



Programmatic Technical Assistance

Scaling Up Microfinance Institutions (MFI) Lending for Improved Rural Sanitation in Bangladesh



(Output Report for TA P156017)



February 2019

This synthesis report details the process, outputs and intermediate outcomes of the World Bank executed technical assistance (TA) to assist MFIs in developing a market in improved sanitation products by mainstreaming loans to poor rural households to finance improved sanitation product purchases and by mainstreaming loans to local sanitation entrepreneurs to finance expanded commercial operations.

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Contents

Acronyms 3

Executive Summary..... 4

1 Context..... 5

2 Background 5

3 Results..... 10

4 Approach..... 12

5 Baseline..... 13

6 Outputs 14

 6.1 Development and promotion of sanitary designs / delivery mechanisms 15

 6.2 Skills development of entrepreneurs..... 16

 6.3 Behavior change through social marketing of hygienic latrines..... 18

 6.4 Increase affordability through the introduction of financial products..... 20

7 Intermediate Outcomes..... 21

 7.1 Increased investment in sanitation businesses 22

 7.2 Establishing a one-stop shop and doorstep service..... 23

 7.3 Increased sales, income and profits in sanitation business..... 24

8 Outcomes..... 25

9 Lessons Learned..... 29

Annex 1: GPOBA Project Implementation Modality..... 31

Annex 2: Latrine Options with Components and Prices 34

Annex 3: Poverty Probability Index..... 37

Acronyms

ASA	Association_for_Social_Advancement
BDT	Bangladeshi Taka
CPF	Country Partnership Framework
DPHE	Department of Public Health and Engineering
GPOBA	Global Partnership on Output-Based Aid
GoB	Government of Bangladesh
HH	Households
IVA	Independent Verification Agency
IVC	Independent Verification Consultants
JMP	WHO & UNICEF Joint Monitoring Programme for Water & Sanitation
LE	Local Entrepreneur
LGED	Local Government Engineering Department
LO	Loan Officer
MDG	Millennium Development Goal
MFI	Micro Finance Institution
PO	Partner Organisation
NGO	Non-Governmental Organization
NILG	National Institute for Local Government
OBA	Output-Based Aid
ODF	Open Defecation Free
PKSF	Palli Karma-Sahayak Foundation
PCN	Project Concept Note
PO	Partner Organization
PPI	Poverty Probability Index©
SDG	Sustainable Development Goal
SMO	Sanitation Marketing Officers
SDL	Sanitation Development Loan
TA	Technical Assistance
USD	United States Dollar
WASH	Water, Sanitation, and Hygiene
WB	World Bank
WHO	World Health Organisation

Executive Summary

This technical assistance sought to address the unacceptably low quality of sanitation services associated with the high demand for low priced sanitation facilities. Building on the learning from the World Bank executed sanitation marketing technical assistance pilot project (TA P131981) implemented from 2010-2015, this World Bank executed Programmatic Technical Assistance *Scaling Up Microfinance Institutions Lending for Improved Rural Sanitation in Bangladesh (TA P156017)* sought to work through a network of MFIs to extend finance to households and local sanitation entrepreneurs to accelerate access to 'improved sanitation facilities' in rural areas of Bangladesh.

This World Bank executed TA of USD 0.9 million grant undertook the upstream work for the establishment of a recipient executed *OBA Sanitation Microfinance Program (P157958)* financed with a USD 3 million grant from the Global Partnership on Output-Based Aid (GPOBA) with the objective to leverage USD 22 million from MFIs to accelerate the access of poor rural households to an improved sanitation facility. Support under this World Bank executed TA included the provision of advice and training to MFIs and local entrepreneurs on sanitation product development and demand creation, as well as technical support for the monitoring and evaluation to ensure that service delivery outcomes are being met. Major shifts in the rural sanitation market enabled by this World Bank technical assistance were:

1. The presentation of improved latrine design to households demonstrating that a more aesthetic and convenient ladder of potentially affordable technology options were available for households;
2. The provision of a 'turn key' latrine installation service of a certified quality via a one-stop contractor thus avoiding the risks of separately managing the purchase of materials, labour and transport services.
3. The introduction of a non-productive sanitation development loan (SDL) into the lending market by MFIs enabling the purchase cost of latrines to be recovered over 50 installments.

Over the FY17-18 period;

- training was provided to a total of 2,394 sanitation local entrepreneurs (LEs) on the promotion, design, fabrication, delivery, installation and safeguards associated with the range of improved sanitary facilities certified under the OBA Sanitation Microfinance Program. As of June 2018, a total of 1864 trained LEs are continuing to sell this range of certified latrine materials and components, offer installation and delivery services, and carry out market promotion activities.
- a total of 259,885 households received loans from MFIs totalling USD 31 million for the installation of latrine models developed and promoted through this TA. Of this, a total of 170,679 households within the OBA Program area accessed USD 21.1 million of interest free sanitation development loan (SDLs) against the construction of latrines certified to meet the standards developed under this TA.
- a total of 1,944 local entrepreneurs (LEs) received sanitation business loans from MFIs totalling USD 3 million. Of this, a total of 1,031 LEs trained under this TA received sanitation business loans at market rates totalling USD 1.3 million from the 21 MFIs within the OBA Program area. For those entrepreneurs engaged within the OBA program area, the cited value of income from latrine sales increased more than three-fold (from USD 900/month to USD 3121/month) and the cited profit increased more than two-fold (from USD 166/month to USD 357/month).

This World Bank executed TA successfully shifted local entrepreneur behavior away from the supply of sanitation products at the shop floor to the provision of a 'turn-key' sanitation service at the doorstep of the household. This effectively shifted the dialogue from the delivery of the sanitary components of a

latrine to the delivery of the sanitation service from a latrine and shifted the interlocutor from the males (who go to the market) to the females (who are available in the household) during the day.

While the ability to access credit for a verified quality latrine appears to have been essential, and while an interest rate subsidy seems to empower women to advocate for improved sanitation within their household, the size of the subsidy is not significant enough to increase the affordability for ultra-poor households and is not significant enough to influence the behaviour of poor households.

This World Bank executed TA has pioneered a shift in the market behaviour of MFIs in relation to the extension of loans to households to gain access to improved quality public services. Combining the extension of 'non-productive' sanitation loans to households with 'productive' sanitation loans to local entrepreneurs has enabled the public costs of behaviour change communications to be borne by the MFI project staff and the local entrepreneurs.

The sustainability of the sanitation development loans was higher for MFIs (i.e. ASA) which have their own sanitation loan policy and their own allocation of capital (with targets) for the extension of sanitation loans. This suggests that wholesale MFIs should require all retail MFIs to have a sanitation policy and capital allocated to sanitation loans before being eligible for future projects.

1 Context

This report summarizes the outputs and intermediate outcomes of the World Bank executed programmatic technical assistance (TA P156017) to assist the Government of Bangladesh (GoB) in scaling up access to safely managed sanitation services for the rural poor. This TA is aligned with the Country Partnership Framework (CPF) of shifting World Bank resources from the direct financing of public service delivery to the leveraging of private sector finance to improve public service outcomes and foster economic growth.

This World Bank executed TA of USD 0.9 million undertook the upstream work for the establishment of a recipient executed Sanitation Microfinance Program (P157958) financed with a USD 3 million grant from the Global Partnership on Output-Based Aid (GPOBA) which then sought to leverage USD 22 million financing from MFIs to accelerate the access of poor households to improved sanitation services. Support under this World Bank executed TA included the provision of advice to MFIs and training to local entrepreneurs on demand creation and sanitation product development, as well as technical support for monitoring and evaluation to ensure that service delivery outcomes are being met. This report details the knowledge outputs to enable small-scale sanitation entrepreneurs to manufacture and market multiple improved sanitation facilities over the period from July 2016 to May 2018. It also captures the provision of technical assistance to microfinance institutions (MFIs) to raise the demand for finance amongst poor households to install improved sanitation facilities.

2 Background

MDG Sanitation Status

The Government of Bangladesh has made significant progress in increasing access to sanitation over the MDG period. According to the Joint Monitoring Program (JMP) status report for 2015¹, only 0.1% of the population of Bangladesh (or 160,000 people) practice open defecation while 31% of the population (or 50 million people) access unimproved latrines. While 47% of the population (or 76 million people)

1 WHO & UNICEF (2017). Joint Monitoring Programme for Water Supply & Sanitation for Bangladesh

accessed improved sanitation, a further 22% of the population (or 36 million people) accessed improved latrines shared between two or more households. Despite the progress, Bangladesh failed to meet the MDG target of 67% of the population (or 108 million people) accessing improved sanitation facilities.

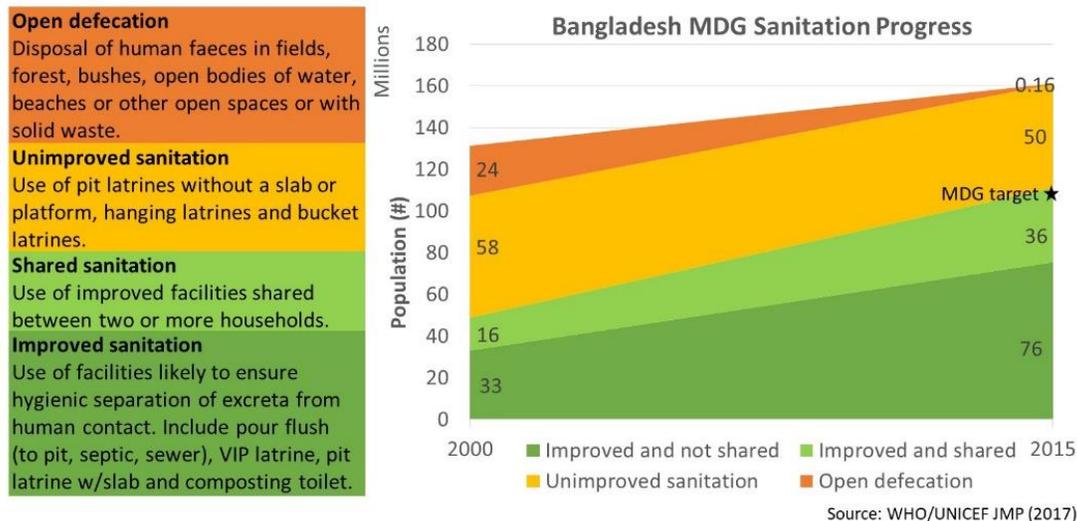


Figure 1: Progress on the millennium development goal (MDG) 7 for sanitation

While the community-led total sanitation approach pioneered in Bangladesh (and adapted all over the world) has proven extremely successful in eradicating open defecation, community led approaches have not been so successful in assisting households to move up the sanitation ladder. In recognition of the comparative advantage of sanitation marketing in facilitating households' movement up the sanitation ladder, the World Bank initiated a programmatic technical assistance (TA P131981) over the period from 2010-2015 to pilot sanitation marketing approaches in Bangladesh.

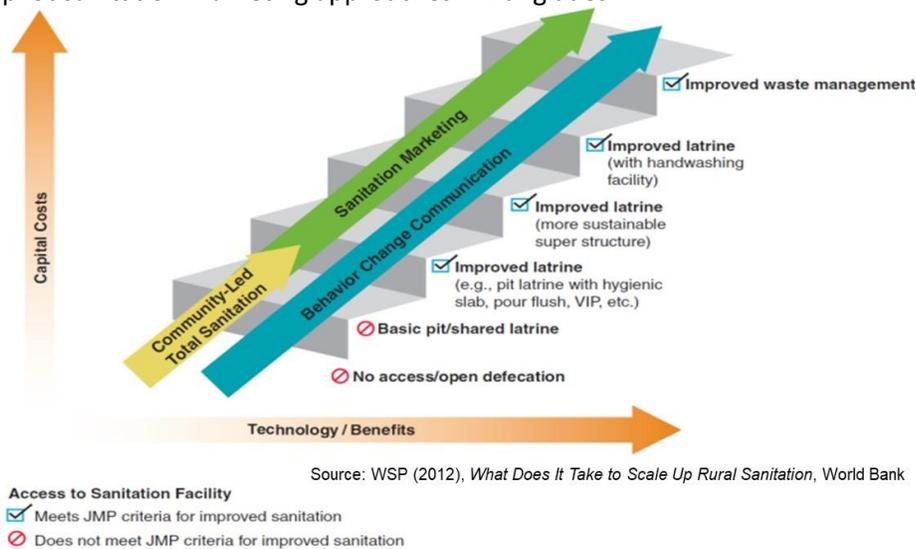


Figure 2: Approaches to enable households to move up the sanitation ladder

SDG Sanitation Status

The Sustainable Development Goal (SDG) Target 6.2 has sought 'By 2030, to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.' Where the MDGs did not have any target for open defecation, SDG 6.2 has explicitly prioritised the eradication of open defecation. In recognition that the MDG goal of halving those without access can leave the poorest and most vulnerable behind, the SDGs

have targeted universal access to services. In recognition that excreta contained within improved facilities is not necessarily safe, the SDGs have also introduced a safely managed category to ensure that the faecal waste from improved latrines is safely emptied, transported, treated, disposed of and/or re-used.



