In-depth Supply Assessment Report for the Sanitation Marketing Pilot – Tororo District Uganda

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Contact Information:

USAID Hygiene Improvement Project
Academy for Educational Development
1825 Connecticut Avenue, NW
Washington, DC 20009-5721
Tel. 202-884-8000; Fax: 202-884-8454
hip@aed.org - www.hip.watsan.net

Plan Uganda
Plot 126 Luthuli Avenue, Bugolobi,
P.O. Box 12075
Kampala, Uganda
www.plan-international.org
Tel.: + 256-414-305-000

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Acronyms

AED	Academy for Educational Development
HA	Health Assistants
HIP	Hygiene Improvement Project
SanMark	Sanitation Marketing
Ush	Uganda Shillings

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1.0 Background

The Sanitation Marketing (SanMark) pilot project, supported by the USAID-funded Hygiene Improvement Project (HIP), is being implemented by Plan International/Uganda along with ARD and the Academy for Educational Development (AED). The in-depth supply assessment was undertaken to provide information on the availability of supply-side materials and services, which would be necessary to support the SanMark pilot in Tororo District.

The assessment was also intended to identify constraints within the supply chain that could be addressed through appropriate interventions in support of the sanitation marketing efforts and better respond to consumer demands for latrine products. The in-depth supply analysis was carried out following the quantitative supply assessment, which was done concurrently with the quantitative demand survey, and the in-depth consumer assessment. Using a purposive sampling method, the in-depth consumer demand assessment identified and interviewed latrine adopters and non-adopters in the pilot parishes, established the type of latrines being used, and what households in the pilot area perceived to be the characteristics of good latrines.

2.0 Introduction

The assessment commenced with a detailed briefing introducing the consultant to the sanitation marketing principles and how to conduct the exercise using the tools provided in the Sanitation Marketing Guidance Manual—also developed by the SanMark project. During the briefing session the consultant was provided with results from the quantitative supply assessment carried out concurrently with the rapid demand assessment.

The quantitative supply survey asked households to identify their service providers (those who build latrines) in the different locations covered by the survey. This provided basic information on individuals who were already involved in latrine construction, where they were located, and their telephone numbers. Uganda does not have a national household address system but the country has a high cell phone density, with deep penetration into the rural areas. This made it possible to access contact telephone numbers of the providers or their close kin/neighbor for ease of reach. Appointments were made with the help of local heath assistants (HAs) and interviews were held with the help of interpretation provided by the HAs.

Sampling for the in-depth supply assessment activity was therefore based on a purposive selection method limited to the service providers commonly and frequently identified through the rapid quantitative assessment. Later, however, a subsequent field visit was undertaken to fill in indentified gaps from the previously concluded in-depth assessment.

The service providers selected for interviews were those whose names were mentioned or appeared more frequently on the quantitative supply survey results. Two latrine builders were chosen from Kwapa II, and two others from Molo. Each interview lasted

approximately one to one and a half hours, with local district health assistants providing translation services.

2.1 Objective of Supply-Side Assessment

The assessment was intended as an exercise for field testing supply-side assessment tools and guidelines (See Annex 1) developed for SanMark programs. The purpose of the draft tools and guidelines was to enable sanitation marketing practitioners/implementers to generate an inventory of sanitation providers by establishing who they were, what their location was and to a limited extent what services they provided. This would facilitate identification and quantification of sanitation (latrine) providers, including suppliers of inputs, design and labour, construction and related tasks needed for provider training interventions under the supply side of the SanMark intervention.

2.2 Limitations of the Interviews

Using health assistants for translation led to some problems, as their technical vocabulary was not strong and their comprehension of American English (used in the questionnaires) was weak. Another weakness of the process was that most of those interviewed knew how to build only the "Common (or traditional) Pit Latrine," with mud floors mud walls, and thatched roof. This may have meant that some questions were not delivered with the emphasis and context intended, or that back translation of the answers was not as accurate as mentioned.

