

NOVEMBER 2010



## ABOUT THE AUTHOR

**ROKEYA AHMED**

is Water and Sanitation Specialist, WSP–South Asia, based in the World Bank’s Dhaka office. She leads the Bangladesh rural sanitation program of WSP as task manager.

**APPROVING MANAGERS**

Christopher Juan Costain, Principal Regional Team Leader for South Asia, Water and Sanitation Program.

Jaehyang So, Program Manager, Water and Sanitation Program.

# SmartLessons

*real experiences, real development*

## Sanitation Market Development: A Head Start for Healthier Living

*Given a choice, poor people in Bangladesh would like to be treated the same as any other consumers who go to the market, assess all the options, and then make their purchases—either with a lump-sum payment or through an installment plan. Even with an interest component, installment buying gives them greater economic liberty. The Water and Sanitation Program (WSP) not only facilitates this economic liberty, but, more importantly, it also promotes sanitation reform through affordable means of waste management that include hand washing, waste management, and sustainable latrine options. To promote the sustainability of the sanitation program, with the aim of scaling up, WSP designed and implemented a small project—Scaling Up and Sustainability of Total Sanitation in Bangladesh (SSTSB)—from April 2008 to March 2009 (see Box 1). As a result, rural consumers in the five piloted villages of Jamalpur district (Mohanpur, Ghoradhap, Chandpur, Chontia, and Kalibari) now can choose from among 20 latrines that cost from Tk 400 to Tk 20,000 (\$5.50 to \$290), hand-washing devices (from \$.60 to \$7), and solid- and liquid-waste-management technology (from \$5 to \$10). This SmartLesson describes how this progress came about.*

### Background

Bangladesh is one of the most densely populated countries in the world, with more than 144 million people in an area of just 147,570 square kilometers. More than 76 percent of the people live in rural areas. About 115 million people live on less than \$2 a day. Based on calorie intake, about 18 percent of the rural populations are classified as extremely poor (daily intake below 1,805 calories per person).<sup>1</sup>

Over the last decade, Bangladesh has emerged as a global reference point in experimenting with and implementing innovative approaches to rural sanitation. One such innovation was the community-led total sanitation (CLTS) approach (Box 2), which moved millions of people away from “open defecation” toward “fixed point defecation.” Between October

2003 and June 2008, the percentage of rural people accessing basic sanitation increased from 29% to 88% (National Sanitation Secretariat). But, according to the Joint Monitoring Program for water supply and sanitation of the WHO and UNICEF, the improved sanitation coverage is only 53 percent (2009).

Practitioners and policy makers recognized low-cost toilets, which are affordable and suit the local conditions of the community, as the major solution to shift community practice to fixed-point defecation using improved sanitation.

In less than five years, more than 90 million people in Bangladesh shifted to fixed-point defecation. But diarrheal diseases are still the second leading cause of child and infant mortality. Only 0.4 percent of people wash their hands with soap and water before having

<sup>1</sup> Bangladesh Bureau of Statistics, 2006.

a meal.<sup>2</sup> The issue of the total quality of sanitation coverage demands a concept of sanitation that goes beyond disposal of excreta to include the environmental sanitation issues associated with the hygienic management of solid waste, wastewater, and storm water.

Because Bangladesh is one of the countries most vulnerable to the adverse effects of climate change, sanitation coverage in some of the susceptible areas already has suffered huge losses from floods and cyclones that have completely inundated latrines or washed them away. For example, 23.4 percent of latrines required reconstruction or repair within two years of installation.<sup>3</sup>

The sustainability issue in Bangladesh also presents a massive regulatory challenge for the disposal of septic sludge once the one-site sanitation facilities are filled and emptied. On average, 27 percent of households don't have their own toilet, and this number is as high as 50 percent in some areas.<sup>4</sup>

### **Project Activities and Results**

During the sanitation movement, local masons and small entrepreneurs supported millions of families in constructing latrines (mainly pit latrines). Recognizing their potential, the SSTSBS project was designed to enhance the nation's abilities to provide affordable options for improved sanitation to households. The project engaged in entrepreneurship building, marketing support, development of low-cost sanitation solutions, and establishment of a new financing mechanism with the local masons and entrepreneurs. We began by identifying local masons who were interested in engaging in sanitation as a business. There were 20 candidates, most of whom were already engaged in ring-slab manufacturing or similar businesses, such as shop owners selling sanitation products. The project worked with these entrepreneurs on marketing and business development approaches. Of the 20 entrepreneurs that were trained, 10 improved their businesses after the training, with 7 receiving loans from ASA and the 3 others making improvements with their own money.

Among the marketing strategies identified was the use of local resources—village residents who would be trained to motivate their neighbors to adopt good sanitation practices, with the support of project field staff.

Regarding low-cost options for toilet facilities, hand-washing devices, and solid and liquid waste management, the project examined and collected a number of options, developed learning materials on the different options, and conducted hands-on training for local mason-entrepreneurs for their manufacture/installation. Very quickly after the basic training, however, the entrepreneurs introduced innovations on these options to suit the preference and budgets of their customers.