Figure 3: Shifts in sanitation from the MDG 7 to the SDG 6.2

According to the SDG baseline report for Bangladesh in 2017², only 32% of the rural population (or 34 million people) had access to a safely managed sanitation service. Of the 72 million people that lacked access to a safely managed sanitation service in 2015, less than 200,000 people had no access to a service (i.e. were still practicing open defecation). This means almost all the rural population lacking access to a safely managed sanitation service, already had some access to a sanitation service that was either basic (12 million people), limited (20 million people) or unimproved (40 million people). Enabling this vast majority of the rural population that already have some access to a sanitation service to climb up the sanitation ladder to meet the SDG standard is the premier challenge in rural Bangladesh.

² WHO & UNICEF (2017) *Joint Monitoring Programme for Water Supply & Sanitation, Bangladesh*

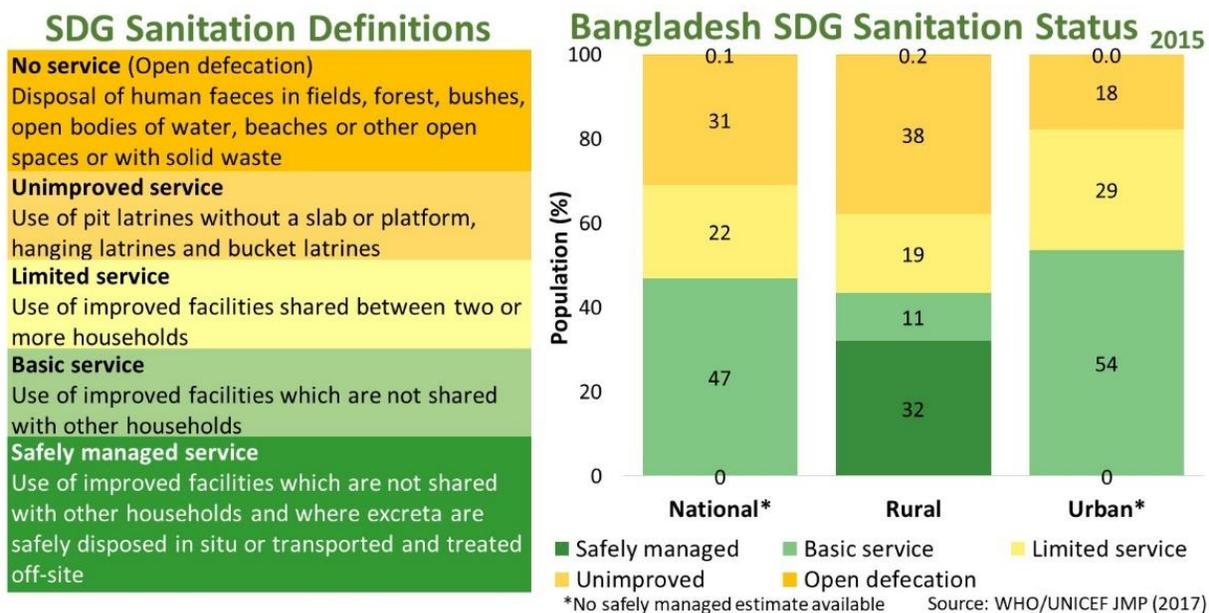


Figure 4: Bangladesh SDG 6.2 Baseline Sanitation Status

Institutional Status

In Bangladesh, the responsibility for sanitation service delivery (i.e. ensuring safely managed sanitation services for all) is assigned to the lowest tier of local government institutions, which is the Union Parishad in rural areas. The Ministry of Local Government and Rural Development is responsible for sanitation policy making (establishing laws, rules and standards) and ensuring that local government institutions have the necessary financial and human resources to perform their designated sanitation functions. The Ministry of Local Government makes this capacity available through its own Local Government Line Department and its various agencies that include the Department of Public Health Engineering (DPHE), the Local Government Engineering Department (LGED), the National Institute of Local Government (NILG) and the Rural Development Academy (RDA).

While local government institutions and particularly the union parishads played a key role in facilitating the social movement to eradicate open defecation, the key role in capacity provision was undertaken by NGOs while the provision of sanitation materials was undertaken by the informal private sector. This resulted in the almost universal extension of low cost and low quality sanitation facilities with 90% of rural households using their own funds to build latrines and 95% of rural households accessing latrine materials from local markets.³ The almost universal access to at least an unimproved sanitation facility is set against a massive challenge where 68% of the rural population (i.e. 72 million people or 18 million households) don't have access to a safely managed sanitation service.

Bangladesh also has a network of micro-finance institutions (MFIs) that have been extremely effective in extending access to credit to make productive investments to rural households across the entire country. While MFIs and many NGOs have programs that enable rural households and small entrepreneurs to access credit to invest in productive assets, the extension of loans to invest in non-productive assets have been extremely limited in scope and scale. As a result, MFIs in Bangladesh have limited experience in the extension of non-productive loans to households to invest in improved sanitation facilities.

³ WSP (June 2011) *Long-Term Sustainability of Improved Sanitation in Rural Bangladesh* The World Bank

Rural Sanitation Markets

At the commencement of the project, there were an estimated 10,000 local entrepreneurs who had manufactured the material necessary to enable millions of families in rural Bangladesh to install basic pit latrines. The disconnect between the manufacture of latrine components and their installation by households themselves had locked the demand for, and the supply of, sanitation facilities into an unacceptably low quality of service equilibrium.

As a result, most rural households of Bangladesh tend to rely on direct pit latrines. These latrines are constructed using 3 - 5 concrete rings with a plastic pan set into the middle of a cement slab covering the rings. Most pans were initially connected to a water trap however these water traps are often deliberately broken to reduce the water required for flushing therefore exposing users to the foul contents of the pit. As the plastic pans are not designed to be set in concrete and do not have tabs to hold them in place they can become separated from the slab. The slabs are also of poor quality and have been known to break even resulting in people falling into their latrine pits. Direct pit latrines are also extremely difficult to empty often requiring the superstructure to be moved to gain access. This creates an incentive for households to 'put up' with extremely unsatisfactory superstructures of bamboo and plastic without a permanent roof ... that can be easily removed and replaced for emptying.



Figure 5: Superstructure, slab and rings that characterise existing direct pit latrines in rural Bangladesh

The current poor *status quo* of existing sanitation markets characterized by an unacceptably low quality and low cost of sanitation facilities was understood to be a function of:

- a lack of access to knowledge on the options for moving up the sanitation ladder
- a lack of demand from households for higher quality sanitation services
- an absence of access to credit for households to improve their sanitation facilities
- an unwillingness of local entrepreneurs to invest in higher quality sanitation products

World Bank Legacy of Engagement

While community-led total sanitation approaches have served Bangladesh well in the eradication of open defecation, they are not as well suited to moving households up the sanitation ladder. A World Bank executed technical assistance (TA P131981) from 2010-2015 was initiated to pilot the shifting of the institutions of service delivery from community-based to market-based models. This World Bank executed TA piloted strategic shifts in technology and local entrepreneur behavior that was necessary to break the low quality of service nexus constraining sanitation markets in rural Bangladesh. Through this TA, the World Bank engaged with ASA (one of the premier MFIs in Bangladesh) to develop a financial product enabling low-income rural households to access credit to finance the purchase of improved sanitation facilities. The extension of business loans to local entrepreneurs that were trained in the production and installation of improved sanitation facilities was also piloted under this initiative.

Sanitation Market Development World Bank Technical Assistance (2011-2015)

The World Bank technical assistance '*Domestic Private Sector Regulatory Framework for Sanitation in Bangladesh (TA P131981)*' supported the development, testing and piloting of market-based sanitation service delivery models in rural Bangladesh. The technical assistance for sanitation marketing commenced in 2011 with a small pilot working with local entrepreneurs in a few villages of two upazilas. Over a 4 year period, the project developed and tested numerous latrine technology options, built the capacity of local entrepreneurs in the installation and promotion of these options, trained NGOs including Hope for the Poorest (an NGO established by ASA to undertake non-commercial activities) in the extension of sanitation marketing approaches and assisted ASA to develop a non-productive sanitation loan.

The sanitation marketing pilot project found that the raising of demand and extension of credit to households for improved latrine facilities, along with improving the quality of latrine models and changing the modality of supply appears sufficient to address the low quality and price nexus that undermines the sanitation sector in Bangladesh. The project concluded that more work is needed to identify ways and means of scaling-up this approach, of ensuring the inclusion of the ultra-poor and of covering the costs of demand creation.

This World Bank executed TA *Scaling Up Microfinance Institutions (MFI) Lending for Improved Rural Sanitation in Bangladesh (TA P156017)* has sought to accelerate the movement of rural households up the sanitation ladder through the transformation of local sanitation markets in rural Bangladesh. This was proposed through the deployment of a recipient executed World Bank investment to trigger the adoption of following roles by four main actors:

- **A wholesale MFI** to develop the sanitation loan financial product make available wholesale credit to local partner MFIs and verify compliance with the OBA latrine quality standards, loan disbursement and the collection of repayments.
- **Retail MFIs** to extend sanitation development loans (SDLs) to households and sanitation business loans to entrepreneurs, facilitate the process of social marketing, disburse the loans, collect the repayment installments, link the customers to entrepreneurs and ensure the quality of construction.
- **Local Entrepreneurs** to manufacture, deliver and install a quality 'turn-key' latrine facility at the doorstep for their clients. As the main provider of sanitation services, LEs play a key role in creating the market for quality sanitation goods and services that comply with environmental safeguards.
- **Credit Group Members** to access low interest finance from MFIs to enable trained LEs to be engaged to install OBA certified quality latrine products.

In December 2016, a World Bank recipient executed GPOBA grant of USD 3 million was signed with the Government of Bangladesh for PKSf (a wholesale microfinance institution owned by the Government of Bangladesh) to work with retail microfinance institutions and local sanitation entrepreneurs to extend interest free loans to 170,000 households to install improved sanitation facilities with subsidy payments to retail MFIs withheld against OBA certified quality standards by an independent verification agent.

3 Results

The target intermediate outcomes and outputs proposed in the project concept note (PCN) for the Programmatic Technical Assistance *Scaling Up Microfinance Institutions (MFI) Lending for Improved Rural Sanitation in Bangladesh (TA P1516017)* approved in August 2015 have been summarised against the outputs achieved in the following table.

Table 1: Intermediate Outcomes, Indicators and Outputs Achieved

Intermediate Outcome(s)	Key Indicator(s)	Outputs Achieved
Availability of hygienic latrine products in the market	2,000 Local sanitation entrepreneurs (LEs) will sell a range of latrine materials and components, offer installation and delivery services, and carry out market promotion	<p>As of June 2018, a total of 2,394 local entrepreneurs (LEs) had received training in the promotion, manufacture, delivery & installation of improved latrine facilities.</p> <ul style="list-style-type: none"> • 1,659 LEs received training on the World Bank module under this TA. • 735 previously trained LEs received refresher training on environmental and social safeguards <p>As of June 2018, a total of 1864LEs were continuing to deliver improved sanitation facilities</p> <ul style="list-style-type: none"> • 1,570 trained LEs were still producing and delivering latrine services as per the program design in OBA program areas • 294 LEs that received training under this TA were delivering improved sanitation facilities outside of the OBA program areas
Awareness and demand for hygienic latrines is raised among rural households	200,000 households (1.25m people) in rural areas will upgrade toilets	<p>In the FY17-18 period, a total of 259,885 rural households engaged LEs that received training through this TA to upgrade their toilets</p> <ul style="list-style-type: none"> • 170,679 rural households had certified toilets installed by LEs trained through this TA under the OBA program. • 89,206 households took loans from MFIs for toilets installed by LEs trained through this TA outside the OBA program area.
Financing available for hygienic latrine products	100,000 households and 2000 entrepreneurs will receive sanitation-related loans 10 MFIs will become capable of marketing sanitation loan products	<p>In the FY17-18 period, a total of 259,885 households received sanitation-related loans totalling BDT 2,470 million (USD 31million).</p> <ul style="list-style-type: none"> • 170,679 households received sanitation loans totalling BDT 1,682 million (USD 21.1 million) from the 21 MFIs supported by this TA in the OBA program area. • 89,206 additional households received sanitation loans totalling BDT 788 million (USD 9.9 million) from MFIs supported under this TA outside of the OBA program area. <p>In the FY17-18 period, a total of 1,944 entrepreneurs received 2,592 sanitation loans totalling BDT 252 million (around USD 3 million).</p> <ul style="list-style-type: none"> • A total of 1,031 LEs trained under this TA received sanitation business loans from the 21 MFIs totalling BDT 111 million (USD 1.3 million) through the OBA program. • An estimated 913 LEs received sanitation business loans from MFIs trained under this and previous TA totalling BDT 141 million (USD 1.7 million) outside of the OBA program area. <p>In the FY17-18 period, a total of 21 MFIs have become capable of marketing sanitation loan products to the standards defined in the OBA sanitation program.</p>

4 Approach

The objective of this World Bank executed TA was to assist MFIs in developing a market for improved sanitation products through the mainstreaming of ‘non-productive’ loans to rural households for the purchase of hygienic latrines and the mainstreaming of ‘productive’ loans to local entrepreneurs to expand their sanitation operations. The World Bank executed TA sought to achieve this through the provision of technical support to strengthen the supply side of sanitation service delivery through the provision of training and credit to local sanitation entrepreneurs and MFIs. A complementary recipient executed Output Based Aid (OBA) Sanitation Micro-Finance Program implemented by a wholesale MFI and 21 retail MFIs to strengthen the demand side through the provision of credit and awareness to rural households to demand hygienic latrines was also supported by the World Bank executed TA.

