This is particularly important in pilot phases if the model is to be shared more widely as an example to other SACCOs and potential lenders for secondary lending schemes such as MFSC.

Captiva further suggests that ineffective monitoring contributed to the poor loan repayment in Kapchorwa and hopes additional monitoring will increase repayment rates as well. Captiva felt local support was needed to monitor the program. Initially, the plan was to recruit and pay local SaaB coordinators to promote and monitor the sanitation lending activities. Based on the sustainability issues of managing and continuing payment to local coordinators, W4P is now looking to work with government-employed district extension workers to include the new sanitation product in their existing monitoring efforts at the district-level. Captiva and W4P are discussing the possibility of adding a few key indicators, specific to sanitation and sanitation loans, to their monitoring activities. On a larger-scale, MFSC and UCSCU are both lending and monitoring agencies and may be able to support monitoring on a broader-scale.

In an attempt to capture evidence of the success (or failure) of SACCO sanitation lending models in Uganda, W4P is hoping to start tracking the following indicators on a monthly basis: (1) number of approved loan applicants, (2) loan recovery, (3) number of latrines constructed, (4) loan default rates, and (5) the SACCOs investment in sanitation loans. However, this has required W4P staff themselves to conduct field visits to gather monitoring data and a more sustainable mechanism is needed. In the short-term, Captiva has provided the SACCOs with a monitoring template, which they are supposed submit to Captiva each month. For the longer-term, MSCL and UCSCU may be best suited to provide external monitoring. However, adequate capacity building to support SACCOs' ability to effectively track loans and self-monitor is still needed.

Unfortunately, regardless of the lack of accurate monitoring, experiences with KOSACCO do not provide evidence for sustainable and scalable sanitation lending due to sustainability concerns based on low repayment and the fact that interest is not charged. However, it is hoped that experiences with the other four SACCOs will provide sufficient information to (1) create a proven ‘package’ outlining how to develop and manage a new sanitation loan product that other SACCOs can adopt, and (2) provide evidence in order to engage additional stakeholders. For this reason, accurate monitoring will be crucial as experiences unfold with the new SACCOs in the program, in addition to capacity building and support from loan product development to loan tracking and recovery.

9.8 Other sanitation microfinance experiences in Uganda

The NGO Habitat for Humanity Uganda offers home improvement loans in the central region. They have 858 borrowers with a portfolio of 265,508 USD. The loan amounts range from 100,000 to 3 million UGX. Financing is provided for 4-24 months with an annual nominal interest rate of 24-60% (flat). The full APR for the loans is 47.7-58.5% for a transparency of 47%.**Error! Bookmark not defined.** All the loans are provided to individuals who have a business, home, or land, and are a salaried worker limiting access to these loans for most of the clients targeted for sanitation loans.

Water.org offers sanitation loans through MFIs around Kampala and plan to scale-up countrywide. They provide a variety of capacity-building grants to financial partners, which they call “smart subsidies” because they are targeted at activities that support MFIs entering the water and sanitation market, including capacity building. These activities include: water and sanitation market assessments; baseline client demand surveys; loan product development, structuring, roll-out and marketing; sanitation and hygiene education and related community-based outreach; and water and sanitation loan tracking technology such as MIS software. Water.org also invests smart subsidy capital in external monitoring, auditing, and evaluation of its partner institutions. Rather than subsidizing interest rates the program aims to build MFIs’ capacity to access capital from commercial sources. They also work in India, Bangladesh, and Kenya.[25]

9.9 Lessons learned

A clear and proven SACCO sanitation lending ‘package’ is needed. All the SACCOs report being unsure of how to progress in the development and management of the new sanitation loan product and more capacity building and guidance is needed. . Creating new sanitation loan products may take some time and a great deal of creativity and financing. From the SACCO perspective, developing a new loan product is resource-consuming and risky. In order to reduce resource-needs and mitigate risk, a ‘package’ including guidance and tools to develop and manage sanitation loans based on empirical evidence is needed. Developing this package will take time, but is an area where W4P and Captiva may be able to leave a lasting impact without providing continued support.

Commercial partners should be the real face of microfinance products. The commercial partners such as MFSC that lends to SACCOs needs to be encouraged to be the lead on microfinance product development and implementation. A stronger impression needs to be created that the sanitation loans are provided on a commercial basis by a commercial partner. Equally of great importance is for the SACCOs to own and lead the entire process and every stage in order to instill ownership of the sanitation loan product. Knowledge of W4P involvement in the lending schemes led to SACCO expectations that W4P would cover associated costs of providing sanitation loans; a scenario that could not be sustained long-term or brought to scale.

SACCOs need capacity building. A formative evaluation conducted in July 2013 concluded that there appears to be a great deal of interest by SACCOs to offer sanitation loans and they are a logical link to the community as they are part of the communities they serve. However, SACCOs often require additional support to offer a sanitation loan product. This may include training on how to promote sanitation loans and/or linking SACCOs with existing community awareness campaigns, training on how to effectively track loans including a strong and practical MIS and data collection methods, and technical training on how to select partnering product providers and manage and verify latrine construction if they will not be giving cash directly to households.

Avoid interest-free loans. The interest-free loan provided to KOSACCO resulted in low incentives for KOSACCO to continue offering sanitation loans or even adequately track repayment. Learning from this experience W4P-Uganda is now requiring SACCOs to co-finance and trying to connect them to more permanent sources of lending capital such as KIVA and national lending bodies to increase lending capacities.

Sanitation product providers need incentives. Encouraging competition between sanitation product providers in an open market-driven structure may increase the likelihood for timely and high quality construction. Captiva/W4P subsidies to selected masons may create unsustainable incentives and distort the market. One example of this is where one mason refused to fill-in the oversized pit to properly fit the slab because "the BDS did not pay for that". This does not represent a healthy sanitation market with market-based (not NGO-based) incentives.

Monitoring incentives are needed. Despite incentives for W4P to monitor and evaluate the sanitation loan program, a gap exists in market-based incentives to track information and cash flow that has resulted in inaccurate data from the SACCOs and BDS. Incentives are needed to ensure adequate information management. With MFIs, there is an incentive to accurately track cash flow in order to maintain a professional reputation and ensure positive cash flow to stay in business. These market-based incentives appear to be lacking in the SACCO and BDS monitoring in Uganda representing a substantial threat to sustainability and the ability to document evidence of sanitation lending to incentivize additional stakeholders to participate in the sanitation lending market. MFSC and UCSCU may be able to provide SACCOs with external incentives and training to adequately monitor the loans as part of their current lending model and this should be considered as agreements move forward with them.

Partner with existing national bodies. MFSC and UCSCU present an opportunity for large-scale partners and experience-based guidance based on their work with SACCOs across Uganda. If they adopt the SACCO sanitation lending model, sustainability and scale will be much more likely. Accordingly, efforts should be made to connect and partner with them in the sanitation loan development process, beyond simply viewing them as a capitalization source.

Communication between program components is needed from the beginning. One of the challenges W4P faced was in bringing all the different program elements together, between technology development, quality control, follow-up, etc. Improving communication between program elements has been a key lesson-learned and a new focus for improvement.

10. SYNTHESIS

This section presents a synthesis of experiences and lessons-learned from W4P's sanitation microfinance approaches in seven countries in order to support learning in the nascent sanitation microfinance sector. General recommendations are presented, but the context of each country should be considered when reviewing. A brief summary of sanitation access and the microfinance environment in each country is included below with further details presented in the preceding sections. The subsequent discussion includes synthesized considerations for initiating, sustaining and monitoring sanitation microfinance programs. The section concludes with a brief review of lessons-learned from other organizations' sanitation microfinance experiences.

10.1 Context

Sanitation coverage

Sanitation coverage in the seven countries ranges from 35% in Uganda and India to an estimated 80% in Guatemala (Table 10-1). However, the reality is often considerably worse as these values do not necessarily reflect functionality or use. Not surprisingly, coverage is also typically worse in rural areas compared to urban centers, other than Malawi and Uganda where rural coverage is actually slightly higher, and Rwanda where it's estimated as equal. Despite increases in coverage since 1995 ranging from 19% to 41%, of the seven countries, only Peru and Guatemala are on-track to meet the 2015 sanitation MDG.

Unfortunately, the cost to meet the MDG is prohibitive in most countries. In total, for all seven countries, the estimated investment needed to meet the 2015 sanitation MDG is 27.7 billion USD; an amount well beyond currently available resources. In addition to the sustainability challenges of subsidized sanitation intervention, the SaaB program aims to support market structures that will improve the efficiency and effectiveness of investment, thus reaching more people. Microfinance can support this aim as described in a 2008 Bill & Melinda Gates Foundation study because "use of microfinance makes it possible for cost recovery to be linked to private benefits, thus freeing up public resources for the poorest, and for activities with clear public benefits."[35] Basically, microfinance can attract additional funding sources, including household investment, through market-based structures.

Table 10-1. Sanitation coverage and investment needs by country

Country	Sanitation coverage (2011)[7] Urban	Rural	National	Increase since 1995[8]	On-track to meet MDG[8]	Cost to meet MDG[9]
Bolivia	57%	24%	46%	22%	no	$1.13b
Guatemala	88%	72%	80%	35%	yes	$58m
India	60%	24%	35%	19%	no	$24.7b
Malawi	50%	53%	53%	26%	no	$103m
Peru	81%	38%	72%	24%	yes	$285m
Rwanda	61%	61%	61%	41%	no	$114m
Uganda	34%	35%	35%	17%	no	$1.35b
					TOTAL	**$27.7b**

Microfinance environment

The financial environment varies greatly between the seven countries (Table 10-2). Average income varies from 360 USD in Malawi to 5,150 USD in Peru, suggesting greater purchasing and borrowing power of the lower-income market segment in Peru for *desirable* sanitation products. Microcredit is much more common in Peru and Bolivia than the other countries, with approximately 12.2% and 9.9% of the population, respectively, actively borrowing money from registered microfinance service providers, compared to less than 1% in Rwanda and Uganda. It should be noted that there are likely a number of active borrowers not included in the MixMarket values in Table 10-2 that are clients of unregistered microfinance service providers, but these values provide a general comparison of the formal microfinance sector in each country.