3.0 Findings of the Assessment

This section presents findings of the assessment and describes the existing technologies, capacity of current latrine providers and sources of materials and supplies for latrine construction. The section also examines the transport mode for supplies and materials to households, average cost of building a latrine from interviewees and the cost of the yet to be considered dome slab latrine option by. This was based on a field trip undertaken to Nkokonjeru where dome slabs are currently being tried out.

3.1 Description of Existing Technology in Use

In the various locations visited, the predominant latrine technology in use was the Common Pit Latrine, built over an unlined pit, using mud and log floors, mud and wattle structure, and thatched roofing. This is the latrine referred to in the rapid assessment as Ordinary Pit Latrine. This observation was supported by data produced from the demand-side surveys, which covered villages in all parishes in the pilot area locations in Tororo District. Despite the short life-span of such a structure (2-3 years), this technology is what the providers interviewed claimed people can afford. It should also be noted that this may be the only technology that many of the local service providers can offer, costing between Uganda Shillings (Ush) 60,000 and 160,000. This cost

Traditional latrine in Tororo

depends on how much work is done or materials supplied by the home owner and how much bartering takes place. Depth of the latrine pit is also a significant element, costing between Ush 2,000-4,000 per foot, depending on the soil type.

It should be noted that service providers often build with materials provided by the owners, therefore, the quality of such a latrine will depend on the materials available and not necessarily the service providers' skills. This implies that the development of the supply chain should be accompanied by the promotion of service provider capability and capacity, to provide better services than households could provide themselves. This is corroborated by the rapid demand assessment, which shows that the majority of those who indicated dissatisfaction with the latrine, while few in number, were themselves providers, who presumably understand the standard of latrine in use as opposed to improved options.

3.2 Capacity of Local Latrine Providers

Tororo Mason

In one of the project locations visited, neither of the latrine builders interviewed was capable of providing latrine improvements such as poured concrete floor slabs or fired brick masonry work for durable walls and foundations. This demonstrates the lack of capacity of latrine providers to respond to different demand/need for any range of improved technologies in this specific area. However, in Molo, a team of latrine service providers with some knowledge of masonry and concrete work were found. These masons expressed that they occasionally had clients with the means and desire to install improved latrines. On another trip taken to the district in mid-January 2009, the availability of masons was further investigated through interviews with local townspeople. It is evident that all rural trading centers had a number of masons who have been trained at local technical institutes. These masons were ordinarily engaged in general construction and not usually involved with the construction of latrines; and were therefore not interviewed in the original supply-side assessment.

None of the latrine service providers interviewed had any previous formal training in masonry or construction work. In order to provide improved latrines that use brick foundations and walls, and concrete floors, it will be beneficial to work primarily with trained masons, and use the current pit diggers for that task only. The two groups may then be linked in such a way that the pit diggers are placed under the supervision of masons who determine and offer technical guidance on specifications appropriate for the type of slab the masons intend to offer to a household. This will not only keep the existing pit diggers in business, but will allow for specialization and supply chain linkages, completeness and sustainability.

3.3 Sources of Materials

For the common pit latrine technology described above, most clients currently purchase the materials themselves, paying the contractor for labor only. According to one latrine provider, materials for a latrine floor and structure could cost the client approximately Ush. 60,000 if they indeed purchase all the materials and do not barter or cut the wood themselves. This includes logs for the floor, wood for the walls and roof, grass for thatching and door materials, all of which can be bought locally in most of the district.

According to the SanMark Demand Survey, a majority of people interviewed suggested that the most desirable feature of a well-built latrine would be the durability from using a concrete floor, brick walls and a metal roof. Such a latrine would require materials that are not available in all rural towns. However, they are available from neighboring trading centers, rarely more than 5-10 km away, and can easily be transported by bicycle. This would include cement, metal roofing sheets as well as reinforcing steel and wire mesh. Gravel, sand and fired brick can be obtained in almost all towns.

Should demand for latrines grow, it may become feasible for a growing latrine service provider to purchase good quality clean gravel in Tororo and Petta by the truckload, thereby reducing costs.

All of the materials listed above can also be found in ready supply in Tororo, either at the sole bulk material supplier, Novo Enterprises, or in small quantities in the local market.