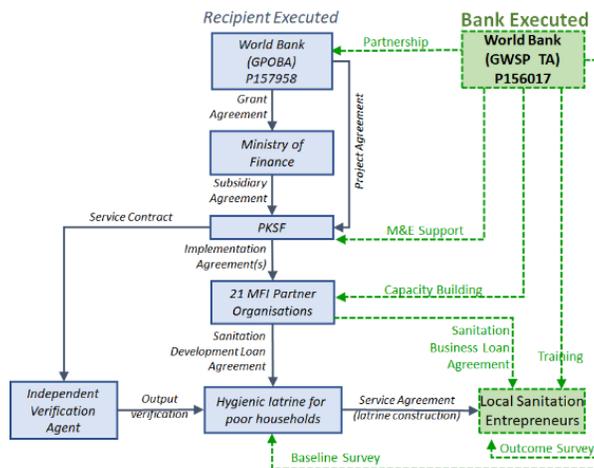


Figure 6: Recipient and Bank Executed Program Components

Bangladesh Scaling Up MFI Lending for Improved Rural Sanitation Theory of Change

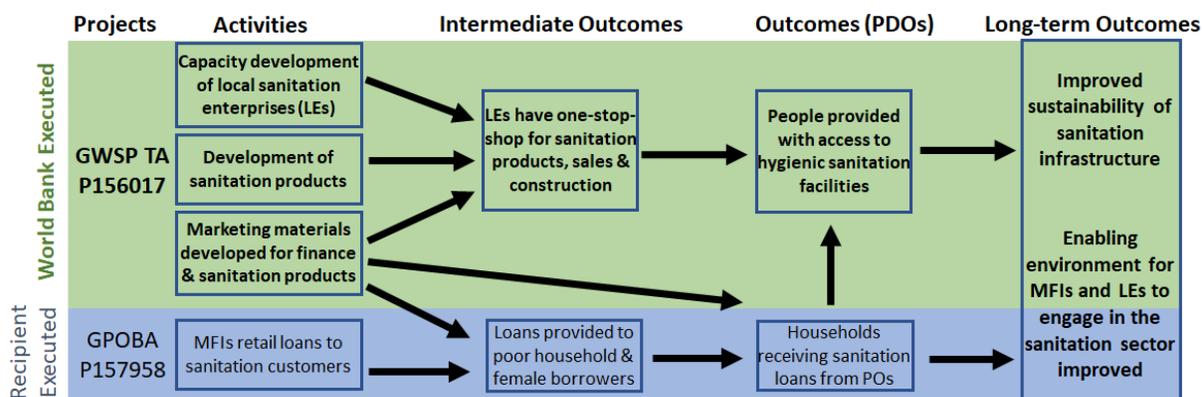


Figure 7: Schematic Overview of the Results Chain for the World Bank and Recipient Executed Components

The World Bank executed TA supported sanitation market development over the period from June 2016 - May 2018 building capacity for the creation of the demand for, and the supply of, improved sanitation services. This included the training of MFIs and Local Entrepreneurs in the supply of ‘turn-key’ sanitation services. It also included the capacity building of MFIs and Local Entrepreneurs in the creation of household demand ‘at the doorstep’ for improved sanitation services. Through this TA, assessments of the baseline sanitation status of households and evaluations of the commercial performance of Local Entrepreneurs were also undertaken.

The recipient executed OBA program was implemented in 237 Upazilas (sub-districts) under 42 districts selected based on their geographical context, previous sanitation experience and local capacity. Responsibility for the implementation of the OBA program (including compliance & reporting to the World Bank) is with PKSF, which is a wholesale microfinance institution of the Government of Bangladesh. PKSF signed implementation agreements with the 21 POs to make available credit for the provision of sanitation development loans (SDL) to households. Due to their previous experience and size, ASA agreed to provide

the loans as well as the capital financing for 59% of the 170,000 targeted households. The POs which received capital financing from PKSf received a 10% subsidy against the total value of the loan disbursed (loan and interest) to the households while ASA received a 12.5% subsidy due to the use of their own capital.

Household borrowers were required to choose from a range of standard design 'set price' latrines installed by prequalified trained local entrepreneurs (see Annex 2 for more detail). Loans had a minimum size of 3,500 BDT (USD 45) and a maximum size of 10,000 BDT (USD 128) with the unit cost of the subsidy ranging between USD 5-16. The non-productive sanitation development loans were extended to both existing and new credit group members of the MFIs. A 6-10% sample of the quality of household sanitation services certified by an Independent Verification Agent formed the basis for the release of the OBA subsidy by the World Bank to PKSf and from PKSf to the retail MFIs. Households paid off the loan in weekly installments over a period of 55 weeks with the normal 12.5% fixed interest rate for the household being subsidized by the program. (See Annex 1 for further detail of the implementation procedure).

The USD 3 million GPOBA funded recipient executed output-based microfinance program and the USD 0.9 million World Bank executed technical assistance program effectively mobilized an additional USD 23.7 million from microfinance organizations towards the installation of improved sanitation facilities.

5 Baseline

Initial indications by the MFIs based on discussions with the estimated 3.12 million credit group members in the recipient executed sanitation OBA target areas were that 2% were practicing open defecation, 57% had unimproved latrines and 41% had improved latrines.

In December 2016, NGO Forum was engaged through this TA to undertake a baseline survey of the sanitation status amongst credit group members in the OBA Sanitation Micro Finance program area. The baseline survey assessed seven sanitation status indicators for 12,439 households, in 781 credit groups, in 228 MFI branches, in 107 Upazilas, in 31 Districts. Of the total 12,439 households surveyed:

1. 11,076 households (89%) had a latrine while 1,363 households (11%) did not.
 - The 11% of households which did not have a latrine must either practice open defecation or share the latrine of neighbouring households.
2. 3,158 households (25%) had hygienic latrines while 7,918 households (64%) had unhygienic latrines.
3. 4,035 households (32%) had offset latrines while 7,041 households (57%) had direct pit latrines.
 - While 75% of the offset latrines were hygienic, only 4% of direct pit latrines were hygienic.
4. 9,343 households (75%) owned their own latrines while 1,733 households (14%) had jointly owned latrines.
 - 29% of individually owned and 26% of jointly owned latrines were considered hygienic.
5. 7,861 households (63%) had latrines with a superstructure while 3,215 households (26%) had latrines that don't have real superstructure.
 - While 62% with a superstructure were hygienic, only 5% without a superstructure were hygienic.
6. 2,778 households (22%) had latrines with a sealed floor while 8,298 households (67%) had no floor.
 - While 82% with a floor were hygienic, only 11% without a floor were considered hygienic.
7. 1,166 households (9%) had latrines with water available in their latrines while 9,910 households (80%) had no water available.
 - While 88% with water were hygienic, only 22% without water were considered hygienic.

The most important associations with the hygienic status of latrines in this baseline survey were:

- 1) The availability of water;
- 2) The presence of a floor;
- 3) The pits being offset;
- 4) A superstructure;
- 5) The outright ownership

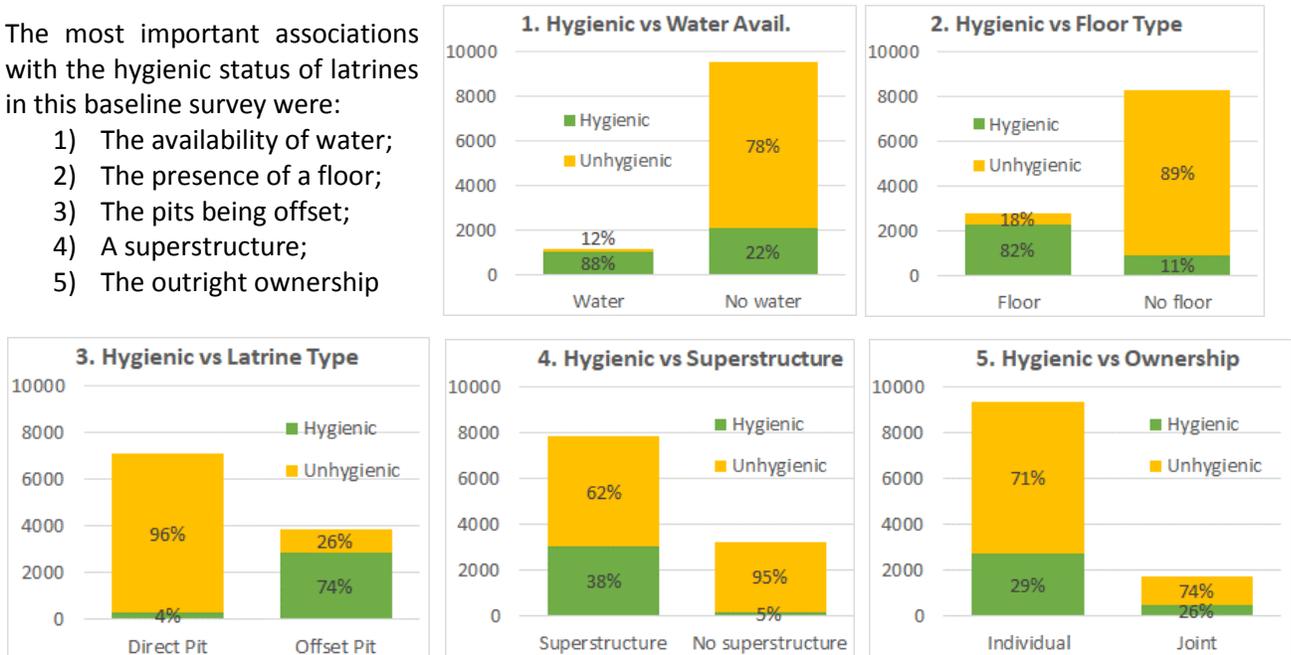


Figure 8: Characteristics of latrines as they relate to hygiene status at the baseline

Under the World Bank executed TA program and the recipient executed OBA program, technical and financial assistance was extended to households to install an improved offset pit latrine with a sealed floor, modern superstructure with the facility for water storage (to enable flushing and anal cleansing). *Financial and technical assistance for piped water plumbing to the latrine was beyond the scope of the program but is potentially significant in reducing the burden on women for the carting of water.*

Individual latrine ownership was not significantly associated with the hygienic status of the latrine, nor was individual ownership significantly associated with the presence of water, the presence of a floor, the presence of a superstructure or the offsetting of the pit. *Loans under the recipient executed OBA program were only extended to individual households as the 'safely managed sanitation service' defined by the SDGs requires that latrines are not shared by two or more households.*

A total of 1,818 households (15%) had latrines that were hygienic, individually owned, offset, with a sealed floor and a superstructure. Only 803 households (6%) had latrines that were hygienic, individually owned, offset, with a sealed floor and a superstructure, where water was available. *This suggests that between 85% - 94% of the 3.12 million credit group members are potentially in the market to upgrade their latrine facilities to the OBA certified sanitation standard.*

6 Outputs

The outputs under this World Bank executed TA sought to address the unacceptably low quality of sanitation services associated with the high demand for low priced sanitation facilities in rural Bangladesh. While the low cost of these sanitation facilities has enabled almost universal access, the quality of sanitation service fails to meet key criteria of hygiene, reliability, occupational health and environmental safety. Triggering the market to increase the quality of sanitation services demanded an increase in the price that customers were willing to pay for a sanitary latrine.