The enabling environment for microfinance, including the regulatory framework and practices, the supporting institutional framework, and political stability, can have a strong influence on sanitation microfinance success. In order to compare the microfinance environment in various countries, a ranking system was developed by the Economist Intelligence Unit based on the previously mentioned enabling factors with a maximum score of 100.[14] Based on their ranking system, they scored the enabling environment for microfinance in 55 countries, including all the countries included in this study except Malawi. Peru was ranked the highest of all 55 with a score of 79.8, followed by Bolivia at 71.8. Guatemala ranked 31 of 55 with the lowest score of the countries included in this report at 41.4. Although Malawi was not included in the rankings, a low score is likely, given the fact that in general, microfinance regulations are ineffectively enforced and pricing transparency is a challenge including loans with a number of undisclosed additional charges.[15]

Differences in the enabling environment suggest that context-specific approaches are needed. Contextual factors may include local microfinance regulations, lending structures, prevalence of microcredit, availability of lending capital, average household financial capacity, household demand for sanitation, and the supply-chain for affordable sanitation products. For example, in Peru where there is a strong microfinance environment, guarantees, capitalization or financial capacity building may not be necessary, while in a country like Rwanda or Malawi, additional support to facilitate sanitation lending may be needed. Microfinance regulations should also address contextual needs as, for example, aggressive marketing strategies can result in families accepting credit beyond their needs and ability to repay, resulting in associated societal consequences, particularly in environments with low education and income levels.

Table 10-2. Microfinance environment by country

Country	GNI per capita (USD, 2011)[12]	Population (mill, 2011)[11]	Active borrowers[13] as % of population	Active depositors[13] as % of population	Microfinance environment ranking (100 = highest)[14]
Bolivia	2,020	10.1	9.9%	19.8%	71.8
Guatemala	2,870	14.8	2.6%	~0%	41.4
India	1,420	1,241	2.1%	0.2%	45.7
Malawi	360	15.4	1.0%	3.2%	unavailable
Peru	5,150	29.4	12.2%	11.9%	79.8
Rwanda	570	10.9	0.7%	3.2%	48.6
Uganda	510	34.5	0.8%	1.6%	51.6

10.2 Summary of W4P experiences with sanitation microfinance

W4P has employed diverse approaches to develop sanitation microfinance, working in both rural and peri-urban settings and partnering with a wide range of microfinance service providers (Table 10-3). Additionally, various programs are being piloted within Bolivia, Guatemala, India, and Uganda allowing for comparison within the same national environment. W4P has also provided varying degrees of financial, technical, and promotional support and capacity building, which offers an opportunity to assess the impact of different support mechanisms. The approaches to date have been based on the local context and microfinance environment, as well as a desire to pilot new ideas to learn how best to foster sustainable sanitation microfinance programs.

The sanitation lending programs are in various states of maturity, from a couple months to over four years since program inception, with a client base ranging from five to over 6,000 households. Loan sizes also vary greatly, from an average of about 24 USD in South 24 Parganas, India to 1,800 USD in Peru. The payback periods range from six months to four years with an average term of about 18 months. Interest rates across the sanitation loans vary greatly: from 0% to 36% annually, most calculated using the declining method. Considering fees, interest calculation method and mandatory savings, pricing transparency ranges from 50% to 100%, plus one loan product in India that has a transparency of 0% based on fees that are charged on an interest-free loan.[16] This difference also reflects variance in the microfinance environment as low transparency is often the result of non-existent or ineffective policies and a culture of low-transparency lending within the local market. Loan repayment is high for most programs, although repayment has been a serious challenge for some, with the lowest repayment in Kapchorwa, Uganda: likely less than 50% though concrete figures are unavailable due to limited information management.

The following sub-sections discuss each approach in more detail, including lessons-learned, specifically focusing on:

- How lending institutions were identified and incentivized;
- How W4P facilitated sanitation lending start-up;
- Household access to the sanitation loans;
- Methods of loan disbursement and construction;
- Sustainability and scalability; and
- Monitoring and evaluation.

Guidance and recommendations based on these lessons are presented in Section 11.

Table 10-3. Summary of W4P-supported sanitation microfinance approaches

	Bolivia				Guatemala		India			Malawi	Peru	Rwanda	Uganda	
Location	Cochabamba			Tiraque	Santa Cruz del Quiche		South 24 Parganas	Murshidabad	Bihar	Blantyre	Arequipa	Ntarabana	Kapchorwa	Various
Area	urban			rural	rural & urban		rural	rural & urban	rural	urban	urban	rural	rural	rural
Lending partner	NGO	sanitation business	MFIs, SACCO	municipality, water board	NGO	2 large SACCOs	NGOs & CBOs	SHG fed. & MFI	MFI	bank	large SACCO	SACCO	SACCO	6 SACCOs
Start date	2009	2012	in progress	Sep 2012	Dec 2012	in progress	2007	May 2010	Dec 2012	Sep 2011	Mar 2013	May 2013	Aug 2012	Aug 2013
Sanitation product	EcoSan	EcoSan/ various	various	EcoSan	EcoSan, various	various	various	various	various	various	biodigestor & septic tank	EcoSan & biogas	pit latrine	pit latrine
Number of loans	8	4	N/A	16	12	N/A	6,000	450	20	25 groups (210 HHs)	5	17 (48 approved)	24	14
Number of applicants	unknown	unknown	N/A	unknown	17	N/A	unknown	450	30+	30 groups	100+	51	53	unknown
Average loan amount	$950	$1,135	will vary	$440	$225	N/A	$24	$100	$265	$150	$1,150	$110	$150	$235
Lending method	individual	Individual	mostly individual	individual	individual	individual	group	SHG	group	group	individual	group	individual	individual
Loan term	1-4 years	1 year	will vary	4 years	6-12 months	6-18 months	12-18 months	18 months	18 months	6-12 months	18-36 months	9-12 months	6-24 months	6-12 months
Payment frequency	monthly	monthly	monthly	yearly	monthly	monthly	monthly	monthly	monthly	monthly	monthly	monthly	monthly	monthly
Annual interest rate	13% (declining)	24% (declining)	18-24% (declining)	<1% (inflation)	18-24% (flat)	36% (declining)	0%	18% (declining)	18% (declining)	24% (flat)	30% (declining)	24% (declining)	0%	24% (flat)
Transparency	84-95%	100%	will vary	100%	50-53%	will vary	0-100%	73%	<1%	52-59%	90%	53-57%	100%	varies
Repayment	70%	unknown	N/A	not yet due	98%	N/A	unknown	90%	100%	88%	100%	100%	<50%	N/A
W4P start-up capital	$0	$0	$0	$4100 donated	$25,000 donated	$20,000 loan (~4% APR)	$135,000 donated	$5,000 donated	$8,000 guarantee	$20,000 guarantee	$0	$0	$5,000 loan (0% APR)	$1,200+ loan (0% APR)

10.3 Identifying & incentivizing lenders

Identifying a lending partner

On a global level, W4P has worked with a wide range of microfinance service providers, including:

- NGOs in Bolivia, Guatemala and India;
- CBOs in India;
- A local municipality and water committee in Bolivia;
- A commercial bank in Malawi
- MFIs in Bolivia and India;
- Small community SACCOs in Rwanda and Uganda;
- Large SACCOs in Peru and Guatemala;
- An SHG federation in India; and
- A sanitation business in Bolivia.

Identifying an appropriate lending partner depends largely on the local microfinance market, but there are a few general considerations that emerged from these experiences to support decision-making.

NGOs may provide a manageable scale, but their incentives are often mismatched with the market-based incentives needed to sustain lending. There have been a number of advantages to working with the NGO in Guatemala, including that the NGO:

- Provided a manageable scale for trialing ideas, where changes could be made quickly and with low risk, to create evidence and "spark" the market;
- Had sanitation experience and capacities to manage construction; and
- Was interested in social and sanitation outcomes.

However, they required substantial capacity building to act as a lending institution, challenging scalability of the model directly and the program in Guatemala has expanded to include two small MFIs. Additionally, as experienced in Bolivia and India, there can be an inherent conflict for subsidy-based organizations to offer sanitation credit in a sustainable (i.e. profitable) manner. In South 24 Parganas, India, W4P partnered with NGOs and CBOs to manage revolving sanitation loan funds. Despite the construction of 6,000 household latrines, the model is not likely sustainable in its current form because:

- The NGOs and CBOs lack microfinance experience resulting in high overhead costs;
- By nature, the NGOs and CBOs view households as beneficiaries, not as clients or customers, and did not strictly enforce loan repayment;
- The NGOs did not have an incentive to revolve funds for profit as they can't be seen as "profiteering", and a reasonable profit margin would have been less than they receive from socially-motivated grants;
- Without market-based incentives, W4P needed to monitor that repaid funds were revolved and, given the large number of NGOs and CBOs, monitoring was difficult and W4P began to lose track of spending;
- Because NGOs typically focus on specific target areas, scaling the model would require multiple NGOs, all of which would need capacity building, support, staff employed, and constant supervision; and

- NGOs often have poor MIS resulting in poorly tracked loans and unreliable financial data because, unlike MFIs, whose own sustainability is linked to the sustainability of the lending scheme, there is little incentive for NGOs to track lending and repayment.

Community-based financial institutions have a relationship with households but may lack capacity. There are a number of advantages to working with community-based lenders such as SACCOs and SHGs as experienced in India, Peru, Guatemala, Rwanda, and Uganda, including:

- They are more likely to offer loans in the small amounts needed for household sanitation investments than larger financial institutions;
- Sanitation loans have the potential to make up a large portion of their portfolio offering market-based incentives to provide sanitation financing; and
- They have a relationship with the community and local product/service providers allowing them to take greater risks based on their experience with and knowledge of community members.

However, there are challenges to working with small community-based lenders as well, such as:

- Insufficient lending capital is a common barrier as experienced in Uganda and India (the SACCOs in Rwanda and Peru were able to self-capitalize from their larger portfolios and existing financial sources);
- Scale-up is limited or requires further intervention to bring additional SACCOs on board;
- SACCOs and SHGs often have poor MIS as seen in Uganda (this is not the case with the large SACCO in Peru who uses the MIS software of their larger parent institution); and
- Lower capacity to develop and manage a new loan product such as sanitation financing due to their smaller staff who are often volunteers from the community.

MFIs and banks have the financial and operational capacity, but may be uninterested. Based on experiences in Bolivia, India and Malawi, there are a number of benefits to working with MFIs and banks:

- They have the financial capital to support sanitation lending;
- They provide greater potential for scale-up as they often work in a larger area than community-based lenders and are more visible within the microfinance community;
- They usually have a strong staff with microfinance experience and training; and
- Most have a good MIS in order to track their portfolios which are typically much larger than SACCOs'.