3.4 Transport

For individual single stance latrines, all materials can be transported by bicycle from the closest trading center. From a realistic standpoint, the most likely way for a latrine service provider to succeed is for the owner to acquire most or all the materials him/herself, paying the contractor for labor only. The small amount of gravel and sand needed for a single latrine could be collected locally using wheelbarrows. Bricks either made on-site by the owner or bought in the same town could also be transported by wheelbarrow. Remaining materials needed, such as cement and wood, are available almost everywhere, and the roofing sheets and reinforcing bars (if used) could easily be transported by bicycle.

3.5 Supply-side Constraints

Most households contract to build their latrines during the period after harvest seasons when money is available. This limited time period is a constraint to contractors who build 4-6 latrines during the 3-month period, and another about 4 more during the rest of the year.

Even though the latrine service providers contacted do not acknowledge any particular constraints to their latrine business, the main problem seems to be the low incomes of their clients. Spending Ush. 150,000 is considered a large investment for a poor farming family. Each service provider interviewed indicated that they have at one time or other had problems with non-payment for services provided. One stated that in about half of all his contracts he did not get full payment.

The other element is that each provider interviewed did other work, such as building houses, and latrine construction was only a side activity. Due to the seasonal availability of money supply, they see latrine construction as a sideline job to do only when demand is there. If demand was stronger and year round, then the development of specialised latrine contractors may be viable.

4.0 Improvements to Latrine Technologies

It may difficult to change public perception regarding the type of latrine technology to use in Tororo District. However, if households can be convinced of the value of building a latrine that lasts for 10-15 years at USh.200,000, rather than building the perceived cheaper and common option, which costs between Ush.100,000 to 160,000 every 3-5 years, they might be willing to spend a little more money up front for an improved, durable structure.

The proposed technology would be similar to the Ventilated Improved Pit latrine, with brick foundation and walls, a concrete slab with vented pipe, and a metal roof.

To improve the lifespan of the pit itself, the best option proposed is to line the opening with brickwork, going down 2-3 feet to reach compact soil. This foundation is raised to support a pre-cast concrete (or plastic) slab with a simple drop hole. The concrete slab could either be bought from concrete product providers, such as Sure Investments in Tororo, or made on-site after training of masons for the purpose. Brick walls using fired brick and mortar will last quite a long time as will a metal roof.

Demonstration Latrine

One slab technology that has worked well in other countries and has been somewhat successful in the area surrounding Kokonjeru (between Kampala and Jinja) has been the dome slab. This technique does not use reinforcing steel, relying on the inherent strength in the dome shape built from concrete only. Another option would be to use the plastic slab prefabricated by Crest Tanks. This option is similar in cost to the dome slab and has the benefit of a plastic surface that is easy to clean. Both of these options allow reuse of slab and wall materials when the pit becomes full, greatly reducing the cost for a replacement latrine.

5.0 Conclusions

It seems that a durable single stance latrine could be built for a reasonable cost anywhere in Tororo District. The most difficult material to find, gravel, is not essential in large quantities (approximately 50 liters would be needed for a 1 meter diameter domed slab) and could be found locally at a cost of 5,000 shillings. Clean sand is sometimes difficult to find, but all towns claim to have pit sand available, which is suitable for masonry work and could be washed to obtain the 30 liters needed for a latrine slab.

Rural retailers, who do not normally stock roofing sheets or reinforcing bars, often transport cement and other materials from Tororo and most seemed amenable to adding any materials as needed to their order list. However, from the remote small trading centres, it is only a 10-15 kilometer bike ride to the nearest large trading center for transport of any needed material.

Masons are in good supply in Tororo District. Even remote small villages are close enough by bicycle to larger towns, so that almost anyone at any location in the district should be able to build a latrine.

A critical point for success of the SanMark program would be to find ways to guarantee that service providers get paid for their services. From interviews with providers in Tororo as well as discussions with one installing dome slab latrines in Kokonjeru, this is a major problem. It might make sense for latrine service providers to have owners provide materials (as specified by the provider) and then build the latrine over time, as the owner can afford to purchase materials. The service provider would be paid for labor only; thereby limiting his losses should a buyer default on the project.