The activities of this World Bank executed TA targeted the following four inter-related components:

- ✓ Component 1: Development and promotion of sanitary designs /delivery mechanisms
- ✓ Component 2: Skills development of entrepreneurs
- ✓ Component 3: Behavior change through social marketing of hygienic latrines
- ✓ Component 4: Increase affordability through the introduction of financial products

6.1 Development and promotion of sanitary designs / delivery mechanisms

The sanitation movement in Bangladesh led most rural households to install low cost direct pit latrines. These latrines are particularly prone to the failure of the pee trap, often deliberately broken to reduce the demand for water for flushing. This subjects latrine users to the health risks of direct exposure to faecal waste contained within the pit.

Offset pit latrines reduce this risk by situating the users away from the contents of the pit. Offset pit latrines are also easier to access for the emptying of faecal sludge.

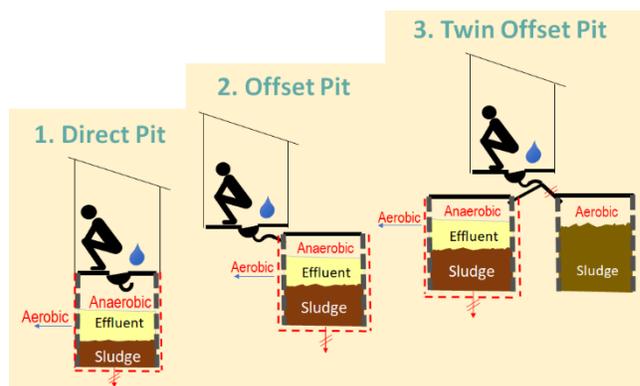


Figure 9: Rural Bangladesh Sanitation Technology Ladder

The contents of direct pit and offset pit latrines cannot be safe while they remain in an anaerobic state requiring any emptying of pits to be undertaken with appropriate safety precautions. Switching to a second pit allows aerobic bacteria to enter the first pit and with time these aerobic processes will neutralize the pathogens (bacteria and viruses) rendering the contents of the pit safe for handling.

This World Bank executed TA promoted three types of offset pit latrines developed under the previous TA with a tee junction facilitating the installation of a second pit. These three latrine models recognise the importance of the quality of the latrine floor on hygiene and the quality of the superstructure on privacy. The latrine aesthetic on the willingness of households to pay for quality sanitation facilities was also reflected in the design options. The three latrine models promoted through this TA were:

- *Aram Plus Latrines*: prefabricated by LEs enabling the complete installation by households. This model proved to be unpopular and was subsequently dropped.
- *Bilash Box Latrines*: installed by LEs with cast concrete floors and corrugated iron sheeting. This model with green corrugated iron sheeting was extremely popular.
- *Bilash Latrines*: installed by LEs with a solid brickwork wall below the corrugated iron sheeting.



Figure 10: Improved Offset Pit Latrine Options Promoted

Building the capacity of the MFI loan officers was a key activity undertaken under this TA through a World Bank executed contract with NGO Forum (a water & sanitation network organization). Day-long training

sessions were conducted by 29 sanitation marketing officers (SMOs) for the MFI field staff working within the 238 sub-districts of the 43 districts targeted under the recipient executed World Bank program. Capacity support to the loan officers (LOs) within the 1,393 MFI branches was also facilitated through the field deployment of the 29 SMOs through this TA.

The introduction of ‘non-productive’ MFI loans for households to engage local entrepreneurs trained through this TA to construct OBA certified latrine models was executed through a tri-partite service delivery agreement between customers, local entrepreneurs and MFIs. Sanitation Marketing Officers (SMOs) deployed under this TA facilitated the adoption of the following roles:

- 1) *MFI staff*: mobilize household demand for improved sanitation facilities;
- 2) *LEs*: respond to demand by offering a range of ‘turn-key’ latrine technology options and prices;
- 3) *Customers*: access the sanitation loan from MFIs and place an order with LEs to construct a latrine;
- 4) *Tri-partite Agreement*: Following construction by the LE & quality supervision by MFI staff, loan funds are released to the customer to make the full payment to the LE.

Sanitation Service Delivery Process

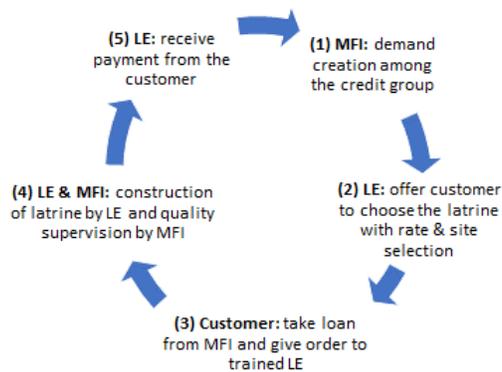


Figure 11: Tri-partite sanitation service delivery agreement

Initially the key motivation for local entrepreneurs to engage in the manufacture, transport and installation of the OBA certified latrine models was that the payment from the household via the MFI was linked to the installation of these latrine models. The demand creation by the MFI and guarantee of lump-sum payment by the household via the MFI on the provision of a satisfactory turn-key latrine installation were significant motivating factors for some LEs to change their behaviour to install verified quality improved offset latrines with a corrugated iron superstructure.

Key Outputs

During the period from June 2016 - May 2018 the following outputs have been achieved by the field engagement of sanitation marketing officers (SMOs) through this World Bank executed TA.

- Day-long orientation sessions on the sanitation products and process conducted for the 3,307 MFI field staff from the 1,393 MFI branch offices from the 21 MFIs by the 29 SMOs.
- Technical support provided to the loan officers of the 1,393 MFI branches extending sanitation development loans (SDLs) by the 29 SMOs.
- Effective concertation of LEs, MFI field staff and credit group members by the 29 SMOs at the field level surpassed the target of the extension of 200,000 branded sanitation products.
- End line evaluation of the changes in LEs sales, income and profit over the course of the recipient and World Bank executed programs undertaken by the 29 SMOs.

6.2 Skills development of entrepreneurs.

Capacity building of Local Entrepreneurs (LEs) was critical in fostering both the demand for, and supply of, improved sanitation facilities necessary for the extension of safely managed sanitation markets in rural Bangladesh. Existing small-scale entrepreneurs already engaged in sanitation businesses were prioritized for training in attempt to build on existing markets and avoid the potential negative effects of competition. Support through this TA was extended to local MFI branches to advertise for expressions of interest from LEs and canvas for LEs compliant with the following criteria developed by the World Bank.

- ✓ Has a trade licence, signboard and shop including production center (rental/own).
- ✓ Has at least three years experience in the sanitation business.
- ✓ Reliant on sanitation business as the main source of livelihood.
- ✓ Willing to manufacture latrines as per the program design and provide a doorstep service.

The final selection of LES was based on the application submitted to the MFIs, visits to the LE production centres (by SMOs engaged under this TA) and subsequent negotiation.

Selected LEs were invited to participate in a three-day long residential training course entailing theoretical and practical demonstration sessions conducted by 6 training officers (3 social & 3 technical) engaged through this TA. Key elements of the training related to:

- the change in local entrepreneur behavior from the manufacture of latrine components to the manufacture, delivery and installation of a 'turn-key' improved sanitation facility
- the change in local entrepreneur behaviour from a shop-floor response to client orders to engaging in the demand creation process for improved sanitation facilities at the doorstep of households
- the development of local entrepreneur skills in the manufacture and installation of the components necessary for the delivery of the three approved latrine models
- the knowledge development of local entrepreneurs on the social and environmental safeguards necessary for the installation of an improved sanitation facility



Figure 12: Skills development sessions for local entrepreneurs

The previous technical assistance pilot project demonstrated that the careful selection of local entrepreneurs for capacity building activities is critical to their viability. Even with strong selection criteria, around 22% of LEs did not engage in latrine construction activities due to the perceived low profit margins and the lack of interest amongst some LEs to provide services at the doorstep beyond the manufacture and sale of products. As a result, a total of 2,394 LEs were trained during the project periods and as expected 1864 went on to actively engage in the manufacture, sale and installation of latrines under the project. The most significant shift in the LEs business models was the provision of a 'turn-key' sanitation product at the doorstep of the household. This required LEs to engage in the marketing, manufacture, transportation, installation and after sales service across the sanitation supply chain.

Key Outputs

During the period from June 2016 - May 2018 the following outputs have been achieved by the deployment of training teams engaged through this World Bank executed TA:

- A total of 1,659 LEs received 3-day long residential training as per the training module developed for the program through this TA.
- A total of 735 additional LEs who had received training from the earlier World Bank executed TA pilot project were provided a half-day orientation session on environmental and social safeguards.
- Follow-up technical support provided to LEs by the training team, drawn-down by the field-based SMOs to ensure that improved sanitation facility service standards are being met.

- End-line monitoring, evaluation and learning workshops conducted by the training team with the LEs and MFI loan officers engaged in the recipient executed and World Bank executed programs.

6.3 Behavior change through social marketing of hygienic latrines

The World Bank executed TA sought to significantly shift market behavior away from the provision of sanitation products at the shop floor to the provision of a ‘turn-key’ sanitation service at the doorstep of the household. This effectively shifted the dialogue from the delivery of the sanitary components of a latrine to the delivery of the sanitation service from a latrine, and the interlocutor from the males (who go to the market) to the females (who are available in the household) during the day.

During the sanitation movement, small-scale cement businesses across rural Bangladesh expanded into the manufacturing of latrine components (i.e. cement slabs and rings) available on the shop floor. Similarly, local hardware shops increased the availability of various latrine components (i.e. PVC pipes, pee traps and ceramic commodes). Households were responsible for the transportation of materials and the construction of latrines. The purchasing of latrine materials, transportation, design and construction was generally undertaken by male household members. The major determinant of the selection of materials and the design of the latrine being the price of components rather than latrine effectiveness.

Working with the majority female members of the credit groups established by Micro-Finance Institutions (MFIs) and the local entrepreneurs (LEs) trained to deliver quality ‘turn-key’ sanitation products to households provided female household members with the information necessary to determine their preferred rural sanitation solution. Central to this change in behaviour was the development of the following social marketing materials supported under this World Bank executed technical assistance.

Latrine Catalogue: includes pictures of the different latrine options, materials and prices. It includes the design and installation of a twin offset pit and the details the process for the conversion of a single offset pit or direct pit into a dual pit. The catalogue identifies the environmental safeguard issues to be considered at the time of site selection and installation. Options of water storage for flushing, anal cleansing and hand handwashing are also detailed. Copies of the catalogue were distributed to the LEs and the MFI field staff to enable detailed discussions with potential clients when choosing latrines. The development, printing and distribution of these catalogues for trained LEs and MFI staff was supported through this TA.



Figure 13: Latrine catalogue

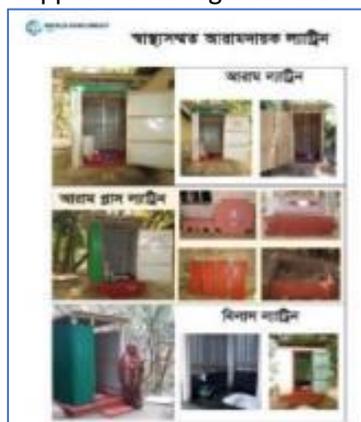


Figure 14: Latrine poster

Latrine Poster: developed to provide a quick overview of the three types of latrine options (Aram, Bilash and Bilash Box) available through the recipient executed World Bank program. These manuals were distributed to the trained LEs to be displayed on their sanitation shop premises. The posters have been developed, printed and distributed for the trained local entrepreneurs through this TA.

Latrine Flipchart: developed for MFI field staff to use in the demand creation sessions with credit group members. The flipchart contains pictorial information on eight aspects of an improved sanitation facility:

- 1) Negative health effects of unhygienic and direct pit latrines;
- 2) Characteristics of a hygienic improved latrine facility;
- 3) Different types of offset latrine options;
- 4) Environmental considerations in pit design and installation;
- 5) Management of twin offset pit latrines;
- 6) Conversion of direct pit latrine to offset latrine;
- 7) Site selection considering the safe distance from water sources;
- 8) Water reservoir options for latrines and their importance.

The development, printing and distribution of the flip charts amongst the field staff was supported through this TA.



Figure 15: Latrine flipchart

The final project evaluation concluded that the improved sanitary containment offered by upgraded latrines was not a significant motivating factor for households. The aesthetic of the new latrine (i.e. the cement slab and coloured corrugated iron surround), the enhanced user experience (i.e. less smell and therefore able to be more conveniently located close to house, the increased privacy associated with the full superstructure, the ease of cleaning and the less risks of the collapse of the slab) were key motivating factors for customers. Another important motivating factor was the affordability (i.e. access to credit and reduced interest rate loan) when making a decision about the use of their income and scarce resources.



Figure 16: Credit group member demand creation sessions

Key Outputs

During the period from June 2016 - May 2018 the following activities have been undertaken by SMOs engaged through this World Bank executed TA:

- Facilitation of a household sanitation baseline survey amongst 12,439 of the credit group members in the recipient executed OBA program areas.
- Facilitation of more than 20,000 demand creation sessions (along with the MFI field staff) with the participation of more than 100,000 credit group members resulting in the receipt of more than 70,000 requests for sanitation development loans.

