Promoting Sustainable Sanitation Services

Output 1.7.1

Additional Market Opportunities and Analysis
WFP Bolivia: Sanitation as Business
Market Opportunities and Challenges
December 2011
OBJECTIVES

SCOPE

MARKET RESEARCH BOLIVIA

DIAGNOSE
SANITATION VALUE CHAIN & BOTTLENECKS

BOTTLENECKS AS MARKET OPPORTUNITIES FOR ENTREPRENEURS
SAAB Project - Bolivia

OBJECTIVES
### SAAB Projects Objectives - Bolivia:

- **To build** a high social impact sanitation value chain with a market and financial sustainability perspective.

- **To identify** and appraise the **market demand for specific toilet technology according to a socioeconomic segmentation of the consumers**

- **To articulate** the links, starting from the promotion and dry toilets building through the processing and marketing of bio-fertilizers for agriculture application.

- **To identify** the actors, objectives and expected SAAB project results.

- **To map** the bottlenecks all over the sanitation value chain: Define the Action Plan.

- **To identify** market opportunities for entrepreneurs and private sector at the sanitation sector.
SAAB Project - Bolivia
South America

Bolivia:
- 9 regions
- 10 Million People
- 1.1 Million sqm
- 70% no sanitation services
- 14% no water access

Cochabamba:
- 1 Million people
- 33% in extreme poverty
Scope

- The main actions and impact area are located in Cochabamba: periurban and rural areas
- Cochabamba is the third region in Bolivia in terms of economic development and population
- Main rural and periurban areas don’t have access to water
- In periurban areas main water access is through a cistern truck
- UDDTs are the only sanitation technology widely promoted in this area
SAAB Bolivia Project

PREVIOUS MARKET RESEARCH

BOLIVIA
PREVIOUS MARKET RESEARCH

The following i, conducted in the cities of La Paz, El Alto, Cochabamba and Santa Cruz, show the interest of peri-urban populations in the access to ecological bathrooms:

1. ETHNOGRAPHIC STUDY OF WATER AND BASIC SANITATION IN AREAS WITH A HIGH CONCENTRATION OF POVERTY

2. MARKET RESEARCH NEED OF CREDIT FOR THE IMPLEMENTATION OF SANITATION PROJECTS IN COCHABAMBA
RESEARCHES

The following i, conducted in the cities of La Paz, El Alto, Cochabamba and Santa Cruz, show the interest of peri-urban populations in the access to ecological bathrooms:

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2. MARKET RESEARCH NEED OF CREDIT FOR THE IMPLEMENTATION OF SANITATION PROJECTS IN COCHABAMBA
METODOLOGY OF RESEARCH

Who was interviewed?

✓ Families with at least 1 child
✓ Santa Cruz, La Paz, El Alto and Cochabamba (Cities of the shaft of the country and most populous)
✓ With the following formats bathrooms:
  • A family ecological bathrooms in residence
  • A family with septic tank
  • A family without bath
  • A family with another format of common bathroom
Challenges

The grand challenge for Bolivia is to resolve the problems that make it difficult to increase access to basic sanitation:

- Lack of information about the population
- High cost of providing services
- Access to credit offers for financing
- Scalability
- Problems with the sustainability of services
- Environmental contamination
Water Supply

✓ **On average 2 out of 3 households** in peri-urban areas of Cochabamba did not have a system of water supply pipe to the house.

✓ **91.4% of households** have no access to piped drinking water.

✓ For interviewed people a bathroom that contemplates in its design intermittent access to water will have more value than a bathroom that only functions with water or only without water.
The 20.93% of the surveyed households have a bathroom, the **79.06% does not have a bathroom in the house**.

On average, approximately **83.4%** of households do not have toilets that are connected to sewer.

**63.9%** of respondents see the need to improve hygiene and sanitation services.

On average, **52.9%** have a preference for bathrooms *inside* the house, **46.36%** have preference for bathrooms *outside* the house.
Sanitation - Bathrooms

✓ A toilet signifies a family achievement, overcoming expenditures and bad situations. The toilet is a **symbol** of the **level** of a family’s well-being.

✓ Most people **start** building peri-urban areas of very low **investment bathrooms** that are mobile.

✓ Families prioritize the value of things and opportunities from **space and relationships**.

✓ Types of bathrooms used in peri-urban areas of Bolivia:
  - Latrine
  - Bathroom with cesspool
  - Bathroom with septic tank
  - Eco bath
Microfinance Access for sanitation

✓ The capacity for payment of the families who would be interested in getting a loan to solve the sanitation problem is about $50 US / month.

✓ The periurban families are accustomed to putting in terms of fees their projects that provide access to goods. Fee, is a disposition for prioritizing the use of money, and putting it in more than one place.

✓ The bathrooms are constructed using loans. All of the bathrooms observed during this investigation, were realized beginning with access to some type of loan. The manual labor usually includes the active participation of the owners of the property.
DIAGNOSE:
SANITATION VALUE CHAIN BOTTLENECKS

SAAB Bolivia Project
The process...