However, there are potential limitations to partnering with MFIs and banks including:

- Sanitation loans may be below their minimum loan size or comprise such a small portion of their portfolio that there is little incentive to develop and manage a household sanitation loan product, which was a challenge when identifying MFI partners in Bolivia; and
- They may have more stringent borrowing requirements than SACCOs, such as requiring a land title, since they are not familiar with individual community members as a SACCO would likely be.

With these experiences in mind, MFIs and banks could provide sanitation microcredit to middle-income borrowers with sufficient assets and evidence of income as is the case in both Bolivia and India. Additionally, MFIs and banks may be a sustainable funding source for community-based groups such as CDOT lending to the SHG federation in India. The MFI/SHG federation lending strategy allows community-based SHGs to provide sanitation loans to households that may not meet borrowing requirements of an MFI but are familiar to the SHG who manages disbursement and repayment, albeit at a high interest rate in this case. Similarly, commercial banks can play this role as experienced in Malawi where OIBM is lending to solidarity groups, although a guarantee was needed in this specific scenario to incentivize the bank.

Engage government. Although it's still early to evaluate the lending program in Tiraque, Bolivia where the municipality and water committee are managing a revolving fund for sanitation, the scheme seems promising. Caution may be needed in scaling as best practice guidelines in microfinance generally advise against government partners acting as lending institutions, warning that "a danger of too much government involvement in microcredit is that political criteria, rather than sound credit administration, could drive decision making".[17] In Rwanda, the district government supports sanitation microfinance through existing mechanisms including enforcing group lending agreements, promoting household sanitation through government-led campaigns, and supporting sanitation access for the lowest-income market segment who could not afford to repay a loan. This appears to be a synergistic model for government involvement in sanitation microfinance.

Consider direct lending from sanitation businesses. As an alternative financing option for households without access to formal microcredit opportunities, and/or as a way to increase toilet sales while larger-scale microfinance programs are being developed, sanitation businesses may consider providing sanitation products on credit, allowing clients to pay over time with interest. Similar to challenges observed with community-level lending institutions, financial management capacity may be limited and, as learned in Bolivia, strict and legal loan terms are needed to encourage timely payment.

Facilitate an autonomous sanitation market that includes microfinance. In addition to piloting sanitation lending with one or a handful of partners, supporting the creation of a strong autonomous sanitation market that includes microfinance may encourage sustainability and scale. W4P's BDS partner in Bolivia, IMG Consulting, is working toward this by coordinating with multiple types of financial institutions including five MFIs and one SACCO, and facilitating a "platform" of sanitation businesses, clients, government partners, university representatives, and microfinance providers to work together in the creation of a sanitation market that includes market-based incentives for all stakeholders. Though still in initial phases, this provides an example of a holistic approach to facilitating financing as part of an independent sanitation value chain.

Incentivizing sanitation financing

The type of microfinance partner will also influence how they are incentivized. There are a number of potential incentives to enter the sanitation financing market and the incentive schemes used by W4P or SaaB partners, as well as lender-reported incentives, include:

- In Peru, the relatively new SACCO, GESTION, was interested in sanitation loans as a means to enter the competitive microfinance market in their operating area by offering a unique product.
- In India, the SHG federation says their incentive to provide household sanitation loans is the hope that improved sanitation will reduce the need to provide medical loans which carry a lower interest rate. They've also observed a growing demand for sanitation loans from their members.
- In Uganda, one SACCO decided not to offer sanitation financing as they felt it was the government's responsibility to provide sanitation as a human right. The SACCOs that did decide to offer sanitation loans say their incentives are health and productivity-based, particularly since SACCO management are

members of the community. However, the perception that W4P and the BDS, Captiva, would provide financial assistance may have also been a strong incentive.

- In Rwanda, W4P and the BDS, Boundless, incentivized the SACCO with the idea of sanitation loans as a business opportunity based on a market assessment that estimated a potential profit of approximately 62,000-93,000 USD for sanitation loans at 2% monthly interest (declining).
- In Malawi, W4P developed a concept note outlining the local market for on-site sanitation which they shared with financial institutions. Despite business potential, all the prospective lending partners felt sanitation financing was risky and OIBM may have been more incentivized by the $20,000 guarantee provided by W4P as an investment account. A longer-term incentive may also have been the ability to offer subsequent business loans to the solidarity groups mobilized and trained through W4P support.
- In Guatemala, the partnering water and sanitation NGO, ACDIS, says their incentive is to enable greater access to purchasing sanitation products as part of their mission to support integrated development.
- In Bolivia, the partnering BDS, IMG Consulting, found they had more success when they (1) appointed one person at IMG to be responsible for communicating with financial institutions, and (2) involved sanitation businesses and potential sanitation loan clients in discussions with financial institutions. They also found that MFIs were the easiest to incentivize as they are often the most flexible in comparison to banks and SACCOs in Cochabamba.

Synthesized lessons-learned:

Know the local microfinance market and culture. Effective incentives will likely vary by location and research up-front is critical to understand the local microfinance market and what drives new loan product development. Accordingly, market assessment should include a review of financial service provider incentives.

It takes time. Sanitation microfinance is a relatively new concept and will require a shift in thinking. Rushing this process with short-term financial incentives may risk the sustainability and scalability of the approach.

Use market-based incentives. As seen in Malawi, non-market-based incentives, such as the guarantee provided by W4P as an investment fund, are unlikely to be sustainable. Market-based incentives such as increased client base, improved social performance ratings, or the opportunity to enter a new market with high profit potential, may provide more long-term incentives and promotion along these lines is needed.

Reduce perceived risks of sanitation financing. Microcredit providers will often steer away from non-income-generating loans as seen in Bolivia and Malawi. Sanitation loans are included in this category. However, sanitation improvements can *enhance* income as access to a decent toilet can increase productivity through better health and time saved from seeking a safe place to defecate, and decrease medical expenses, resulting in potentially more disposable income.[25] The SHG federation in India echoes this sentiment saying their incentive to offer sanitation loans is to reduce demand on the low interest-bearing medical loans they offer. Additionally, combining with income-generating loans, as ACDIS developed in Guatemala, may entice both lenders and borrowers. However, the additional cost to manage combined loans should be considered.

10.4 Facilitating lending start-up

Capitalizing sanitation lending

W4P's sanitation lending pilot strategies have included a range of financial start-up support including:

- No financial support to capitalize lending with SACCOs in Peru and Rwanda, or with the MFIs in Bolivia;
- A guarantee of $8,000 to the MFI in Bihar, India, and of $20,000 to the commercial bank in Malawi
- A 2-year $5,000 loan to the SACCO in Uganda, and $20,000 loans to two SACCOs in Guatemala;
- A $430 matching grant to the municipality in Tiraque, Bolivia; and
- Donations of $25,000 to the NGO in Guatemala, $5,000 to the SHG federation in India, and $130,000 total to the NGOs and CBOs in India.

Based on these experiences, key lessons learned include:

Avoid interest-free or donated lending capital. For the same reasons that giving toilets away can distort the sanitation market, giving money away to capitalize sanitation lending can distort the sanitation microfinance market by undercutting more sustainable market-based capitalizing mechanisms. In addition to creating reliance on charity and the associated sustainability and scalability concerns, donations or interest-free loans may hinder even the short-term success of pilot sanitation lending schemes. In Kapchorwa, Uganda the SACCO didn't feel they could charge clients interest because W4P provided the SACCO with an interest-free loan. This resulted in an unsustainable model with no incentive for the SACCO to continue offering the loans as they needed to cross-subsidize from interest bearing loans just to cover operating expenses

Provide guarantees and loans with caution. Loans or guarantees should only be provided when financial institutions are unable to attract adequate and appropriate capital.[6] Similar to soft loans (below market rate loans) or grants, depending on how they are structured, guarantees can negatively influence incentives to enforce loan repayment or continue offering sanitation loans when the guarantee is removed. Experiences with Opportunity Bank in Malawi provide an example of this. In Bihar, India, although W4P provided a guarantee, the MFI CDOT is managing the loans well and repayment is high (100% to date). It remains to be seen if they will continue to offer sanitation loans once the guarantee is removed, but it looks promising as there are incentives for CDOT apart from the guarantee, including (1) growing their smaller portfolio, and (2) proving their abilities as W4P tries to facilitate a more permanent linkage to capital funds between CDOT and the National Bank for Agriculture and Rural Development (NABARD). This follows CGAP's recommendation to structure guarantees with incentives to forge more permanent links.[6]

Avoid buying down the interest rate. In Malawi, the $20,000 guarantee provided to Opportunity Bank was also used as a means to buy down the interest to almost half market rate. As a result, the model relies on external subsidy and is unlikely to be taken to scale in current form. The deflated interest rate contributed to (1) little incentive for Opportunity Bank to promote and monitor the loans, (2) one household taking out a sanitation loan for other purposes (likely because it was so much cheaper than other loans), and (3) contributed to the bank likely discontinuing the loans after W4P's exit since they are not profitable. Additionally, the deflated interest rate can distort the market making it challenging for more sustainable mechanisms to compete with subsidized, temporary lending models. Because the first pilot was based on a deflated interest rate, it is unknown if sanitation loans would have been successful at market rates which may have been more likely to be adopted by other institutions.

Facilitate access to more permanent capital sources. Depending on the local microfinance environment, it may be unrealistic to expect lenders to self-capitalize sanitation loans. This is often the case for SACCOs and small MFIs or NGOs. In these cases, W4P support should be used to leverage more sustainable capitalization sources, such as NABARD in India, and KIVA or MFSC in Uganda.

Lender capacity building

In addition to technical and business training for sanitation entrepreneurs as part of the SaaB program, new sanitation lenders may also require business development services. Sanitation financing is usually a new loan product for lenders and capacity building is needed to support development and promotion. In order to build the capacity of lending partners,

- W4P-Guatemala developed a guidance document for developing a new sanitation loan product, a detailed credit structure from promotion to disbursement, evaluation and construction, and supported information management by providing MIS software and associated training;
- In Peru, a W4P-supported sanitation entrepreneur designed lower-cost, desirable toilets that have been adopted by the SACCO as a "menu" of sanitation technologies offered through their loan product;
- In West Bengal, India and Blantyre, Malawi, W4P contracted a local NGO, to facilitate sanitation-related trainings and promotional activities with SHGs and solidarity groups, respectively; and
- In Uganda, Captiva facilitated a training session with SACCO staff, sanitation entrepreneurs and promoters to discuss the SaaB concept, technical details of the latrine product, marketing skills, and to discuss monitoring mechanisms and responsibilities of each party. However, a weak MIS was been identified as a bottleneck to the program and data tracking support and capacity building is needed.