6.4 Increase affordability through the introduction of financial products.

The World Bank executed TA pioneered a shift in the market behaviour of MFIs in relation to the extension of loans to households to gain access to improved quality public services. Combining the extension of modest ‘non-productive’ sanitation loans to households with larger ‘productive’ sanitation loans to entrepreneurs, enabled MFIs to extend loans for fixed assets (that can’t be recovered in the event of a default on the loan) without significantly increasing their market costs or risks.

Over the program period, lending from MFIs for sanitation totaled 0.5% of their total lending portfolio (0.3% for ASA and 1.9% for the other 20 MFIs). For the 20 MFIs receiving capital finance from PKSF, sanitation development loans increased from 0% to 1.9% of their total loan portfolio. Prior to this program, non-productive loans were less than 5% of the total loans by MFIs in Bangladesh⁴. With the introduction of the sanitation development loans, 9% of the total number of micro-credit group members targeted that did not have an improved latrine ended up taking out a sanitation development loan (6% for ASA and 30% for the other 20 MFIs). The introduction of the non-productive interest free sanitation loans led to a 13% increase in the number of new borrowers amongst all MFIs (9% increase for ASA and 18% increase for the other 20 MFIs).

Prior to this program, productive loans for healthcare businesses accounted for less than 1% of total lending by MFIs in Bangladesh. The project facilitated the creation of demand for LEs to access productive loans to expand the delivery of ‘turn-key’ OBA certified sanitary latrines. This access to finance enabled LEs to vertically expand their businesses from the manufacture of latrine components into the delivery and installation of improved latrines (and in some cases the emptying of latrines). Loans to LEs at market interest rates of 12.5% constituted 8% of the total lending by MFIs for sanitation under this program (9% for ASA and 6% for the other 20 MFIs).

This TA worked with PKSF and MFIs in the creation of demand for households to access ‘non-productive’ interest free loans to engage trained LEs to construct an OBA certified improved sanitary latrine model. A total of 170,679 households took out interest free loans within the program area and 89,206 households took out loans at market interest rates from MFIs for latrines outside of the program area. This TA also worked with PKSF & MFIs in the creation of demand for LEs to access ‘productive’ loans at market interest rates to invest in business development to install OBA certified improved sanitary latrines. This access to finance enabled local sanitation entrepreneurs to vertically expand their businesses from the manufacture of latrine components into the delivery and installation of improved latrines (and in some cases the emptying of latrines). A total of 1,031 LEs received business loans (ranging from BDT 30,000 – 200,000) at an interest rate of 12.5% in OBA program areas.

The extension of productive loans to LEs to expand their sanitation business increased their willingness to engage with MFIs in the raising household demand for non-productive loans to invest in improved quality latrines. This partnership between LEs, MFIs and credit group members benefitted:

- *LEs*: in terms of access to credit group members at the doorstep for the creation of demand for improved sanitation facilities
- *MFIs*: in the expansion of credit group members arising from the successful creation of demand by LEs for improved sanitation facilities within the community
- *Credit group members (predominantly female)*: in the improved access on their doorstep of information on improved sanitation facilities and an appropriate line of credit

⁴ Bangladesh Microfinance Statistics (2016-17) as quoted in the OBA Sanitation Microfinance Program Evaluation Report

While the ability to access credit for a verified quality latrine appears to have been essential, and while an interest rate subsidy seems to empower women to advocate for sanitation loans within their household, the size of the subsidy seems to have been less significant in changing the incentives of the poor or enabling the ultra-poor to access an improved latrine facility. The extension of interest free loans to households for improved sanitation facilities only reduced the average repayment by households from BDT 220 to BDT 200 per week over the course of a year. For the poor households this was not sufficiently significant (in comparison with their productive loans) and for the ultra-poor households this was not significant enough (to enable them to afford such a latrine).

Key Outputs

- A total of BDT 1,682 million (USD 21 million) has been disbursed as loans to rural households to install OBA certified latrines.
- A total of 1,031 LEs (66% of the 1,570 active LEs in OBA program areas) had taken loans totalling BDT 111 million (USD 1.4 million) from different MFIs.

7 Intermediate Outcomes

Capacity building activities for sanitation LEs commenced in July 2016 through the World Bank executed TA though the recipient executed OBA Program did not commence till February 2017. Training of LEs, on-the-job support and facilitation of access to loans from MFIs were the main form of capacity building support provided to LEs through this TA.

Prior to the undertaking of this TA, the role of LEs in the sanitation sector was limited to the manufacture of latrine components and sale from the manufacturing site to customers.

- LEs operated their sanitation business as an open-air manufacturing site without any shop or any significant choice beyond that of a concrete ring, a slab, PVC pipes and maybe a PVC pan.
- LEs only manufactured cement rings and circular cement slabs with either a cement or plastic pan in the middle. Customers came to their manufacturing site to buy a slab and 3 rings to install themselves.
- LEs used low-quality materials to manufacture low price products to squeeze some profit from the low willingness of customers to pay for quality sanitation facilities.
- The average capital of the local entrepreneurs was BDT 20,000-50,000 while the average profit from sanitation businesses was BDT 4,000-10,000 per month.

An assessment of the effectiveness of this TA on the sanitation business of LEs was also undertaken as part of the monitoring, evaluation and learning process. This consisted of:

- Quantitative data of 300 LEs working in the 31 districts with different MFIs under OBA Sanitation Micro Finance Program who received training under this (or the previous) TA was compiled from interviews by SMOs with 12 LEs of strong, moderate and weak capacity from their working area.
- Qualitative data from 70 LEs was compiled through two consultative workshops. The first batch comprising of data from 40 LEs working with the 20 MFIs and the second batch comprising of data from 30 LEs working with ASA.
- Case studies from 9 of the LEs working with different MFIs under the OBA recipient executed program in different geographical regions across Bangladesh were compiled from structured interviews.

This assessment of the results of the capacity building process found the most significant changes in the performance of LEs to have occurred in the following areas:

- 1) Increased investment in sanitation businesses
- 2) Establishing a one-stop shop and doorstep service
- 3) Increased sale, income and profit in sanitation business

7.1 Increased investment in sanitation businesses

The World Bank executed TA sought to enable trained LEs to extend their working capital by either facilitating their access to credit from MFIs or encouraging investment through other forms of finance.

Of the 300 surveyed LEs, a total of 191 LEs (or 64%) received loan amounts totaling BDT 22.7 million (USD 0.28 million) at an average of just under BDT 120,000 (USD 1509) per LE during the TA program. This is consistent with the MFI compiled data suggesting that 1,031 of the 1,570 active LEs (or 66%) had taken loans totalling BDT 112 million (USD 1.40 million) at an average of just under BDT 110,000 (USD 1,293) per LE.

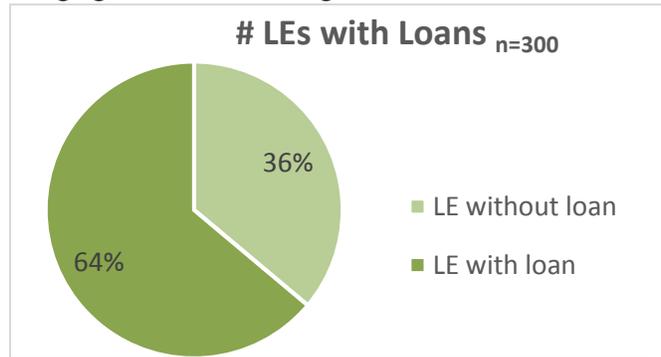


Figure 17: LEs with loans from sample survey

A total of 10% of the LEs that have taken out loans have accessed significant capital for business expansion totaling BDT 200,000 or more. The rest of the 90% of LEs that have taken out loans were making relatively small investments with almost a third borrowing less than BDT 200,000, a third borrowing less than BDT 100,000 and another third borrowing less than BDT 50,000.

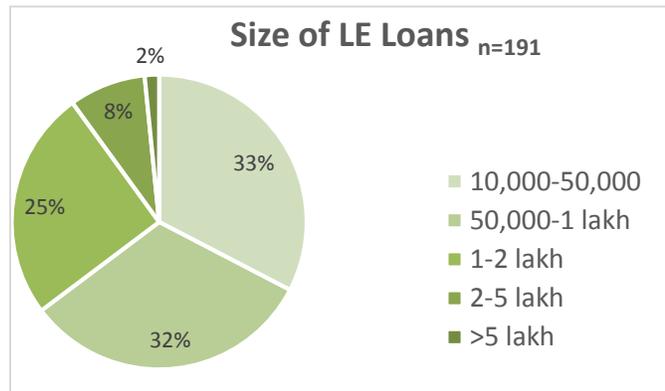


Figure 18: Size of LE loans from sample survey

The average monthly capital of LEs increased from BDT 135,000 before training to BDT 302,000 after training. While only 39% of LEs had an average monthly capital of more than BDT 100,000 before the training, this increased to 80% after the training. While only 15% of LEs had an average monthly capital of more than BDT 200,000 before training, this increased to 53% after the training.

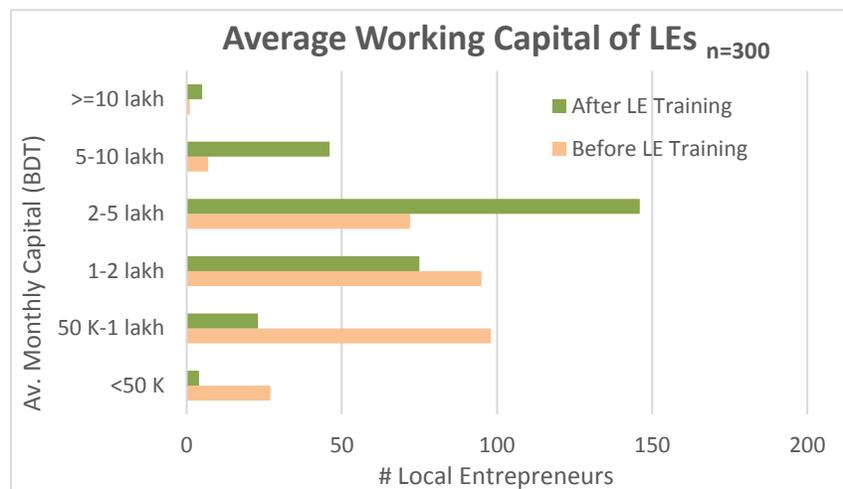


Figure 19: Working capital of LEs from sample survey

Figures are not available on the additional investment by the 1,570 LEs over and above the USD 1.43 million taken-out in loans from MFIs but the end of program evaluation has estimated that the total investment by LEs surpassed USD 3 million.

7.2 Establishing a one-stop shop and doorstep service

A total of 133 LEs (44%) had established a one-stop shop enabling customers greater convenience in the choice of the latrine models and accessories necessary for the hygienic management of latrines. Demand for improved sanitary facilities improve by the making available choice for construction, operation and maintenance of latrines. The pricing of the different ‘turn-key’ latrine models along with the prices of the components fostered greater understanding amongst the customers that they were receiving value for money.



Figure 20: LEs with one-stop shop from sample survey

By offering the full range of services necessary to deliver a ‘turn-key’ sanitation facility at the doorstep (including manufacture, transportation and installation), occupational health and environmental safety conditions can be maintained by LEs. While some LEs have their own transport & construct latrines themselves, the majority sub-contract transportation, masons and carpenters. Some LEs even sub-contracted sweepers for the emptying of faecal waste from pits when they are full. By clumping the demand from credit group members within a single community, a team of two people (mason & carpenter) can rationalize on transport and the time for curing of cement to complete 10+ latrines per week.



Figure 21: Before & after pictures of direct pit latrine vs OBA offset latrine

By managing the doorstep provision of a sanitation service LEs can identify the most suitable site to install latrines. With the improved hygiene associated with offset pits it is possible to bring the location closer to the house, whilst maintaining a safe distance from water sources. To reduce the risks of frequent emptying, associated with excess effluent accumulation, caused by poor absorption in the soil, the rings are now being fabricated by LEs with holes cast into the cement. LEs are also required to install a “tee junction” into the pipe enabling a second pit to be added, fostering the safe handling of faecal waste when the pit becomes full.



Figure 22: Significant changes in the manufacture of offset latrines introduced under this TA

In some cases, it is possible to reduce the site costs by converting existing direct pit latrines into hygienic offset pit latrines. Interviews with households and local entrepreneurs conducted during the evaluation of the project revealed that the conversion of unimproved direct pit latrines into improved offset pit latrines only happened on very rare occasions. This was primarily because the cost of conversion was not significantly cheaper because most of the local entrepreneurs were not prepared to touch latrines that had already been used because the touching of excreta in Bangladesh is a job that is considered ‘unclean’ and reserved for the lower caste people groups.