Annex 1: Draft Supply Assessment Tools

Rapid Sanitation Industry Assessment Tool

Purpose
To provide an inventory of sanitation providers by establishing who they are, where they are located and to a limited extent what services they provide. This will allow for identifying and quantifying sanitation (latrine) providers, including providers of inputs, design and labor, construction and related tasks for training interventions under the supply side of the SanMark intervention.

Instructions
When making arrangements for the rapid household sanitation survey, it is important for the SanMark team to bear in mind that if a household has a latrine, it was either self-provided or sourced from a provider. In some circumstances, communities organize under self help groups to provide sanitation facilities amongst group members.

In all cases, however, it is necessary to identify people already in the business, or those willing and intending to go into the business of sanitation provision; the core target group for training will be selected from this group. This is, therefore, best when paired with the initial rapid assessment activity which those who have been established to own latrines provide information on the source of supply, and where possible the location of the supplier.

The information about providers is then compiled separately in a sanitation provider register, with names and addresses to provide background information for identifying providers for in-depth interviews.

The results of the sanitation survey provider registry will guide you in the planning and development of your tools for sanitation industry visits and the in-depth latrine provider research. These should focus on getting information on products and services and their attributes.

Sanitation Industry Visits Tool

Purpose
To establish the structure and length of the sanitation supply chain, its players and their capacity and knowledge needs, qualitative supply and product chain analysis. Sanitation industry visits aim at providing a platform for the design of an appropriate training module for masons and influencing the sanitation promotional approaches by the private sector from reactive to proactive models. It is intended that industry visits be used as a basis for introducing the concept of sanitation provision as a business rather than a health and hygiene intervention. Ideally you will seek to establish the supply-side constraints and start to identify strategic support and actions that reduce these barriers, and support

business to expand into this new market and enhance affordable and desirable home sanitation.

Instructions
Using the information derived from the rapid sanitation you will have an inventory of household sanitation providers who will link you to suppliers of materials, inputs, latrine builders, slab casters etc. These will then be added onto the provider register to give you a complete supply chain inventory.

With the inventory, you are ready to commence your industry visits. Determine which supply chain members can be visited individually for in-depth interviews. The former will likely be large supplier or producers of inputs, wholesalers or retailers who cannot easily set aside their time for interviews, while the latter are likely to be local areas masons and excavators/sinkers working individually or already in groups

Steps
Prepare your questionnaire in advance and make sure you understand its contents well enough to be able to refer to it easily, without flipping through unnecessarily. Where necessary and this will be in almost all cases, make appointments with the key people you need in order to get the information you require.

At the Visit Site
Introduce yourself and your assistant (if you have one) and explain that you are hoping to learn from them about how they work and what supplies and services they provide, which will help local masons develop a sanitation business to make home sanitation accessible to more households. If you are in an area with a history of latrine subsidy programmes, you may need to mention you will not be paying for latrines so as to manage expectations. Explain that you are visiting them to see and learn about the different products and latrine technologies utilized in order that these can be improved upon to meet consumer needs and preferences.