Based on these experiences, key lessons include:

Support development of a strong MIS. Small lenders, such as SACCOs, often have a poor MIS which can result in insufficient loan tracking, poor operations, and inaccurate reporting as is the case in Kapchorwa, Uganda. The development of a strong MIS is an area that NGOs, such as W4P, can support as seen in Guatemala. CGAP provides guidance on selecting and implementing MIS[26], and free software is also available online, such as MIFOS[27].

Build capacity within the market. Local sanitation NGOs may be able to fill the gap in lending institution knowledge and motives regarding sanitation coverage. They can transfer sanitation knowledge to lenders, create product demand, connect households with lending institutions, organize community members, and engage with government authorities. However, caution should be used to ensure that sanitation lending programs don't *rely* on externally-funded NGO involvement, such as Hygiene Village's role in Malawi. Hygiene Village coordinates the solidarity groups and plays a crucial role in the process, but is paid by W4P with no support from the lender. When W4P support ends, it's unlikely the program will continue as capacity was not built *within* the market*,* but was substituted with unsustainable support from outside the market.

You can't have toilet loans without affordable and desirable toilets. Sanitation microfinance support needs to be coupled with strengthening the sanitation market as a whole. This includes demand creation and supporting the development of affordable and desirable technology. In Rwanda, demand creation was supported by district health workers through an existing government program providing an opportune time for the sanitation lending scheme to emerge. In other countries, this role was played by local NGO and/or BDS partners. A main focus of SaaB has been supporting the development of low-cost technology through local sanitation entrepreneurs and businesses. Although the business and technology side of SaaB has not been discussed in detail in this report, this work has been crucial to the success of sanitation lending. As an example, W4P's efforts in Peru to design *desirable* sanitation products, has led to greater loan demand so that households can afford to purchase a toilet they actually want to own.

10.5 Household access to sanitation loans

Once affordable and desirable technologies are developed and promoted, demand for sanitation financing seems high in most the areas included in this study. However, the loans are not always accessible.

- In Guatemala, 12 of the 17 loan applicants were granted the loan, while others were rejected due to existing microfinance debt, a poor credit record, or a low score on the lender's qualitative analysis that includes personal references and entrepreneurial evaluation (when tied to a business loan).
- In Murshidabad, India, all 450 applicants qualified for the loan. They were all SHG members associated with the SHG federation financed by CDOT. In this case, loan access was also facilitated by a $5,000 capitalization grant from W4P through the supporting NGO SPADE, and an $8,000 guarantee to CDOT.
- In Bihar, India, 20 of the 30+ applicants qualified for the loan through CDOT; all existing clients.
- In Malawi, 25 of the 30 groups that applied for the loan were approved. Requirements for the loan included that borrowers were homeowners, from the target area, and approved by the community leader based on knowledge of their reputation in the community.
- In Peru, only five of over 100 applicants were approved. Applicants were rejected due to: (1) bad credit from previous default; (2) having less than the required three years in their current residence; or (3) insufficient evidence of income as is common for small service providers such as taxi drivers.
- In Rwanda, 48 of the 51 applicants were approved. Two were rejected based on the SACCO's past experience with them and one was not approved because monitoring, by the SACCO and Boundless, revealed that the household already had a "new and good" latrine.

In order for SaaB to be effective, the toilets and the finances needed to purchase them, must be accessible. Some ideas to improve access to sanitation loans include:

Get creative. W4P country programs have come up with creative, context-specific ideas to increase the accessibility of sanitation financing, including:

- Lower the cost of sanitation products, and hence the loan amount or savings needed, through technology development.
- For households who don't meet borrowing requirements, W4P-Peru is developing a savings scheme called *Ahorro-Baño* (Bathroom Savings). Clients would make weekly deposits into a savings account until they have enough to cover about 50% of the total toilet cost, proving their ability to make regular payments. At that point, the client could (1) borrow the remaining amount to purchase a toilet, or (2) pay off their debt with the savings and be eligible for a toilet loan in full. A savings scheme was also mentioned in Rwanda where 73% of households in the market study were willing to save for a latrine, and a local government representative spoke of a previously successful mattress savings scheme.
- Another idea being considered in Peru is called *Pandero-Baño*. Pandero is a common lottery-based collective savings mechanism in Peru where groups, typically of friends or family, contribute a certain amount of money which is used to purchase an item that is then raffled off to someone in the group. As an example, 10 neighbors could contribute a small amount each week for a prescribed period of time after which a drawing would be held and the winner would receive a new toilet.
- W4P-India is considering a creative solution to the lack of household lending institutions in Sheohar district, Bihar where entrepreneurs would borrow capital from an MFI and sell toilets to households on

credit which clients would then repay, with interest, once they receive funds from a government incentive program that requires the family to build the toilet before funds are disbursed.

Consider group lending if capacities exist. Sanitation financing was provided through group liability schemes in India, Malawi and Rwanda; and individually in Bolivia, Guatemala, Peru and Uganda. The value of group versus individual lending is debated and highly dependent on the local microfinance culture and lender and borrower capacities. The theory behind joint liability lending is that repayment is higher due to peer-pressure to repay since every group member is held responsible. However, findings of comparative group versus individual lending studies are mixed: in a three-year study from the Philippines, no difference in repayment rates between group and individual lending was identified.[28] Another study in Mongolia echoed these findings, but did observe a greater impact on female entrepreneurship possibly due to the support structure provided through group loans.[29] In general, microfinance in Latin America is trending toward individual lending, while group loans are still common in parts of Africa and Southeast Asia. This may be due to typically higher average household income in Latin America making individual loans more accessible, and/or more individualistic social norms in many parts of Latin America compared to Africa or Southeast Asia. Although group loans may increase loan access for borrowers with insufficient securities on their own, they are more difficult to manage, track, and evaluate borrower ability to repay including presence of current debts. For this reason, group lending for sanitation may be more appropriate where there are pre-existing groups such as the SHGs in India.

10.6 Loan disbursement and construction

There are two general mechanisms for loan disbursement and latrine construction: (1) cash is provided to the household who then purchase a toilet from a sanitation business or entrepreneur as in Malawi, India, and the most recent plans in Bolivia and Guatemala, and (2) cash is paid to the entrepreneurs who build the sanitation product at the household with the borrower never seeing the money itself as in Peru, Rwanda, Uganda, and the NGO-model in Guatemala. However, there are varying methods for disbursing cash and different levels of support in the disbursement and construction process as illustrated in Figure 10-1.

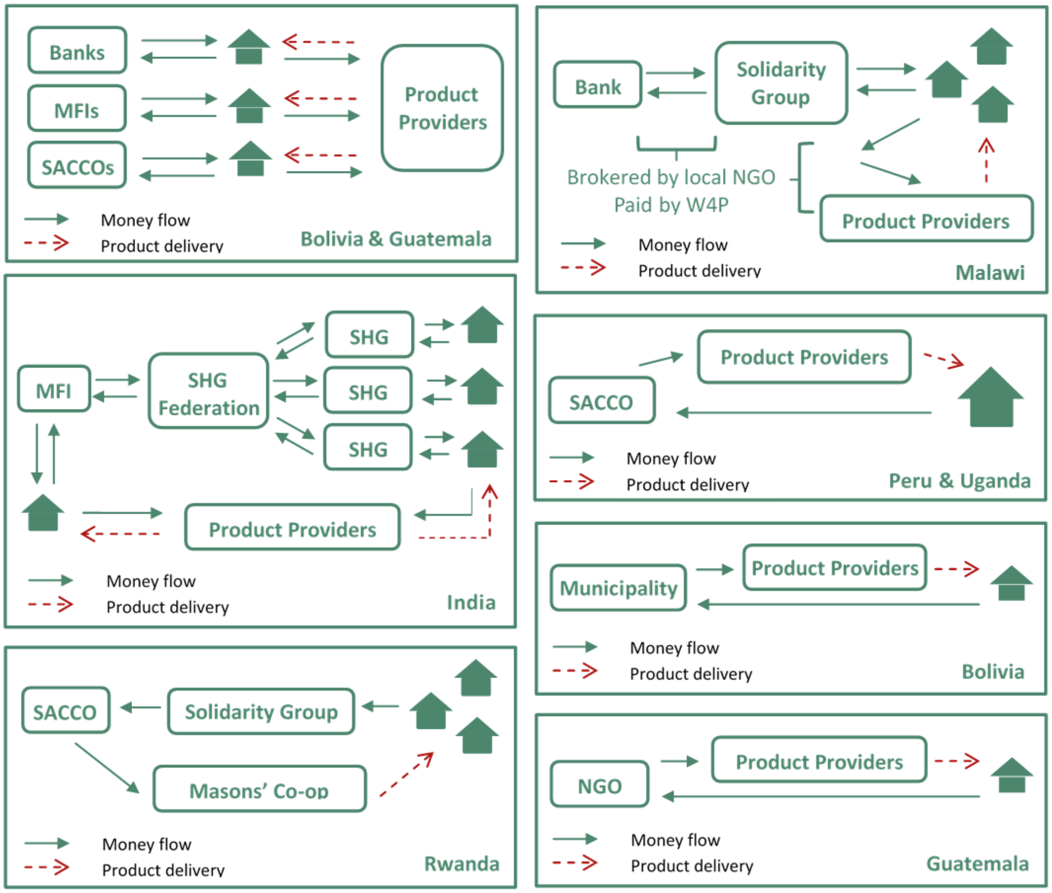


Figure 10-1. Summary of the various lending and product delivery models

Considerations and lessons-learned based on experiences with varying loan disbursement models include:

Consider local context and lender capacities and incentives. In Guatemala, initially the loans were distributed in cash directly to the households, but this resulted in a very slow and difficult to monitor construction process. The NGO lending partner now coordinates payment and construction through local contractors. This model may also avoid the use of sanitation loan funds for other purchases such as the household in Malawi who borrowed and fully repaid a "sanitation" loan, without actually building a toilet. However, not all lending institutions have the capacity or desire to manage the construction process. In India, the MFI CDOT, does not want to be held responsible if anything happens with a particular product and the loan is disbursed to households who then coordinate with a supplier. The most recent lending schemes in Bolivia and Guatemala will likely follow a similar model. In these cases, monitoring the use of loan funds could follow the lenders' existing structures for consumer loans, such as home loans.

Encourage competition between product providers. In Uganda, recruited contractors were trained and linked to the sanitation loans, but didn't have incentives to construct quality latrines as they were not in competition and their payment had already been agreed upon through Captiva. As a result, the SACCO received complaints about poor quality construction and a number of latrines were not completed as builders wanted more money than originally agreed upon. In contrast, in India, there are specific providers connected to the SaaB program, but the loans are kept separate and households can purchase the toilet from any contractor including those outside the SaaB program, which some households have done. This model forces providers to compete and offer timely, high quality services so that more households will hire them.