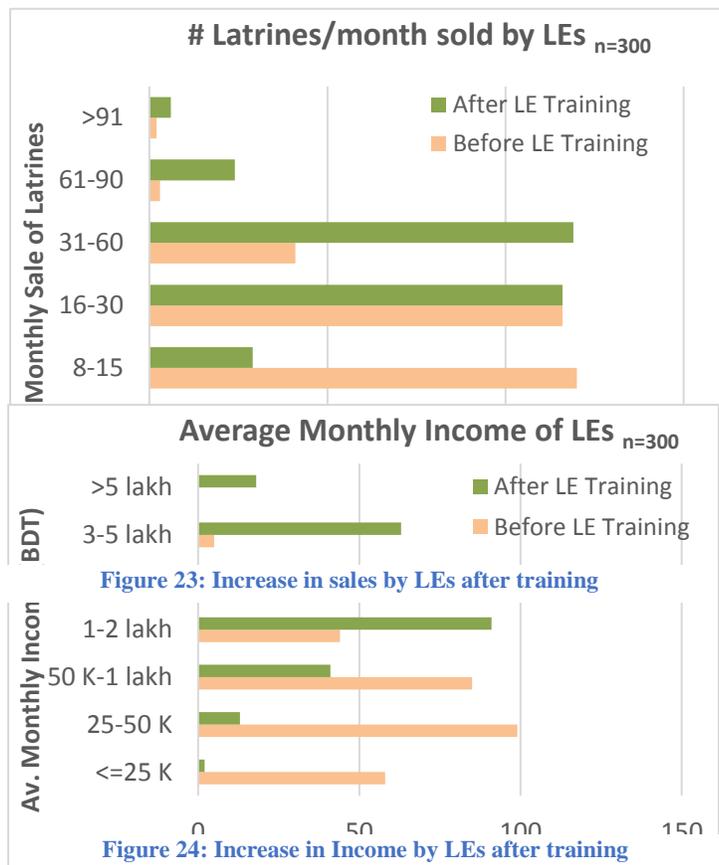
7.3 Increased sales, income and profits in sanitation business

Latrine Sales

Before receiving training through the TA, 254 of the LEs (i.e. 85%) were selling less than 30 sets per month. After receiving the training, the number of LEs selling more than 30 sets a month increased dramatically from 46 LEs (i.e. 15%) to 149 LEs (i.e. 50%). During the eight months when most of the construction occurred (i.e. Oct’17 - May’18), the 300 surveyed LEs installed a total of 40,612 latrines. Around half of the LEs installed less than 100 latrines, while the other half of the LEs sold between 100-300 latrines each. The 300 LEs surveyed sold an additional 1,000 latrines (i.e. 2.5% of total sales) to households as direct cash purchases outside of the OBA program area. Surveys of LEs showed that almost all LEs were providing latrine installation services to non-project households.

Latrine Income

Prior to the training, a latrine set comprised of the supply of 3-5 cement rings and a circular cement slab with a plastic pan which cost approximately BDT 1,000-3,000 per set. After



training, the sale price of latrines increased dramatically to approximately BDT 10,000 per latrine. As a result, the cited value of LEs income from latrine sales increased more than three-fold from an average of BDT 71,579 (USD 900) per month to an average of BDT 248,151 (USD3121) per month.

Latrine Profit

Prior to the training, the profit of most LEs was BDT 5,000-10,000 per month with the profit of most LEs increasing to BDT 15,000-300,000 per month. As a result, the average cited profit of LEs increased more than two-fold from BDT 13,256 (USD 166) per month to BDT 28,432 (USD357) per month. As the entrepreneurs do not keep accounting records and as the profiteering from the sale of latrines is seen to be exploitative, it is highly likely that these profit figures are under estimated.

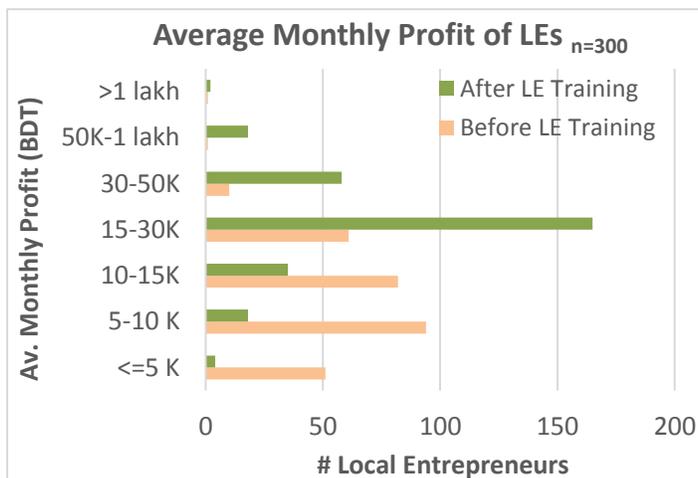


Figure 25: Increase in Profit of LEs after training

8 Outcomes

The end of project evaluation of the *Bangladesh OBA Sanitation Microfinance Program (P157958)* analyzed existing data generated by the World Bank, PKSF, MFIs, LEs and especially the IVA, as well as generating data from structured consultations with 34 credit groups, 14 LEs and 13 partner MFIs. While the end of project evaluation focused specifically on the GPOBA financed recipient executed WB project, it does identify some development outcomes to which this World Bank executed TA contributed.

The Achievements

The recipient executed OBA project was signed in December 2016, became effective in February 2017. The following results were achieved over a 16-month period till project closure in June 2018.

Indicators	Targets	Results
Number of households receiving sanitation loans from POs under the program.	170,000	170,679
People provided with access to hygienic sanitation facilities under the program.	850,000	776,590
Number of hygienic latrines constructed in rural areas under the program	170,000	170,679
Number of households receiving sanitation loans under the program identified as poor	80%	89%
Loans provided to female borrowers	90%	96%
Households satisfied with latrine installation process and functionality	90%	99.99%
Number of local entrepreneurs (LEs) selling a range of latrine materials and components	2,000	1,570
Number of sanitation local entrepreneurs (LEs) receiving loans under the program	2,000	1,031
Number of MFIs capable of marketing sanitation loan products	10	21
Number of Latrines verified by the Independent Verification Consultants (IVC)	6-10%	8.6%
Financial capital leveraged for quality sanitation investments by the project	\$22 m	\$23.7 m

Figure 26: Summary table of outcome target indicators and achievements

The target number of 850,000 people to be provided with access to hygienic sanitation facilities under the project assumed an average of 5 persons per household. The 776,590 people provided with access to hygienic sanitation facilities is based on the 170,679 households with an average of 4.55 people per household receiving loans under this project.

The Relevance

Field surveys indicate that majority of those taking out sanitation loans were those who already had some form of latrine, with households practicing open defecation being less likely to take out a sanitation loan. This supports the program premise that while community led approaches are more effective in encouraging households to enter the sanitation ladder, sanitation marketing is more effective in assisting households to move-up the sanitation ladder.

The Clients

A total of 95% of sanitation development loan clients were female, exceeding the national average for MFIs of 89% female clients. There was not a significant difference in the average size of loans between men (BDT 10,091) and women (BDT 9,845) with male borrowers having a slightly higher percentage of overdue loans than women borrowers. Despite the high engagement of women in credit groups, male household heads exercise significant control over the decision to take out loans and how these loans are spent. Field data demonstrated that there was a small percentage of women who could not convince their husband to upgrade their unimproved latrine.

The Satisfaction

Household satisfaction with the latrine installation process and functionality was recorded against a 4-point ranking system through the IVA verification process. Only 0.01% of the customers of sanitation development loans visited by the IVA were unsatisfied with the installation process or functionality of their latrines. The cause for their dissatisfaction was the lack of the provisions for water storage and insufficient arrangements for the supply of water to their latrines.

The Need

The PKSF partner MFIs (excluding ASA) classify their credit group members into three groups: Buniad (ultra-poor), Jagoron (poor), and Agrasor (non-poor). Analysis of the database of 70,623 households who took out sanitation loans from these 20 partner MFIs indicates that 89% of those who took out sanitation development loans were at least poor, of which 13% were classified as ultra-poor. Only 11% of those accessing interest free sanitation development loans were not considered to be poor.

The Verification of Need

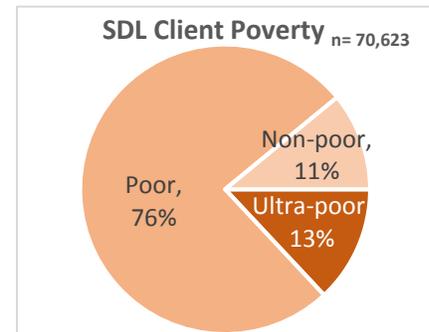


Figure 27: Poverty Status of SDL Credit Group Members (excluding ASA)

Independent Verification Consultant (IVC) reports on 14,612 latrines (or 8.56% of the 170,679 latrines installed under the OBA program) ensured that improved latrine facility standards were being met. The IVC reports also offer a large data set for analysis. The Poverty Probability Index (PPI®) data generated by the IVC enables some independent analysis of the relative wealth of households who took out sanitation loans. (Details of the PPI index and the conversion to household per capita daily expenditure are included at Annex 3).

While this data set does not offer enough confidence in assessing the effectiveness of individual MFIs in extending sanitation development loans to the poor, it is worth noting that the SDL client poverty analysis for ASA (which wasn't captured in the previous dataset) is consistent with that of the other 20 MFIs.

Collective analysis of the PPI data indicates that 60% of SDL customers fell into the category of poor (i.e. below USD 1.75 per day). However, the 29% percent of the ultra-poor SDL customers (i.e. those living on less than USD 1.25 per day) is less than the national average of 39%. While this could be partly due to the progress that Bangladesh has made since 2010 in reducing the percentage of households living on less than USD 1.25 a day, it is also true that micro-credit is not necessarily best suited to targeting the ultra-poor.

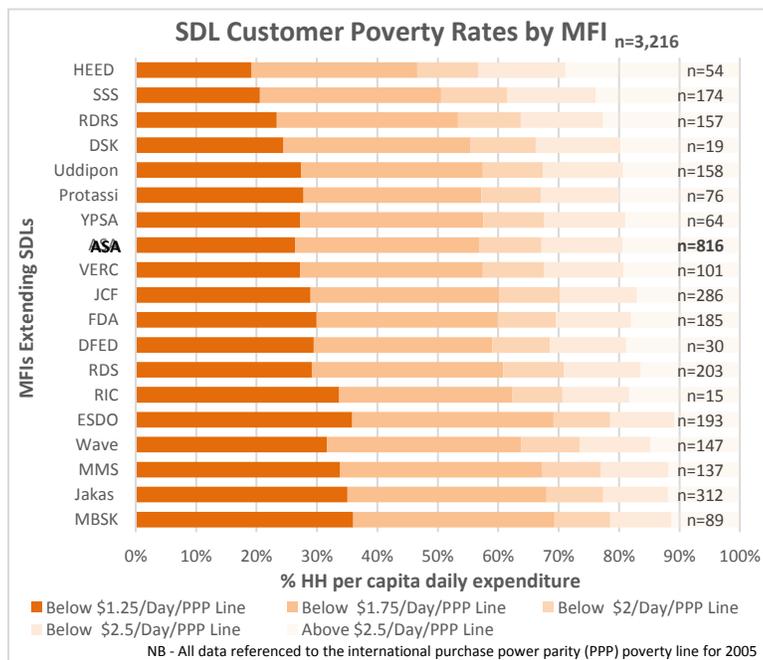


Figure 28: Doublecheck on the Poverty Analysis of SDL Customers for ASA

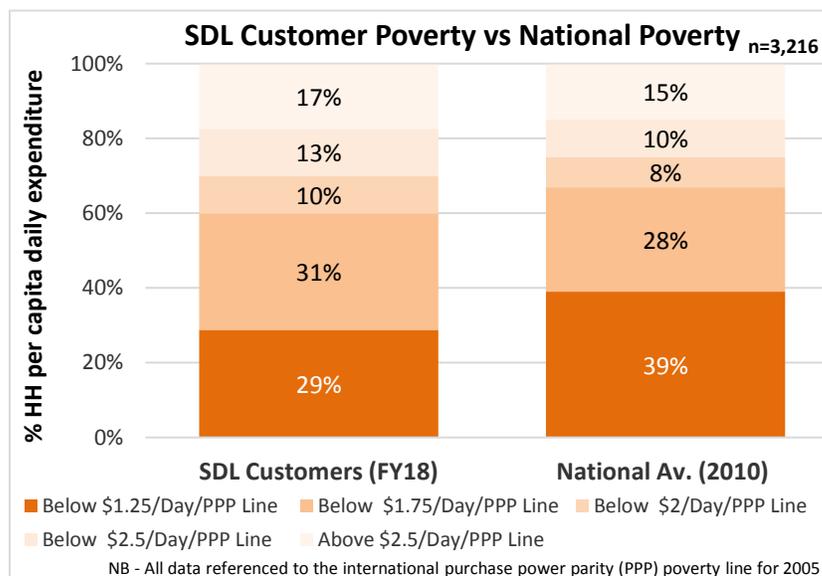


Figure 29: Poverty Analysis of Sanitation Development Loan Customers

The Performance

Up until June 2018, 41% of the sanitation development loans had been fully repaid (39% for ASA and 44% for the other 20 MFIs) however the full performance of the portfolio won't be known till the end of FY19. However, only 0.83% of the total of 170,679 customers had an overdue repayment on their loan (as of June 2018). This is better than the national recovery rate of loans of 95-98% with some MFIs under the project claiming that the SDL was one of their best performing loans.