One of the major contributions of the project was to

<sup>2</sup> International Centre for Diarrhoeal Disease Research, Bangladesh, September 2008, Post defecation hand washing in Bangladesh: Practice and efficiency perspective.  
<sup>3</sup> Water Sanitation Program, October 6, 2010, An assessment of sustainability of sanitation behaviors, facilities, and programs using community-wide open defecation free approaches.  
<sup>4</sup> WaterAid, 2008, "Sustainability and Equity Aspects of Total Sanitation Programmes," Global Synthesis Report.

#### **Box 1: WSP and SSTSBS**

The WSP is a multidonor partnership administered by the [World Bank](#) to support poor people's access to affordable, safe, and sustainable water and sanitation services. It has led or supported many of the advances made within the water and sanitation sector over the last three decades. WSP shares best practices across regions and places a strong focus on capacity building by forming partnerships with academia, civil society organizations, donors, governments, media, the private sector, and others. WSP's work helps effect the regulatory and structural changes needed for broad water and sanitation sector reform.

The SSTSBS project brings finance and technology together to make available a range of affordable sanitation options to promote a shift from basic latrine provision to quality sanitation that includes safe, hygienic, disaster-resilient, comfortable, and durable latrines; safe waste disposal and management; and hygiene promotion, with special emphasis on hand washing. One of the project's main components develops a new financing mechanism to support moving rural households toward quality sanitation by linking small local entrepreneurs with local microfinance organizations.

develop a new financing mechanism to support entrepreneurs with working capital, which in turn allowed them to offer payment installment terms to their customers for up to 10 months. Due to WSP's advocacy in July 2009, the Association for Social Advancement (ASA), a leading Bangladesh-based nongovernmental organization (NGO) that provides microcredit financing, agreed to provide loans to local small entrepreneurs for producing, marketing, and promoting appropriate sanitation technology options such as multiple latrine options and hand washing, and solid waste-management technologies. Seven local entrepreneurs received loans from ASA (totaling \$11,000) to make multiple latrine options available in the rural market. Considerations included sustainability, comfort, waste-management technologies for composting, and hand-washing stations. As a result, from October 2009 to June 2010, about 700 families purchased improved latrine options, hand-washing devices, and waste-management technologies. And 50 schools installed hand-washing stations.

### **Lessons Learned**

#### **1) Use a blended approach to develop both demand and supply.**

The project's blended approach first created demand by introducing the most basic improvements through the community-led total sanitation approach (see Box 2 above), which used a range of participatory rural appraisal tools. These tools included: observing the current situation and building rapport with the community; social mapping to identify the number of households, mark the condition of existing toilets and the waste dumping site, and analyze the population by sex, age and other factors; and well-

## Box 2: Community-Led Total Sanitation

CLTS is a grassroots approach to sanitation developed in Bangladesh. Following the philosophy of participatory rural appraisal, it encourages the people within a community to live in a sanitary environment (mainly confinement of feces) by constructing latrines using indigenous knowledge and their own resources without any external support. The approach uses techniques to sensitize communities to the effects of open defecation and promotes a community-sanctioned shift to fixed point defecation practices.

being ranking, which involved such issues as affordability and the households' economic status.

We combined this demand creation with a strong and well-defined social marketing approach that included market development, engagement of the local government for quality control, and inclusion of the poor as end users. Then we provided a range of affordable services—right at the doorstep of the prospective user.

A note of caution: Raising awareness alone is not enough. Many recipients of hygiene education in Bangladesh can recite the information they have received. And field workers often cite this as proof of program success, assuming that if individuals have the information, they will then take steps to improve their behavior. But that didn't happen due to a lack of user-friendly, affordable technology in the local market. It was therefore necessary to make available, at affordable prices, multiple options of such products as hand-washing devices that were available locally and include demonstrations on how to use them.

### **2) Establish a financing mechanism to support entrepreneurs interested in providing services.**

Financial constraints are the biggest deterrent to the growth and prosperity of any entrepreneurial venture. Traditional banking organizations provide loans against mortgage or collateral, which means the local informal



Example of a low-cost latrine.

private sector will not qualify for such loans. Microfinance organizations mainly provide loans to individuals—ranging from BDT 3,000 to 20,000 (\$4.35 to \$290) at 12 to 15 percent interest without collateral—and the borrowers repay the loan in weekly installments. Even though Bangladesh pioneered the concept of microfinance, no financial organization found the economics of making loans for sanitation for rural poor to be sufficiently lucrative.

It took a fair amount of advocacy and networking to convince the ASA to provide soft loans to deserving local entrepreneurs at a reasonable rate of interest and repayment in monthly installments. The project worked with ASA to evaluate the business soundness and capability of the local entrepreneurs as well as took them to the community so that they could ascertain the demand for sanitation. Local governments also supported this advocacy by providing a guarantee to ASA in the form of a personal follow-up by the local leader to encourage prompt payment from the entrepreneur. Instead of providing services directly to households, the local government supported local entrepreneurs. It did so to enhance the entrepreneurs' businesses as a warranty to the microfinance institute, and as a support for marketing and quality control.