10.7 Sustainability & scalability

The likelihood for sustainability and scale varies greatly between programs and approaches based on profitability and reliance on subsidized capital or local partners without a clear exit strategy.

- The program with Habitat for Humanity in Bolivia is unlikely to continue due to reliance on significant external support since the loans are not profitable and, being an NGO, there are no financial incentives.
- Sustainability of the scheme in Tiraque is yet to be seen, but market-driven scale is unlikely due to government or NGO financing needs and inability to cover operating with the nearly interest-free loans.
- IMG’s current work in Bolivia to create a holistic sanitation market that includes multiple microfinance entities has potential to be sustained and scaled through market-based mechanisms, if successful.
- In Guatemala, current programs may have limited scalability as they rely on capitalization support from W4P. However, these pilots will hopefully spark interest in sanitation lending as a profitable business.
- Sanitation loans through CDOT in India are not yet profitable due to high start-up costs and a high-interest bank loan. A viable capital source is needed to maintain competitive interest rates that are not inflated by a succession of middlemen. If NABARD provides low-interest capitalization, sustainability and scale are more likely.
- In Malawi, OIBM does not plan to continue offering sanitation loans when W4P withdraws the guarantee funds since the loans are not profitable at the low interest rate. Additionally, the program depends on Hygiene Village, which is financially supported by W4P without an exit strategy. TEECs Microfinance is planning to offer sanitation loans in place of OIBM (at market rate) with capital funds from a soft loan provided by W4P, but the program is only in initial stages.
- In Peru, GESTION has self-capitalized through savings accounts and an existing loan from their parent institution. W4P has placed high priority on remaining invisible and have a clear exit strategy, suggesting a high likelihood for sustainability, and if successful, the potential for other financial institutions to follow, pending other lenders’ interest to manage construction or adapt the model.
- The SACCO in Rwanda has self-capitalized, W4P has an exit strategy including agreements with masons to pay a portion of each toilet sale to community health workers to promote their products and the loan, and there is high government involvement through existing mechanisms, all suggesting a high likelihood of sustainability and scale.
- The program in Kapchorwa, Uganda is not sustainable as the interest-free loans are provided at a loss. Additional SACCOs are charging interest and have a higher likelihood for sustaining the program, but scale-up remains a concern as W4P is supporting capitalization. Captiva is coordinating with KIVA and national lending institutions as potential capital sources to scale the program, but the role of Captiva should also be considered as they are currently supported by W4P without a clear exit strategy.

Lessons learned from these experiences, include:

Have an exit strategy. A clear plan for who will conduct and pay for W4P’s current support is crucial to sustainability, particularly considering W4P’s BDS and NGO partners.

Be invisible. W4P's visibility has had a ***big*** impact on repayment and likelihood for sustainability. In Uganda, the knowledge that W4P, an NGO, was behind the lending scheme led to unsustainable interest-free sanitation loans and a low repayment rate. Similarly, in Malawi, when some households learned of the W4P guarantee, they defaulted on their loans under the common belief that NGOs are rich and provide things for free.[30] W4P-Peru has prioritized remaining invisible to households and all W4P staff are required to wear GESTION vests during field visits, representing the partner SACCO, not an NGO. And in Guatemala, there are no W4P logos or labels associated with the loans or toilet products.

Profit potential is just as important as social impact. In Malawi, OIBM was an ideal partner for the loan experiment as their vision, values and mission are in line with social aims targeting marginalized Malawians. The sanitation loan product addressed one of their core business values and theoretically should have created appeal and ownership by OIBM. However, as much as the sanitation loans facilitate social impact, OIBM must generate sufficient profit in order to sustain any lending model. Providing loans for social good is still a business and must be evaluated on business principles as well as social principles.

Involve the government where possible. As previously discussed, the microfinance environment has a strong impact on the success of sanitation lending programs. Engaging government to improve policies and regulate the sector is another area where NGOs, such as W4P, may have a strong influence. Experiences in Rwanda provide a positive example of local government support that compliments the sanitation lending program.

10.8 Monitoring and evaluating sanitation microfinance

Monitoring and evaluation is crucial to the success of both current and future programming. To date, W4P has been monitoring the progress of sanitation microfinance at the country level, with varying indicators and methods (Table 10-4).

Table 10-4. Sanitation monitoring indicators used in each country and plans / suggestions

Country	Current monitoring indicators	Planned or suggested indicators
Bolivia	Through IMG: mainly focused on sanitation microenterprise indicators including # of clients/toilets, profit, and investment in the business. Specifically for microfinance: - # of microfinance providers interested in financing the sanitation businesses - # of microfinance providers interested in financing household sanitation Additionally, W4P conducts Informal/unstructured field visits	
Guatemala	- Loan repayment - Construction	- Financial indicators adapted from microfinance sector - Maintenance and use of sanitation products over time
India	Through CDOT - Existing MIS financial indicators Through SPADE - Loan repayment - Sanitation/hygiene data (clean toilet, soap in the toilet, toilet used by all family members, etc)	Measure the success of sanitation financing models, not through counting the number of toilets but by tracking the program's impact on the sanitation market. For example: - Is the lending partner thinking of continuing? - Are others entering the sanitation lending market? - Are customers taking out sanitation loans? - Are the loans being repaid on time?
Malawi	- Time to disburse loan - Loan used to build latrine - Time to build - Loan repayment	- Tracking time to build may be unnecessary now – competitive market developed - Wish had tracked *why/how* one loan was not used for sanitation & percent of household income to repay loan
Peru	- Existing financial indicators within GESTION's MIS	- Additional financial and sanitation indicators based on lessons from countries in this study

Country	Current monitoring indicators	Planned or suggested indicators
Rwanda	- W4P does not regularly collect data on specific indicators - Community health workers check that households have latrines - W4P evaluation included client satisfaction with quality, construction time, the loan, affordability, and if they would request the service in the future or recommend it to a friend	- The government community health workers will begin submitting a monthly feedback report to Boundless
Uganda	- Number of approved loan applicants - Loan recovery - Number of latrines constructed - Loan default rates - SACCO investment in sanitation loans	- W4P and Captiva are trying to link the SACCOs with existing national SACCO monitoring structures

Based on these experiences, the key lessons learned include:

Monitor regularly to identify concerns as they arise. As seen in Kapchorwa, Uganda, regular monitoring is needed to identify and address concerns, such as poor repayment. Local ownership and context-appropriate indicators are key and there are examples of strong local monitoring efforts from W4P experiences, such as in Malawi and India. One lesson-learned in the process of this study is that it may be unrealistic to expect sanitation agencies to track the more complex indicators recommended by the microfinance sector such as Financial Self-Sufficiency (FSS), which includes a number of intermediate financial measures.[31] A few simple key indicators may be more practical with a higher likelihood of actually being tracked.

Incentivize monitoring and evaluation. Monthly monitoring is often planned, but as is common in the sanitation sector in general, monitoring and evaluation has been weak for a number of programs. Incentives for partners to monitor and evaluate are often insufficient and/or ineffective. There are some positive experience to build on however. The partnering MFIs (and the larger, more formal SACCO in Peru) regularly and reliability monitor through their existing MIS since they have financial incentives to track loans in order to stay in business. In many cases this is also a requirement for MFI capitalization sources or increases the MFIs access to funding. Banks usually have similar motives, but in Malawi, the low-interest rate diminished these incentives and OIBM is not regularly monitoring. SPADE, as an SHG support NGO, has incentives to track both financial and sanitation-related social indicators as their mandate is socially-minded with a focus on development through microfinance. The national SACCO federation in Uganda, UCSCU, has potential to provide monitoring support and incentives for SACCOs, suggesting potential for incentivizing monitoring through larger-scale partners.

Share experiences. On a global level, experience-sharing can support sector improvements, and on a national level may encourage government involvement and spark interest in the market, bringing sanitation microfinance to scale.

10.9 Other experiences with sanitation microfinance

Experiences from other sanitation microfinance approaches may also provide valuable lessons and ideas to support improvement of W4P's sanitation lending programs. A brief review of these follows:

Experiences in India

A recent review of sanitation microfinance in India provides a number of recommendations, including:[32]

- Public funding should be leveraged by incorporating sanitation microfinance in national or regional sanitation campaigns;
- Lack of capital access to finance sanitation loans is a greater barrier to program expansion than lack of household demand;
- As discovered by water.org[33], it is usually preferable, and less resource intensive, to support existing MFIs to develop a sanitation loan product, instead of supporting sanitation NGOs to become MFIs;
- Based on experiences from the Financial Inclusion Improves Sanitation and Health (FINISH)[34] project, MFIs should have an agreement with sanitation NGOs, or similar, to promote and monitor programs;
- The regulatory framework and microfinance environment need to be understood and considered before designing an approach to support sanitation microfinance; and
- "Socially-minded" MFIs are typically more receptive and appropriate than "for-profit" institutions as an entry point for sanitation lending, bearing in mind the importance of their ability to access reliable sources of commercial financing.

Experiences in Tanzania

A similar review of sanitation microfinance in Tanzania, identified similar findings, with a few additional recommendations considering the nascent microfinance sector Tanzania, compared to India. These include:

- Sanitation microfinance should be linked to MFI social performance measures to encourage development of sanitation-related microfinance products as a way of improving social performance ratings and attracting social investors; and
- National financial sector policies could be influenced to incentivize microfinance service providers to offer sanitation loans or savings schemes.

Global experiences

A 2008 study of water and sanitation microfinance in 38 countries, commissioned by the Bill and Melinda Gates Foundation, provides insight based on a more global perspective, including:[35]

- Sanitation microfinance led by MFIs or banks are more likely to be scaled up because, when successful, this approach suggests workable business models that can be internalized in existing systems;
- However, a facilitator (e.g. W4P) is needed due the finance sector's unfamiliarity with sanitation;
- The facilitator should: (1) assess the industry, (2) establish links between stakeholders, (3) support loan development, (4) influence needed policy changes, (5) test models and scale up successes, and (6) contribute to capacity building;
- Technical support to lenders could be gained through local NGOs chosen and paid for by the lenders;
- A clear business case, with evidence, is needed to change lender perceptions of sanitation loans as risky and unknown, in order for sanitation microfinance to reach scale;
- Existing MFI associations are another potential strategic partner, particularly to reach scale;
- Sanitation financing may be more attractive when linked to larger sanitation programs with associated technical assistance;

- Build on existing similar loan products (e.g. home improvement loans), but keep sanitation loans separate to attract social funding;
- Sanitation loan development support should include: (1) market assessment, (2) business plan development, (3) pilot testing, (4) capacity building for information management, and (5) evaluation of sanitation impact and the lender's financial and social performance;
- Grant support could alleviate high start-up costs as exposure to risks and experiences are built up;
- Guarantees should be used carefully and not considered as a way to speed up lending; and
- Household demand may incentivize lenders to develop a sanitation loan, as seen with Mibanco in Peru and Empresarial in Guatemala who have offered sanitation loans in response to client demand.