The Leverage

A significant outcome of the World Bank executed TA and recipient executed OBA sanitation program was the leveraging of commercial capital to finance improved sanitation facilities. The evaluation of the program has estimated that the USD 3.9 million invested by the World Bank and GPOBA has leveraged an additional around USD 23 million of investment. The major investments by ASA and PKSF were de-risked through the complementary design of the World Bank and GPOBA program inputs. Additional investments by clients of an average of BDT 1,140 were necessary in 39% of cases to finance latrine cost increases not covered by the loans.

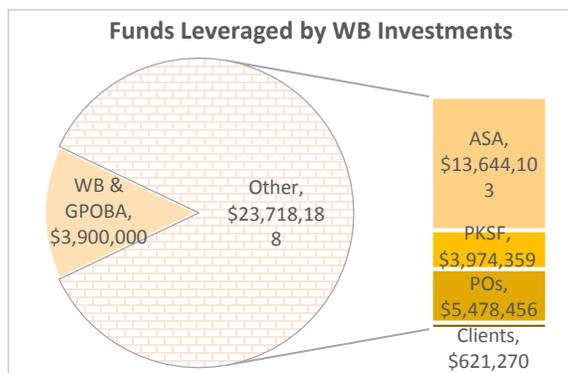


Figure 30: Sanitation Program Financial Leverage

Interest free sanitation development loans (SDLs) to households constituted most of the capital financing leveraged through the program, with business loans to LEs at market rates constituting only 6% of capital financing. The significant contribution of ASA to both SDL and LE loans is due to several factors that included their legacy engagement in the sector, large project area, greater loan sizes and the choice to use their own capital finance rather than capital from PKSF.

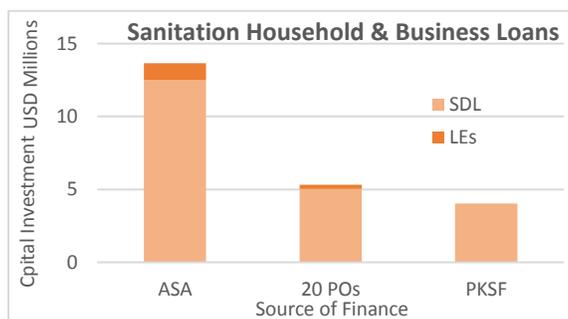


Figure 31: Contribution to household & business loans

The Sustainability

The GPOBA recipient executed funding through PKSF to retail MFIs enabled the extension of loans to households for improved sanitation at 0% interest. This reduced the average repayment by households for sanitation loans from BDT 220 to BDT 200 per week. The access to interest free loans through the project enabled a rapid expansion in access to improved sanitation facilities with loans released for more than 150,000 latrines (i.e. 90% of the project target) installed within just 8 months of the project period. However, the sharp reduction in the number of retail loans for sanitation extended by MFIs since the program targets have been met (in the absence of any wholesale financing of sanitation loans in FY19) raises serious questions about the sustainability of the level of the subsidy.

While the zero percent interest rate on sanitation loans appears to have triggered the market to foster a sharp increase in demand for sanitation loans, this level of subsidy may not be sustainable. For example, the work of the precursor World Bank executed sanitation marketing technical assistance pilot project (TA P131981) led ASA to introduce a reduced interest rate for non-productive sanitation loans of 10% (against productive business loans of 12.5%) in FY15. By FY16, the extension of ASA sanitation loans had grown to approximately 4,000 latrines per month across all its branches. With the inclusion of approximately one third of the ASA branches within the GPOBA project, the demand for sanitation loans increased to 10,000 loans per month in FY17 and 14,000 loans per month in FY18 (with more than half at 0% interest through the project). While the demand for sanitation loans amongst the other twenty retail MFIs has fallen to practically zero since the closure of the project, ASA have allocated BDT 1,539,000 (USD 19million) of their own capital to extend 128,250 sanitation loans at 10% interest (at an average of 10,700 loans per month) in FY19.

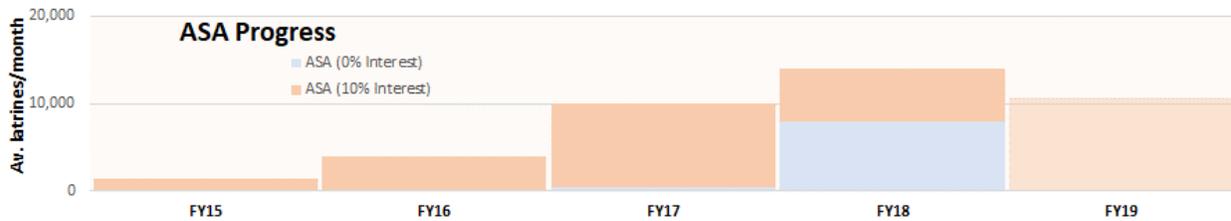


Figure 32: Extension of project and non-project sanitation loans by ASA

The Implications

The World Bank assistance to redress the unacceptably low quality and price point for latrine products comprised of the following two complementary components:

- *Supply side:* World Bank executed grant of USD 0.9 million to develop the standard designs, develop the customer information and education materials, train the installers and evaluate quality of service outcomes, in addition to supporting the design of the GPOBA project.
- *Demand side:* GPOBA recipient executed grant of USD 3.0 million to subsidise the interest on the customer sanitation loan repayments (USD 2.4 million) and manage the verification of latrine quality standards (USD 0.6 million).

Together, these two components leveraged a rapid and significant shift in the market behaviour of sanitation clients and providers within the project area. However, while the use of the OBA funds for the verification of the quality of latrines extended by MFIs appears to have been essential, the amount of the interest rate subsidy seems to have been less important.

9 Lessons Learned

This World Bank executed TA has successfully shifted local entrepreneur behavior away from the supply of sanitation products at the shop floor to the provision of a ‘turn-key’ sanitation service at the doorstep of the household. This effectively shifted the dialogue from the delivery of the sanitary components of a latrine to the delivery of the sanitation service from a latrine, and the interlocutor from the males (who go to the market) to the females (who are available in the household) during the day.

While the ability to access credit for a verified quality latrine appears to have been essential, and while an interest rate subsidy seems to empower women to advocate for improved sanitation within their household, the size of the subsidy seems to have been less significant. For the poor households this was not sufficiently significant (in comparison with the repayments on their productive loans) and for the ultra-poor households this was not significant enough (to enable them to afford such a latrine).

This World Bank executed TA has pioneered a shift in the market behaviour of MFIs in relation to the extension of loans to households to gain access to improved quality public services. Combining the extension of ‘non-productive’ sanitation loans to households with ‘productive’ sanitation loans to local entrepreneurs, means that MFIs have been able to expand their customer base and loan portfolio without significantly increasing their market costs or risks. This enables the public costs of behaviour change communications to be shared amongst the MFI project staff and the local entrepreneurs. While sanitation marketing officers were funded through the TA, in the future it appears that sanitation marketing officer positions could therefore be financed by the MFIs, as ASA has already done.

The sustainability of the sanitation development loans is much higher for MFIs (i.e. ASA) which have their own sanitation loan policy and their own allocation of capital (with targets) for the extension of sanitation loans. This suggests that wholesale MFIs should require all retail MFIs to have a sanitation

policy and capital allocated to sanitation loans before being eligible for future projects. Reducing the subsidy on the non-productive sanitation loans to households and increasing the extension of productive loans to local sanitation entrepreneurs will potentially increase the sustainability of any future engagement.

Under this project, technical and financial assistance was extended to households to install an improved offset pit latrine with a sealed floor, modern superstructure with the facility for water storage (to enable flushing and anal cleansing). Financial and technical assistance for piped water plumbing to the latrine was beyond the scope of the program however the baseline data revealed that water proximate to latrines was a major determinant of the hygienic status of the latrine. The carting of water to the latrines being also a potentially significant additional burden on women. Increasing the sanitation development loans to include the piping of water for flushing, anal cleansing and hand washing to latrine facilities could be a valuable addition to future projects.

Under this project, most households installed a single offset pit with a tee enabling the addition of a second pit to enable the faecal waste to be safely managed. However, it is the sweeper caste that will most likely undertake the addition of a second pit. . Any future project should seek to strengthen the engagement with caste sweepers in converting direct pit latrines to offset pits, the addition of a second pit to an existing single offset pit and the appropriate equipment and procedures to safely manage the contents of the pits.

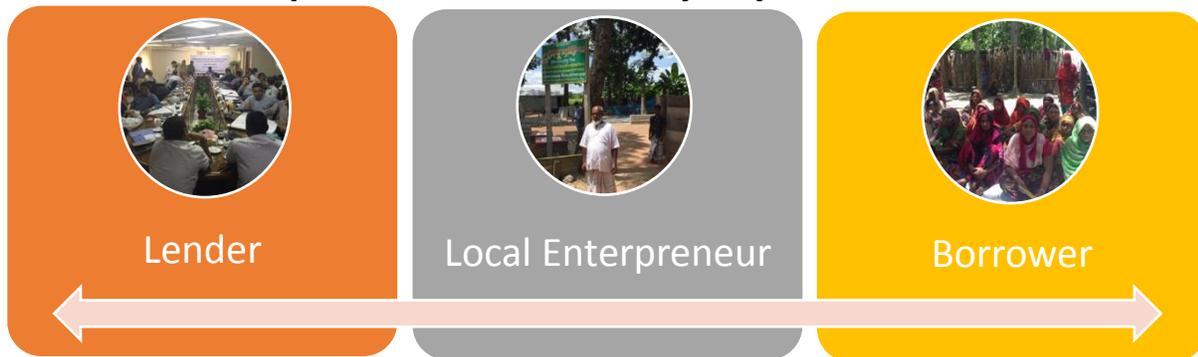
While microfinance has been effective in improving access to finance for the poor, microfinance has not been so effective in reaching the ultra-poor that are not part of local credit groups. Similarly, while output based aid has proven to be effective in orienting institutions to meet quality of output targets at scale, output-based aid has not been so effective in the segmentation of the market to tailor services to reach the ultra-poor. In order to reach the ultra-poor with verified high quality offset latrines, it will be necessary to explore the potential combination with other instruments that are better tailored to reach the ultra-poor (i.e. social safety net programmes and local government subsidies for the ultra-poor).

An essential precursor to the initiation of this project was the World Bank previously executed technical assistance that demonstrated improved rural sanitation access in Bangladesh depends on: i) quality of access (rather than access itself); and ii) leveraging commercial finance.

Annex 1: GPOBA Project Implementation Modality

The implementation modality for the GPOBA recipient executed project was built on the relationship between three stakeholders; the lender, the local entrepreneur, and the borrower. The lenders marketed and provided finance to both the local entrepreneur and the borrower. The local entrepreneur was tasked with marketing, selling, and constructing latrines financed by the lender. Finally, the borrower was the customer for both the latrine and finance products on offer, and therefore had contractual relationships with both the lender and local entrepreneur. The interrelated and interdependent relationships between these three parties facilitated the necessary transactions required to finance and construct the latrines. The project design aimed to ensure the incentives were right for all parties to fulfil their roles.

Implementation Modality Key Stakeholders



PKSF acted as the lead partner, and channeled funds to the Lenders, both ASA and POs, who were mostly NGO's with microfinance and WASH sector experience. Through 1,388 branch offices of 21 POs, these lenders worked to identify clusters of poor consumers in rural areas, interested in accessing sanitation loans. Due to their previous experience and size, ASA had significantly more capacity than the other POs and hence agreed to provide loans to 100,000 of the 170,000 targeted households.

Pre-qualified local construction firms were identified through a competitive process to act as the local entrepreneur (LEs). Once selected they were provided with training to support them to market, sell and construct the latrine products being promoted under the project. Building on the lessons from the pilot project, latrine options were developed and promoted that represented a higher level of service than previously promoted in Bangladesh.