So, by the time the pilot project concluded and the results were shared with other microfinance institutions, there seemed to be sufficient interest to explore similar financing opportunities.



Composting using a simple technology. Cost: \$4.50.



Improved toilet. Cost: US \$60.



Hand-washing device. Cost US \$ 0.65.

### **3) Help local entrepreneurs break through limitations by expanding their horizons in technology and marketing.**

**Technology.** The challenge was to overcome the barriers and limitations created by low-cost sanitary options using low-strength materials, less durable pit lining, or no lining—and to show people that they did not have to install the same type of latrine year after year.

WSP trained local entrepreneurs on nine latrine options, whereas previously they were producing two or three. Once the local entrepreneurs began to think innovatively, a lot of out-of-the-box solutions emerged that used local raw materials as well as new combinations involving cement, concrete, plastic, enamel, and brick. The entrepreneurs also suggested other cost-effective ways of creating toilet structures in phases.

**Marketing.** Parallel to the manufacturing and production was the market-generation exercise, which involved promoting and persuading, dispelling myths and misconceptions, providing factual information, giving the scientific rationale, and customizing buying options—as in how to plan for a toilet that might be beyond the prospective consumer's purchasing capacity.

The local entrepreneurs honed their own marketing styles. Most said they put their heart and soul into making their sanitation ventures a success for two reasons: to see their

community in a better, healthier state, and to make their business profitable.

Prior to the projects, local entrepreneurs sat in the shop and sold their products for a one-time up-front payment—a comparatively costly option that was one of the main barriers to purchase. But now they are walking from house to house with photos of different products, including descriptions of materials and price, motivating the rural poor, and offering doorstep services. This is more effective, because rural women in Bangladesh usually do not go to the market, and many of the men are away, living in towns for their livelihood.

Consumers initially prefer a concrete structure with a twin pit for BDT 8,000 (\$115) or more, but many end up purchasing one that is half the price, for affordability. Long-term payments can widen the opportunity.

The local entrepreneurs also offer attractive installment-payment packages. Most households pay an up-front sum (up to 25 percent of the total cost), and the balance in equal weekly installments. A farmer who constructed a latrine with BDT 4,200 said, "I can also repair my house if I get the same opportunity to pay in installments."

### **4) Work with local change-agents to motivate the community.**

Sanitation is a private, family matter—a subject that has its roots in habits and personal practices and, at the same time, is tied to household economic conditions. A way needs to be found to motivate the family to abandon long-standing habits for better practices. The project used two strategies: It employed the CLTS approach to create community pressure for stopping open defecation, and it used local resources to reinforce messages to individual households by helping them shift to latrines. The project identified five or six people as local resources from each village and trained them to motivate their community—along with field staff of the local NGO, who organized awareness sessions. These village-level sessions involved the local entrepreneurs, local government representatives, NGO workers, and local cultural groups. They presented songs and dramas on sanitation to create interest in and demand for quality latrines. A total of 28 local resources were trained to act as agents of change. (Box 3.)

#### **Box 3: Profile of a Local Resource**

Mojeran Begum is a local resource of a village that became open defecation free in 2007. She received training from the facilitating NGO on mobilization, hygiene promotion, and improved sanitation, as well as on the benefit of improved technology, including hand-washing devices.

Mojeran's personal style is to demonstrate practically the benefits of different models. In her village the hardcore poor used local resources such as bamboo, straw, and jute to build their modest toilets, many of which are destroyed in the monsoons. She motivates people to improve their toilet facilities and also builds a strong case for them to go in for the full toilet sanitation package that includes a hand-washing device, soap, brush, and water pot.

Besides participating in an exercise on sanitation exposure that highlighted benefits to be gained from recycling kitchen waste, Mojeran shared with her community her own experience making compost and selling it for BDT 200 (\$2.90).

## Conclusion

Most developing countries are off track in their efforts to achieve the Millennium Development Goals sanitation targets. By scaling up the lessons learned from this pilot initiative, countries can move from open-defecation status to quality sanitation and be well on their way to achieving the target.

Motivating for the adoption of improved sanitation practices is not simply a matter of informing and educating the rural household.

Rather than have governments provide sanitation services directly to households, an alternative approach, with the potential for more lasting outcomes, is to harness the potential of local entrepreneurs to deliver customized sanitation service options to rural households through the market. Governments need to change their role from a provider of services to an enabler—for example, by supporting training of entrepreneurs for marketing and manufacturing quality control, and arranging for or providing guarantees for loans to entrepreneurs from microfinance institutions.



### DISCLAIMER

IFC SmartLessons is an awards program to share lessons learned in development-oriented advisory services and investment operations. The findings, interpretations, and conclusions expressed in this paper are those of the author(s) and do not necessarily reflect the views of IFC or its partner organizations, the Executive Directors of The World Bank or the governments they represent. IFC does not assume any responsibility for the completeness or accuracy of the information contained in this document. Please see the terms and conditions at [www.ifc.org/smartlessons](http://www.ifc.org/smartlessons) or contact the program at [smartlessons@ifc.org](mailto:smartlessons@ifc.org).