Water.org

Water.org's WaterCredit program supports water and sanitation lending in India, Bangladesh, Kenya, Uganda and Peru. The program highlights the potential of local sanitation NGOs to collaborate with MFIs in order to: (1) provide sanitation expertise to MFIs with little knowledge of the sanitation sector; (2) serve to connect community members with financial services for sanitation improvements; (3) create sanitation and loan product demand; and (4) facilitate government engagement

WaterSHED

WaterSHED's new program in Cambodia uses a credit card inspired model. Households purchase a toilet on credit from one of 29 suppliers who are connected to an MFI. The MFI disburses payment to the supplier who delivers the toilet to the household. The client is then responsible for repayment to the MFI over time. In this scheme, the supplier pays a fee to the MFI to support loan management, much like merchants pay a fee to credit card companies when customers purchase their products using a credit card.

11. GUIDANCE

Based on a synthesis of W4P's and other organizations' experiences as presented in Section 10, the following "checklist" provides general guidance and recommendations for consideration in the development of a sanitation microfinance program.

☐ 1. Assess & support the sanitation market

- Assess the market
  - *Are affordable & desirable products available?*
  - *What is the demand & market potential?*
  - *Are there national sanitation campaigns that could be linked with?*
  - *What are government policies and programs related to sanitation?*
- Support sanitation market development if needed
  - *Development of low-cost desirable technology*
  - *Business development services to local sanitation entrepreneurs/businesses (avoid monopolies)*
  - *Support promotion and creation of household demand for sanitation*
  - *Encourage households in need of a loan or savings program to demand options from their lending institution*

☐ 2. Assess the microfinance climate and market

- Who are the players in the microfinance market (e.g. banks, MFIs, SACCOs, SHGs, Federations)?
- What are the common lending mechanisms - is group lending used?
- What type of microfinance service provider is usually used by the target population?
- What are typical interest rates for consumer loans offered by different types of lenders?
- What are potential incentives for lenders to offer sanitation loans based on the local context? E.g.:
  - *Do MFIs want to increase their social performance rating?*
  - *Are SACCOs interested in growing their portfolio?*
  - *Are new lenders interested to offer a unique loan in order to enter a competitive lending market?*
  - *What risks do different types of lenders perceive in sanitation lending?*
  - *What is the profit potential for sanitation loans in the target area?*
- What are the microfinance policies and regulations that might influence sanitation lending?
  - *What are the restrictions regarding who can act as a microfinance service provider?*
  - *What institutions can accept foreign money? Can institutions accept loans? Grants?*
- What sources of capital are available to lenders?
  - *International (e.g. KIVA, Acumen) and national (e.g. socially-motivated national banks)*
  - *What are common interest rates for capitalization loans?*
- Are there supporting bodies for microfinance service providers, particularly small lenders?
  - *E.g. Uganda's Microfinance Support Center or Uganda Cooperative Savings and Credit Union Ltd.*

☐ 3. Identify potential lending partners

- Consider the advantages and disadvantages of working with different lending partners, as well as their potential roles. Table 11-1 provides a starting point for consideration.

Table 11-1. Advantages, disadvantages and potential roles of sanitation microfinance partners

Partner	Advantages	Disadvantages	Potential Role
WASH NGOs	• Sanitation experience • Manageable scale	• No business/profit incentives • Limited MF experience/systems	• Small-scale pilot • Sanitation support for MFI
MFIs	• Greater potential for scale-up • Often can self-capitalize • Work in a larger area • More visible within MF sector • MF experience / systems	• May be uninterested • Small loan size • Averse to consumer loans • Small portfolio potential • Strict borrowing requirements	• Large-scale sanitation microfinance provider • Capital source for smaller lenders
Banks	• Same as MFI, but lower interest	• Same as MFI, but less incentive & more strict	• Capital source for lenders
SACCOs	• Likely offer very small loans • Sanitation could be large % of portfolio (incentive) • Relationship with clients allows for greater risks	• Often insufficient capital • Scale-up may be limited or require external support • Often have poor MIS • Lower capacity to develop & manage new loan product	• Sanitation lenders (with support systems) • Federations especially
SHGs	• Similar to SACCOs on smaller level and with existing links to bank capital sometimes *(India mainly)*		
Gov't	• May be a way to increase effective spending and sustainability as alternative to subsidy programs	• Political criteria could drive decision making	• Subsidize sanitation for poorest • Supportive regulations • Sanitation campaigns

- With this in mind, the following diagrams provide examples of potential sanitation microfinance models, one led by an MFI (Figure 11-1) and one partnering with SACCOs (Figure 11-2). These are not meant to be prescriptive and the most appropriate model will depend on the local context.

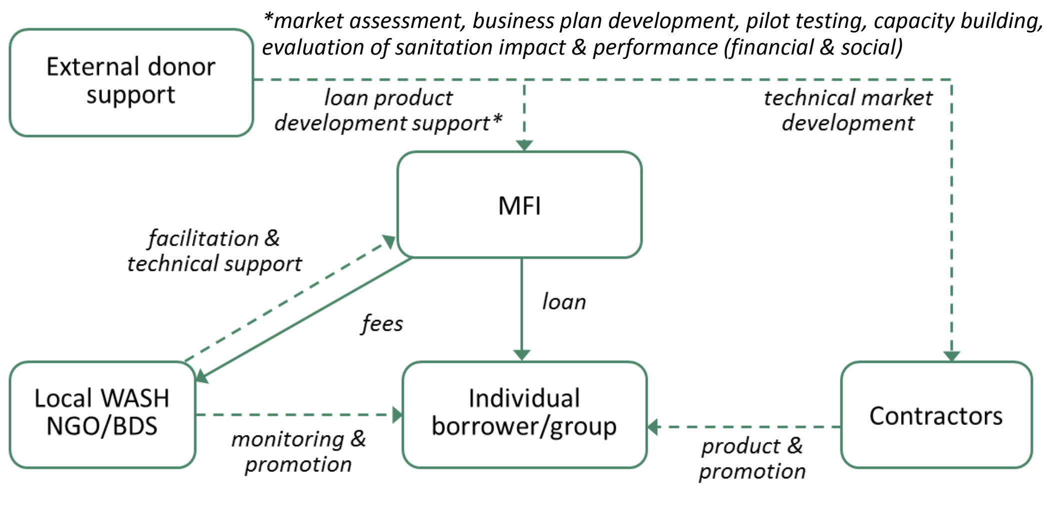


Figure 11-1. Example of an MFI-led sanitation lending model

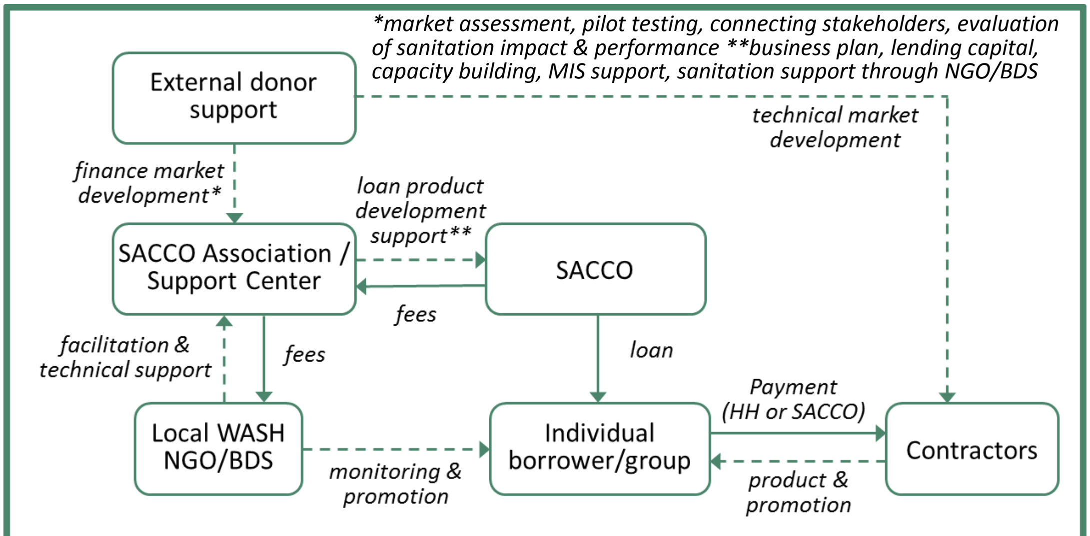


Figure 11-2. Example of a SACCO sanitation lending model

- In addition to the type of lender, Box 11-1 provides lender characteristics to consider regardless of the type of lending partner. This include a mix of qualitative and quantitative characteristics, where a balance of both are important.

Box 11-1. General lender characteristics to consider when identifying potential lending partners

Fair pricing. What is their Return on Equity (ROE)? An ROE of 6-15% is considered a reasonable profit to stay in business without exploiting the poor.[3]

Transparency. Are there hidden costs associated with their loan products? Although local norms will influence pricing, as a general rule, transparency over 80% is good.[16] Explanation in local language(s) is also important.

Robust operations. Are they sustainable without subsidy (i.e. financial self-sufficiency over 100%)?

Interest in sanitation lending. How would sanitation loans fit into their portfolio? Do they have market-based incentives? Do they engage in initial meetings and planning?

Appropriate lending requirements. Do they provide loans in the range of sanitation product loan amounts? Will their requirements disqualify most of the target population (e.g. requiring a land title)?

Perceived risk. Do they have concerns with non-income generating loans? What is their perceived risk? Do they offer other non-business loans such as health, education or home improvement?

A strong MIS. Although this may be an area where W4P can support capacity-building, monitoring and reliable data to track loans is crucial to sustainability, as well as learning.

A good reputation. What is their local reputation? Do clients trust them?

Capacities. Do they have microfinance experience? Do they have the capacity to manage group loans if needed? Do they have field officers?

Creativity. Being a relatively new microfinance product, sanitation lending will require creativity. Have they developed creative lending products in the past, or show initiative to try new things?