The latrine models promoted placed emphasis on ensuring hygienic standards were met, through the installation of a water-seal latrine and a good quality of the superstructure, offering customers an attractive and desirable product. The latrine options offered under the project had a set price, but the differential price points (between US\$ 45 and US\$ 220), offered customers a choice based on their preferences and purchasing power. Details of the three latrine options are included in Annex 2.

To support households to finance the construction of new latrines, the project designed a new financial product, the Sanitation Development Loan (SDL), which was promoted by POs. Households then chose from the selection of trained and qualified LEs to construct hygienic latrines. In accordance with the loan agreement, households were required to choose from the selection of World Bank-designed hygienic toilets for installation. The project subsidized the purchase of the latrine by covering a proportion of the

capital cost of the latrine. Following the output-based approach, these subsidy payments were disbursed to the POs based on the actual number of loans provided and corresponding latrines constructed.

Household Sanitation Loan Process



The POs which received capital money from PKSF received 10 percent subsidy against the total value of the loan disbursed (loan and interest) to the households. ASA, who invested their own capital received a 12.5 percent subsidy. Loans had a minimum size of 3,500 BDT (US\$ 44) and a maximum size of 10,000 BDT (US\$ 126); therefore, the unit cost of the subsidy ranged between US\$ 4.4 and US\$ 15.75. Borrowers were responsible for repayment of the total amount of the loan, minus the subsidy, to the lending MFI and it was structured so customers paid off their loan in weekly installments, over a period of 50 weeks.

While the subsidy was designed to partially cover the total capital cost of the latrine, the subsidy was equal to the interest amount of the loan provided. Hence the POs used this fact to market the loans as an “interest free loan” to their customers, as this was perceived as an attractive proposition that was easily understood by customers and LEs. While the loans were extended to the existing credit group members most of whom had taken out productive loans, new customers were welcome to join the credit group to avail of the non-productive sanitation development loans.

Upon completion of works, a team of Independent Verification Consultants (IVC) checked that the works had been completed to the required standard and that consumers had access to hygienic sanitation facilities. Most OBA projects use independent consultants to undertake the verification in order to enhance transparency, and in this case an independent team was engaged by PKSf. The IVC adopted a sampling methodology and visited households to verify latrines on a quarterly basis. Based on this verification, the OBA subsidy was released by the World Bank to PKSf and onto the POs.

In addition to the household sanitation loans, loans were also made available to the LEs that had undertaken the training and engaged in the project. These loans were to support the LEs to expand their businesses to address demand from the project, as well as to cover working capacity and cashflow in the short term. The entrepreneurs' loans ranged from US\$ 500 to US\$ 2,500 and were provided at a flat interest rate of 12.5 percent and delivered as per the policies of POs. Unlike the household loans, the LEs loans were not subsidized by the project.

Through the technical assistance activities supported under the project, demand creation and market promotion were undertaken, including handwashing promotion and behavior change activities. In addition, follow up support to trained entrepreneurs was provided to ensure quality of construction, involvement of community leaders and local government, and support to POs to reach the poorest households. By raising awareness of the need to shift from unimproved to hygienic sanitation facilities, local government agencies and NGOs helped build demand for the loan.

Annex 2: Latrine Options with Components and Prices

Aram Plus Latrine

৯
সিরামিক প্যান, কংক্রিটের প্লেট ও খুঁটি, টিনের চালা ও বেড়া ১০

আরাম প্লাস ল্যাট্রিন



আরাম প্লাস ল্যাট্রিনের মূল্য

৫ রিং ঢাকনাসহ	১২৫০ টাকা
কংক্রিটের প্লেট (৪ফুট X ফুট প্রাটফরমের জন্য ৪ পিস)	৮০০ টাকা
সিরামিক প্যান	৫৫০ টাকা
সাইফুন ও ডেলিভারী পাইপ (৪ফুট)	২৫০ টাকা
সিমেন্ট, খোয়া, বালু (কাস্টিং স্লাব)	৬৫০ টাকা
কংক্রিটের খুঁটি (৪টি)	১০০০ টাকা
টিনের চালা বাতাসহ (৩ পিস টিন)	৬০০ টাকা
টিনের বেড়া বাতাসহ	২২০০ টাকা
পানির ড্রাম ট্যাপসহ	৩০০ টাকা
পরিবহন ও মজুরী	১২০০ টাকা
সর্বমোট খরচ	৮৬০০ টাকা

Components and prices

SI	Components	Price (BDT)
1	5-Ring with Cover	1,250.00
2	Concrete plate (4 pcs for 4'x4' platform)	800.00
3	Ceramic pan	550.00
4	Syphon and delivery pipe (4 ft)	250.00
5	Cement, Brick chips and sand (casting slab)	650.00
6	RCC pillar (4 pcs)	1,000.00
7	Cl sheet roof with wooden supporting beam (3 pcs)	600.00
8	Cl sheet fencing with supporting wooden frame	2,200.00
9	Water drum with tap	300.00
10	Labour and transport	1,200.00
	Total	8,800.00

The above component prices were estimated during 2016 but increased later during project implementation (Oct 2017- June 2018) and local entrepreneur (LE) charged BDT 10,000, which was given as loan to the borrowers.

Bilas Box Latrine (Box Platform)

১১ বিলাস ল্যাট্রিন

বক্স প্রাটফরম, সিরামিক প্যান, কংক্রিটের খুঁটি,
টিনের চাল ও বেড়া



বিলাস ল্যাট্রিনের মূল্য

৫ রিং ঢাকনাসহ	১২৫০ টাকা
সিরামিক প্যানসহ বক্স প্রাটফরম (৪ফুট X ৪ফুট)	২২০০ টাকা
সাইফুন ও ডেলিভারী পাইপ (৪ফুট)	২৫০ টাকা
কংক্রিটের খুঁটি (৪টি)	১০০০ টাকা
টিনের চালা বাতাসহ (৩ পিস টিন)	৬০০ টাকা
টিনের বেড়া বাতাসহ	২২০০ টাকা
পানির ড্রাম ট্যাপসহ	৩০০ টাকা
পরিবহন ও মজুরী	১২০০ টাকা
সর্বমোট খরচ	৯০০০ টাকা

Components and prices

Sl	Components	Price (BDT)
1	5-Ring with Cover	1,250.00
2	Ceramic pan with box platform (4'x4')	2,200.00
3	Syphon and delivery pipe (4 ft)	250.00
4	Cement, Brick chips and sand (casting slab)	650.00
5	RCC pillar (4 pcs)	1,000.00
6	Cl sheet roof with wooden supporting beam (3 pcs)	600.00
7	Cl sheet fencing with supporting wooden frame	2,200.00
8	Water drum with tap	300.00
9	Labour and transport	1,200.00
	Total	9,650.00

The above component prices were estimated during 2016 but increased later during project implementation (Oct 2017- June 2018) and local entrepreneur (LE) charged BDT 10,000-11,000 depending on varying labour and transportation cost from place to place. In this case, loan amount was BDT 10,000 and the additional amount was contributed by the household borrowers.

Bilas Latrine (Brick work platform)

১৩ বিলাস ল্যাট্রিন

ইটের গাঁথুনির প্রাটফরম- সিরামিক প্যান, কংক্রিটের খুঁটি, টিনের চালা ও বেড়া



বিলাস ল্যাট্রিনের মূল্য

৫ রিং ঢাকনাসহ	১২৫০ টাকা
সিরামিক প্যান ও পানির হাউজসহ	৪৫০০ টাকা
প্রাটফরম (৫ফুট X ৫ফুট)	
সাইফুন ও ডেলিভারী পাইপ (৪ফুট)	২৫০ টাকা
কংক্রিটের খুঁটি (৪টি)	১০০০ টাকা
টিনের চালা বাতাসহ (৩ পিস টিন)	৬০০ টাকা
টিনের বেড়া বাতাসহ	২২০০ টাকা
পানির ড্রাম ট্যাপসহ	৩০০ টাকা
পরিবহন ও মজুরী	১৫০০ টাকা
সর্বমোট খরচ	১১১০০ টাকা




Components and prices

Sl	Components	Price (BDT)
1	5-Ring with Cover	1,250.00
2	Ceramic pan with water reservoir and platform (5'x5')	4,500.00
3	Syphon and delivery pipe (4 ft)	250.00
5	RCC pillar (4 pcs)	1,000.00
6	Cl sheet roof with wooden supporting beam (3 pcs)	600.00
7	Cl sheet fencing with supporting wooden frame	2,200.00
8	Water drum with tap	300.00
9	Labour and transport	1,500.00
	Total	11,600.00

The above component prices were estimated during 2016 but increased later during project implementation (Oct 2017- June 2018) and local entrepreneur (LE) charged BDT 12,000-13,000 depending on varying labour and transportation cost from place to place. In this case, loan amount was BDT 10,000 and the additional amount was contributed by the household borrowers.

Annex 3: Poverty Probability Index

The Poverty Probability Index (PPI®) is a poverty measurement tool for organizations and businesses with a mission to serve the poor. The PPI is statistically-sound, yet simple to use: the answers to 10 questions about a household's characteristics and asset ownership are scored to compute the likelihood that the household is living below the poverty line. With the PPI, organizations can identify the clients, customers, or employees who are most likely to be poor or vulnerable to poverty, integrating objective poverty data into their assessments and strategic decision-making.

Unlike other poverty measurement methods, the PPI was designed with the budgets and operations of real organizations in mind; its simplicity means that it requires fewer resources to use. The PPI is a set of 10 easy-to-answer questions that a household member can answer in 5 to 10 minutes. The questions are simple – “What material is your roof made out of? How many of your children are in school?” The scored answers provide the likelihood that the survey respondent's household is living below the national poverty line and other internationally-recognized poverty lines. The PPI is country-specific and there are currently scorecards for 60 countries.

In 2005, Grameen Foundation commissioned the development of the Progress out of Poverty Index® (PPI®) with the support of the Consultative Group to Assist the Poor (CGAP) and Ford Foundation. Their goal was to create an easy-to-use poverty measurement tool for microfinance institutions, understanding that these institutions need reliable poverty data to manage their social performance. Mark Schreiner's simple poverty scorecard resonated with Grameen Foundation because of the characteristics it shares with the Grameen Bank's 10-Point System. The Prizma Microfinance (Bosnia) scorecard also inspired the development of the PPI. After pilot testing the PPI, Grameen Foundation instituted a training program for MFIs interested in using the PPI, which helped to facilitate initial adoption of the tool.

Today, the PPI has proven its reliability and feasibility to many organizations around the world. Armed with client-level poverty data, these organizations are now making more informed decisions and assessments. The PPI is now used by a wide range of organizations—international NGOs, social enterprises, donors, investors, multi-national corporations, governments and more—across a variety of sectors including agriculture, healthcare, education, energy, and financial inclusion.

In July 2016, in order to facilitate the long-term sustainability of the tool, the PPI Alliance was formed and the PPI moved its home from Grameen Foundation to IPA and created a new construction methodology behind the PPI. In October 2017, the PPI was rebranded as the Poverty Probability Index.



PPI® Scorecard for Bangladesh

To assist with collection, organizations can use the household roster located on the second page.

Entity	Name	ID	Date (DD/MM/YY)
Participant:	_____	_____	Date joined: _____
Field agent:	_____	_____	Date scored: _____
Service point:	_____	_____	# HH members: _____

Indicator	Response	Points	Score
1. How many household members are 12-years-old or younger?	A. Three or more	0	
	B. Two	10	
	C. One	16	
	D. None	32	
2. Do all household members ages 6-to-12 currently attend a school/educational institution?	A. No	0	
	B. No one 6-to-12	0	
	C. Yes	6	
3. In the past year, did any household member ever do work for which he/she was paid on a daily basis?	A. Yes	0	
	B. No	8	
4. How many rooms does your household occupy (excluding rooms used for business)?	A. One	0	
	B. Two	3	
	C. Three or more	5	
5. What is the main construction material of the walls of the main room?	A. Hemp/hay/bamboo, or other	0	
	B. Mud brick, or C.I. sheet/wood	2	
	C. Brick/cement	9	
6. Does the household own any televisions?	A. No	0	
	B. Yes	7	
7. How many fans does the household own?	A. None	0	
	B. One	4	
	C. Two or more	7	
8. How many mobile phones does the household own?	A. None	0	
	B. One	8	
	C. Two or more	15	
9. Does the household own any bicycles, motorcycle/scooters, or motor cars etc.?	A. No	0	
	B. Yes	4	
10. Does the household own (or rent/sharecrop/mortgage in or out) 51 or more decimals of cultivable agricultural land (excluding uncultivable land and dwelling-house/homestead land)?	A. No	0	
	B. Yes	7	

By [Mark Schreiner](#) of Microfinance Risk Management, L.L.C.

Score:

This PPI was created in March 2013, based on data from 2010. For more information about the PPI, please visit www.povertyindex.org.