Mapping the whole sanitation value chain and its 6 main links:

1. Awareness and Promotion
   Communication and Education Campaigns
2. Construction of UDDTs
3. Storage of waste in UDDTs
4. Collection of solid and liquid waste
5. Treatment / Sanitation
6. Marketing of biofertilizer and its agricultural application

UDDTs: Urine Diverting Dry Toilet
CURRENT SITUATION:
SAAB MAIN BOTTLENECKS

SAAB Bolivia Project
Methodology for bottleneck identification

- Several in-depth interviews were conducted within the WFP Bolivia team
- Several interviews with low income families were conducted in the periurban area of Cochabamba
- Documentation and market researches were reviewed
- Interviews with microenterprises: SISE and MESPAL
## SANITATION VALUE CHAIN: MAIN BOTTLENECKS

<table>
<thead>
<tr>
<th>LINKS</th>
<th>BOTTLENECKS</th>
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</table>
| **Awareness and Promotion** | 1. Lack of a socioeconomic baseline for the target populations  
2. Promotion without sales techniques and monitoring  
3. High costs of promotion - unsustainable from a market perspective  
4. Lack of coordination between promotion partners and microfinance institutions  
5. SISE microenterprise without sales and marketing capabilities  
6. DTs “sales” still rely on subsidies up to the 20% of the toilet cost  
7. A culture of subsidy in Bolivia and also in the sanitation sector |
| **Construction of DTs** | 1. Technical and education issues don’t help separation of solid and liquid waste  
2. Toilets in rural areas do not have separate urinals for men.  
3. High cost of construction of toilets  
4. Construction of toilets takes weeks  
5. Microenterprise SISE with weak internal processes in construction and materials inventory management |
<table>
<thead>
<tr>
<th>LINKS</th>
<th>BOTTLENECKS</th>
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<tbody>
<tr>
<td><strong>Storage and Collection</strong></td>
<td>1. Lack of a waste collection system in rural and peri-urban areas</td>
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<td>2. MESPAL microenterprise without waste storage infrastructure.</td>
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<td>3. Storage and processing technologies of waste still in R &amp; D</td>
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<td>4. Lack of an incentive model between collector and low income people</td>
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<td>beneficiaries</td>
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<td></td>
<td>5. MESPAL microenterprise business capabilities in construction</td>
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<td><strong>Treatment / Sanitation</strong></td>
<td>1. Lack of lab tests to prove the urine safeness</td>
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<td>2. MESPAL microenterprise without treatment and sanitation infrastructure</td>
</tr>
<tr>
<td></td>
<td>for solid and liquid waste</td>
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<tr>
<td></td>
<td>3. Solid waste treatment still at R&amp;D stage</td>
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<tr>
<td><strong>Marketing of Fertilizer and Agriculture Application</strong></td>
<td>1. Cultural barriers related to the use of liquid and solid waste on agricultural production and food</td>
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<td>2. Lack of an awareness and education plan for the use of liquid and solid human waste in agriculture</td>
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<td>3. Lack of biofertilizer research by crop type: pine, flowers, wheat, peaches, onions, other.</td>
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<td>4. Lack of market research about use of Biofertilizer in Bolivia.</td>
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SAAB Bolivia Project

BOTTLENECKS AS MARKET OPPORTUNITIES FOR ENTREPRENEURS
SANITATION VALUE CHAIN AND

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<thead>
<tr>
<th>LINKS</th>
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<tbody>
<tr>
<td>Awareness and Promotion</td>
<td>1. Selling and promotion under marketing standard practices</td>
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<td>2. SISE and MESPAL and other sanitation microenterprises need to create marketing</td>
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<td>strategies for the BoP populations including: promotions, discounts, gifts, polls,</td>
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<td>other.</td>
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<td>3. Market opportunities for microfinance institutions</td>
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<tr>
<td>Construction of UDDTs</td>
<td>1. Increasing opportunities for masons and SMEs related to bathroom construction,</td>
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<td>including UDDTs, pour flush toilets, septic tanks, dewatering and infiltration</td>
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<td>tanks.</td>
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<td>2. Market opportunities for manufacturing and distribution of sanitation hardware,</td>
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<td>pipelines, building materials, ceramic goods, plastic barrels, pumps, plastic</td>
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<td>buckets, hygiene goods like soap, shampoo, toothpaste, among others.</td>
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<td>MARKET OPPORTUNITY</td>
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| Storage and Collection | 1. Market opportunities for small enterprises interested to collect human waste from UDDTs  
                          2. Market opportunities for SMEs interested to empty and clean septic tanks |
| Treatment / Sanitation | 1. Market opportunities for small enterprises interested to process human waste and produce biofertilizers and compost for agriculture application  
                          2. Market opportunities for greenhouses (viveros) for fresh flowers and plants, using biofertilizers. |