Good marketing strategy. This is important for attracting a sufficient client base to be profitable, as well as to encourage scale-up through adoption by other lenders.

☐ 4. Connect stakeholders

- Facilitate connections between the microfinance sector, sanitation sector and households
- Engage government and explore ways to integrate with national programs or support systems. E.g.:
  - *Are there sector or community health workers who could support programming?*
  - *Are there existing government structures to support lending, such as managing and enforcing group loan agreements, which could be leveraged?*
- Explore ways to integrate with national supporting bodes identified in the industry assessment. E.g.:
  - *Could MFI or SHG federations provide capacity building and help scale programming?*
  - *Are there larger scale monitoring programs that could support sanitation microfinance monitoring?*
- Consider linking lenders with a local sanitation NGO
  - *The NGO could provide sanitation expertise, connect community members with financial services, create sanitation and loan product demand, and facilitate government engagement*
  - *The lender or other market player should contribute to their support to encourage sustainable partnerships*

☐ 5. Incentivize potential lending partners

- Discuss sanitation lending based on market-incentives identified in the finance industry assessment
- Consider including stakeholders, such as potential clients and sanitation businesses, in discussions, or the creation of a "platform" of sanitation market players that includes financing partners
- If lenders are uninterested or unable, consider sustainable ways to reduce risk and incentivize
  - *Provide a guarantee with shared risk so that the lender still has a stake in results*
  - *Discuss capacity building support that may incentivize and reduce perceived risk*
  - *Consider piloting with a sanitation NGO, particularly if the aim of the program is to test new ideas where a small, manageable scale may be appropriate*

☐ 6. Build lender capacities & capital

- If the partnering lender has insufficient capital, try linking with capital sources identified in the microfinance industry assessment (e.g. KIVA, Acumen, National banks with a social motive, etc.)
- If capital is not available at the program scale or location, consider providing a loan or line of credit to test and "spark" the market
  - *Provide loans at an interest rate similar to what more permanent capital sources offer*
  - *Structure loans to incentivize borrowing from permanent sources if further capitalization is needed*
  - *Coordinate with capitalization sources to discuss potential and options for scaling post-pilot*
  - *Use legal contracts to ensure clear understanding and accountability*
- Support sanitation loan product development
  - *Market assessment*
  - *Business plan development for sanitation lending*
  - *Technical training in sanitation if needed (particularly if the lender will manage construction)*
  - *Pilot testing*
  - *Build on existing similar loan products (e.g. home improvement loans), but keep sanitation loans separate to attract social funding*

- Support loan disbursement planning - disburse to the client or to the sanitation supplier? (Table 11-2)
  - *Is household funds usage or construction timeline a concern?*
  - *Does the lender or partner NGO have capacity/incentive to manage?*
  - *Avoid monopolies & encourage competition between sanitation suppliers*

Table 11-2. Advantages and disadvantages to disbursing loans directly to households versus to toilet suppliers

Advantages	Disadvantages
• Households have more freedom to choose supplier • Less coordination needed between lender & supplier • Lender may find this less risky as they are not responsible for construction issues	• More difficult to monitor funds usage • May be more challenging to control construction timeline to ensure on-time repayment schedule

- Data management support if needed: MIS software, training, and how to track sanitation loans
- Evaluation of sanitation impact and the lender's financial and social performance

☐ 7. Assess loan accessibility - do target clients qualify?

Sanitation lending is not usually appropriate for the poorest market segment who would not be able to repay the loan, but the loan should be accessible to interested middle- and lower-income clients? If not, consider:

- Group lending
  - *Can the target population access the loan individually? Would group lending increase access?*
  - *Do groups & capacities to manage them already exist or will this need to be coordinated (costly)?*
  - *What do the lender and clients prefer?*
- Savings schemes
- Other creative, context-specific ideas based on the microfinance industry assessment

☐ 8. Have a clear exit strategy

- Be as invisible in the process as possible! The lending partner should be the face of the program.
- How will NGO or BDS partners be supported or replaced?
- The Springfield Centre's sustainability matrix, such as the example in Table 11-3, may be a useful tool in the process of developing a clear exit strategy.

Table 11-3. Example of sustainability matrix to support development of an exit strategy

Functions	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
Provide seed capital				
Train lending institution staff				
Market the sanitation loans				
Manage sanitation loans				
Manage and monitor latrine providers				
Connect lenders with latrine providers				
Monitor & evaluate sanitation lending				

☐ 9. Monitor to address concerns as they arise

- Incentivize monitoring. Examples/ideas include:
  - *attach payment of local partners to monitoring goals in agreements*
  - *leverage existing monitoring requirements of capital sources*
  - *identify national monitoring support bodies*
  - *link with organizations that have incentives to track financial and social/sanitation data*

- Develop a program for regular monitoring. General guidance on minimum monitoring indicators is provided in Box 10-1, including eight quarterly monitoring indicators and two annual evaluation themes for consideration. Additional description and rationale follows.

Box 11-2. Minimum sanitation microfinance program indicators to consider tracking (for each lending partner)

Growth
1. Number of sanitation products completed in the last quarter that were purchased on credit
2. Total amount lent by the lending partner for sanitation loans in the last quarter

Repayment
3. Total amount of money that should have been repaid to date (from sanitation loan borrowers)
4. Total amount actually repaid to date (by sanitation loan borrowers)

Subsidy
5. Total financial support from W4P to the lender since program inception (quantitative)
6. In-kind support from W4P or partners in the last quarter (qualitative description only)

Sustainability & Scale
7. Is the lending partner planning to continue the lending program after W4P exits?
8. Is there evidence of other institutions being influenced and offering sanitation loans?

Annual Evaluation
9. Customer satisfaction survey conducted annually
10. Further investigation (how/why?) of monitoring indicators

1./2. Growth: Number of new toilets and amount lent

These indicators provide a sense of program growth based on both number toilets and the amount of money lent by the lending partner for household sanitation loans. The first indicator tracks completed sanitation products (e.g. toilets) in order to include only loans that translated into a completed sanitation product. This adjustment is based on lessons from Kapchorwa, Uganda where a number of loans were recorded as disbursed but repayment was not yet in effect due to sanitation infrastructure that remained incomplete for months, and from Malawi, where one sanitation loan was used by the household for an investment other than sanitation. By collecting information based on construction, promoting competition among product providers in a healthy sanitation market may also be encouraged.

3./4. Repayment: Amount of repayment due versus the amount actually paid

Although repayment rate should not be considered as a measure of program success, this indicator can provide insight into program sustainability. Repayment should not be confused with client satisfaction or ease of payment since households may have needed to borrow from other sources to repay the loan. The "collection rate" (repayment) can be calculated by dividing the amounts actually paid (#4) by the amounts fallen due to date (#3). Tracking actual values, as opposed to simply the repayment percentage, is encouraged to support financial tracking and problem resolution if amounts are not adding up as expected.

5./6. Subsidy: Financial and in-kind support provided by W4P to the lending institution

The amount of financial support provided by W4P to support the lending scheme over time may suggest if progress is being made toward sustainability and scale. A general sense of Return on Investment (ROI) could be calculated by dividing the number of loans (toilets) provided (#1) by the amount of money W4P invested (#5), and lender investment in sanitation loans, or ability to find additional capital or revolve loan funds, may be roughly suggested by looking at the total amount of money that has been disbursed for household sanitation (#2) and capital support provided by W4P (#5). In addition to direct financial support, in-kind support, including capacity building, technical support, and NGO or BDS partner activities, could be tracked *qualitatively* to provide a sense of program support needs over time, since quantifying these activities can be challenging and misleading.

7./8. Sustainability & Scale: Is the lending partner planning to continue and are others adopting the model?

A broader aim of initial sanitation lending is to influence the sanitation microfinance market itself. To this end, the sustainability and adoption of programming indicates progress toward this larger goal. Sustainability may be reflected by lenders' plans to continue after W4P support ends. Adoption of the program by others without external support suggests ability to reach scale. This last indicator would be the "holy grail" of pilot lending and may be unlikely in short time-scales, but important to consider from program inception.

9./10. Annual Evaluation: Customer satisfaction and identifying how/why.

Evaluation of customer satisfaction provides an overarching sense of general program success. For example, if clients would recommend the loan to a friend, this may indicate their satisfaction with the product and installation process, their ability to repay the loan without becoming "poorer", as well as a proxy for if the toilet is currently in use. Learning why or why not will provide further details. Customer satisfaction surveys could be collected annually from a representative sample of clients. Additionally, annual evaluation provides an opportunity for further investigation of monitoring results, such as *how* a lender plans to continue the program or *why* some loans were not used for sanitation.

Additional indicators to consider. In addition to the minimum indicators suggested, the following are a few additional indicators to consider when developing a monitoring program:

- Number of loans disbursed (particularly if construction time and funds usage are not a concern)
- Number of new applications received (provides a sense of demand and accessibility of the loans)
- Number of sanitation product providers available to households purchasing a product on credit (provides a sense of supplier competition and sanitation market growth)
- Profitability of the loans without donor subsidy (qualitative – provides an opportunity for reflection on progress toward a sustainable model)
- Percentage of toilets still in use (provides a sense of impact on household sanitation over time)
- Average percent of household income used to repay the loan

☐ 10. Share lessons and successes

- Nationally to encourage adoption
  - *Create a clear business case, with evidence, to change lender perceptions of sanitation loans as risky and unknown, to help sanitation microfinance reach scale*
- Globally to support sector improvement
  - *Share successes as well as honest evaluation of challenges via reports, websites, or other platform*

BIBLIOGRAPHY AND NOTES

[1] Harper, M. (2002) Self-help groups and Grameen Bank Groups: what are the differences? http://www.microfinancegateway.org/gm/document-1.9.27267/27267.pdf

[2] Where ROE is the after-tax profits divided by the starting equity. For more information see: Rosenberg, R. (2009) *Measuring results of microfinance institutions: minimum indicators that donors and investors should track.* CGAP.

[3] Waterfield, C. (2012) Growth, profitability, and compensation – how much is too much? SPTF Panel. Jordan: June 2012. http://www.mftransparency.org/wp-content/uploads/2012/06/MFT-PRES-511-EN-Jordan-Growth-Profitability-and-Compensation-How-Much-is-Too-Much-2012-06.pdf

[4] MF Transparency provides an Excel-based APR calculator at http://www.mftransparency.org/resources/calculating-transparent-pricing-tool/

[5] A similar example can be found at http://blog.givewell.org/2010/04/02/microfinance-interest-rates/

[6] CGAP. (2006) Good practice guidelines for funders of microfinance. http://www.cgap.org/sites/default/files/CGAP-Consensus-Guidelines-Good-Practice-Guidelines-for-Funders-of-Microfinance-Oct-2006.pdf

[7] 2011 data from WHO/UNICEF. (2013) *Progress on sanitation and drinking water: 2013 update.* Joint Monitoring Program

[8] WHO/UNICEF. (2012) *Progress on drinking water and sanitation: 2012 update.* Joint Monitoring Program.

[9] Hutton, H. (2012) *Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage*. World Health Organization. www.who.int/water_sanitation_health/publications/2012/globalcosts.pdf

[10] http://www.redunitas.org/Propuesta_de_Ley_Marco_Agua_para_la_Vida_17.08.2012.pdf

[11] 2011 data from http://data.worldbank.org/indicator/SP.POP.TOTL (accessed 7 June 2013)

[12] 2011 data from http://data.worldbank.org/indicator/NY.GNP.PCAP.CD (accessed 7 June 2013)

[13] 2011 data in USD from http://www.mixmarket.org

[14] EIU. (2012) *Global microscope on the microfinance business environment 2012.* Economist Intelligence Unit.

[15] www.mftransparency.org

[16] http://www.mftransparency.org/resources/overview-of-the-pricing-transparency-index/. MF Transparency also provides an Excel-based APR calculator at http://www.mftransparency.org/resources/calculating-transparent-pricing-tool/

[17] CGAP (2006) *Good Practice Guidelines for Funders of Microfinance: Microfinance Consensus Guidelines. (For a more detailed discussion of the concerns with government lenders, see pages 17-18 of CGAP's good practice guidelines)*

[18] Based on Springfield Centre's sustainability matrix

[19] www.mixmarket.org

[20] http://www.economist.com/news/finance-and-economics/21569447-industry-starting-revive-road-redemption

[21] For a more in-depth description of these models, see Tremolet, S. & Kumar, R. (2013) *Evaluating the potential of microfinance for sanitation in India.* SHARE.

[22] http://www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Malawi.pdf

[23] Centro Nacional de Planeamiento Estratégico (CEPLAN) (2011) *Plan Bicentenario: El Perú hacia el 2021*.

[24] WSP. (2012) *Economic impacts of poor sanitation in Africa*. World Bank.

[25] www.watercredit.org

[26] Braniff, L. & Faz X. (2012) *Information systems: a practical guide to implementing microfinance information systems.* CGAP. http://www.cgap.org/sites/default/files/CGAP-Technical-Guide-Information-Systems-Jan-2012.pdf

[27] http://mifos.org/product/download-mifos

[28] Innovations for Poverty Action. (2009) *Group versus individual liability for microfinance borrowers in the Philippines.*

[29] VOX. (2011) *Microfinance: is it time to write off group loans?*

[30] Kibreab, G. (2004) Pulling the wool over the eyes of the strangers: refugee deceit and trickery in institutionalized settings. *Journal of Refugee Studies*. 17(1) p. 1-25.

[31] Rosenberg, R. (2009) *Measuring results of microfinance institutions: minimum indicators that donors and investors should track.* CGAP.

[32] Tremolet, S. & Kumar, R. (2013) *Evaluating the potential of microfinance for sanitation in India.* SHARE.

[33] www.watercredit.org

[34] www.finishsociety.com

[35] Mehta, M. (2008) *Assessing Microfinance for Water & Sanitation – Exploring Opportunities for Sustainable Scale up.* Bill & Melissa Gates Foundation. www.gatesfoundation.org/learning/Pages/microfinance-for-water-and-sanitation.aspx

Appendix A: Resources & recommended reading

Sanitation

www.waterforpeople.org

http://www.gatesfoundation.org/What-We-Do/Global-Development/Water-Sanitation-and-Hygiene

Hutton, H. (2012) *Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage*. World Health Organization. www.who.int/water_sanitation_health/publications/2012/globalcosts.pdf

WHO/UNICEF. (2013) *Progress on sanitation and drinking water: 2013 update.* Joint Monitoring Program.

WHO/UNICEF. (2012) *Progress on drinking water and sanitation: 2012 update.* Joint Monitoring Program.

World Bank. (2013) *Tapping the market: opportunities for domestic investments in sanitation for the poor.* https://www.wsp.org/sites/wsp.org/files/publications/DPSP-Sanitation-Report-Conference-Edition-WSP-August-2013.pdf

Microfinance

www.mftransparency.org

www.cgap.org

www.microfinancegateway.org

www.watercredit.org

www.watershedasia.org

CGAP. (2006) Good practice guidelines for funders of microfinance. http://www.cgap.org/sites/default/files/CGAP-Consensus-Guidelines-Good-Practice-Guidelines-for-Funders-of-Microfinance-Oct-2006.pdf

Mehta, M. (2008) *Assessing Microfinance for Water & Sanitation – Exploring Opportunities for Sustainable Scale up.* Bill & Melissa Gates Foundation. www.gatesfoundation.org/learning/Pages/microfinance-for-water-and-sanitation.aspx

Tremolet, S., Kumar, R. (2013) Evaluating the potential of microfinance for sanitation in India. SHARE. http://www.shareresearch.org/LocalResources/REPORT__Evaluating_the_potential_of_microfinance_for_sanitation_in_India_May_2013.pdf

Tremolet, S., Muruka, G. (2013) Evaluating the potential of microfinance for sanitation in Tanzania. SHARE. http://www.shareresearch.org/LocalResources/REPORT__Evaluating_the_potential_of_microfinance_for_sanitation_in_Tanzania_May_2013.pdf

Trémolet, S., Kolsky, P., Perez, E. (2010) *Financing on-site sanitation for the poor – a six country comparative review and analysis*, WSP Sanitation Global Practice Team, Washington D.C. http://tremolet.com/publications/financing-site-sanitation-poor

Appendix B: Country office questionnaire & interview guide

Quantitative data

Please complete the following tables for each location and lending partner that Water For People is working with. There is also a space below the tables for any observations or notes needed to clarify the values.

Location *(district/city)*	
Program area *(rural, urban or both)*	
Program start date *(month/year)*	
Lending partner *(name)*	
Type of lender *(e.g. MFI, bank, SACCO, NGO, SHG)*	
Type of sanitation product(s) offered *(e.g. VIP latrine, EcoSan, various)*	
Cost of sanitation product(s)	
Total number of sanitation product(s) purchased	
Total number of sanitation loans to date	
Average sanitation loan amount	
Number of households that applied for the loan	
Number of households that qualified for the loan	
Repayment rate (amounts actually paid divided by amounts fallen due)	
Type of start-up capital provided *(e.g. seed money, guarantee)*	
Amount of start-up capital provided *(in currency provided in)*	
Types of support provided *(e.g. technical training, business plan development)*	
Lending method *(group or individual)*	
Type of group *(if group loan; e.g. solidarity, SHG)*	
Interest rate *(state if monthly or annually)*	
Rate type *(fixed or variable)*	
Fees and commissions *(including start-up fees, insurance, etc.)*	
Loan term *(payback period)*	
Repayment frequency *(e.g. monthly, every 30 days, annually, weekly)*	
Repayment type *(equal payments - amortized, equal principal, or lump sum)*	
How is interest calculated *(flat-rate or declining balance)*	
Amount of forced savings	
Interest rate on savings	
Grace period	
What is grace period for *(interest, principal or both)*	

Observations:

Qualitative questions

The following questions can be answered within this questionnaire or as part of a semi-structured interview.

Identifying and incentivizing lenders

1. *Why and how did Water For People identify and select the current lending partner(s)?*

2. *How did Water For People incentivize the lending partner(s) to offer sanitation loans? Did the lending partner(s) have any concerns about offering sanitation loans? Did any lenders decide not to offer sanitation loans? If so, why not?*

3. *What do the lending institutions see as the short and long-term benefits of offering sanitation loans? Do they plan to continue offering sanitation loans?*

4. *What have been the challenges and benefits of working with this type of lender?*

Facilitating lending start-up

5. *What barriers have been encountered in the process of initiating sanitation loans? How were these addressed?*

6. *What is the lending partner(s) source of financing for the sanitation loans? (e.g. members' savings, a loan from a commercial bank, a grant from an NGO, etc.)*

7. *What was Water For People's (and/or partnering organizations) role in supporting the start-up of sanitation microfinance, including any seed capital, guarantee funds, training, technical designs, or other support? What would you recommend doing differently in the future based on this experience?*

8. *Have any sanitation entrepreneurs acted as lenders themselves? If so, how did this go?*

9. *How many and what kind of sanitation product providers is the lender working with for the sanitation loans? How were they connected with the lending partner(s)?*

10. *What is the relationship like between the sanitation product providers and the lender? What is going well? What is not?*

11. *Have any sanitation entrepreneurs taken out business loans? If so, how was this experience?*

Effectiveness

12. *Do you feel the sanitation lending scheme has been effective? Why/why not?*

13. *What were the reasons that some households did not qualify for a sanitation loan? What options are available to them?*

14. *Were there challenges in the loan approval and disbursement process? If so, what were they and how were they or can they be addressed?*

15. *Were there challenges with latrine construction once the loans were taken out? If so, what were they and how were they or can they be addressed?*

16. *Is there any evidence of the impact (positive or negative) of the sanitation loans? Are households satisfied?*

Sustainability & scalability

17. *How will Water For People's (and other agencies') role be covered in the future with the current and new lenders? (Note: the Springfield Centre's sustainability matrix provided below can be used to help respond to this question with details entered above the table.)*

Functions	Current		Future	
	Who does?	Who pays?	Who will do?	Who will pay?
e.g. provide seed capital, training, etc.				

18. *Does Water For People have an exit strategy? If so, what and has there been progress toward this?*

19. *Do you think the sanitation lending scheme is sustainable? Could the scheme be scaled-up to other lending institutions? If so, how?*

20. *Do households know that Water For People is involved? If so, have there been any challenges associated with this?*

21. *Have any other lenders started offering sanitation loans without Water For People involvement? If so, did they adopt Water For People's approach or something different?*

22. *From the lender's perspective, has sanitation lending been a profitable business? Why/why not?*

23. *Has the government been involved in the sanitation lending scheme? Are they interested in the model?*

Monitoring & evaluation

24. *How has Water For People monitored and evaluated the sanitation lending scheme? What indicators are used?*

25. *Based on these experiences, what recommendations would you provide to Water For People and other organizations to improve sanitation lending?*

26. *Are there any other sanitation lending programs in the country that you know of? If so, how are other approaches different from Water For People's? Are they going well?*

27. *Is there anything else you would like to add?*