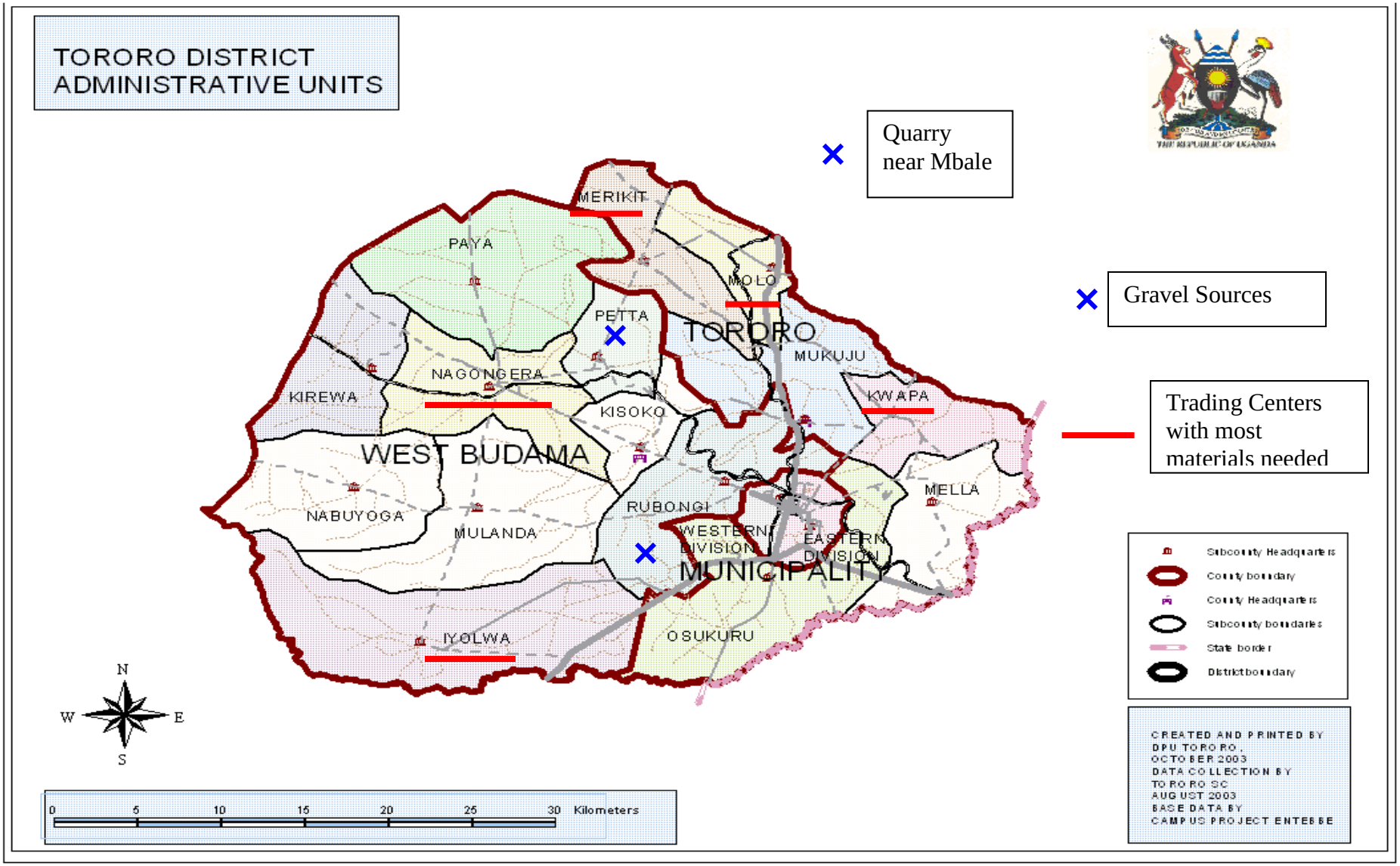
Request permission to ask a few short questions that will take only 20-30 minutes of their time. Questions that must be asked are listed in the text box that follows. You may wish to add a few of your own if you feel it useful. Once the data has been collected the survey results need be analyzed by someone with experience in quantitative data analysis and a clear understanding of the purpose of the survey. The results of this analysis will then guide you in the development of your training module and tools for the development of prototype designs and catalogue of different products.

Site Visit Questions

- What sanitation- related products and services are available and what do they cost?
- Who currently provides these products and services?
- Who buys these products and services?
- What operating expenses do these businesses currently face?
- What are the supply chains for construction materials, components and services?
- What payment and credit systems exist for payment of products and services?
- How are these products and services marketed?

The local policy environment may be an important factor in either constraining or facilitating the uptake of household sanitation. Thus a set of policy related questions also need to be asked:

- What legal requirements are there for household sanitation and how are these enforced?
- Are permits needed for latrine construction?
- From where (if any) are such permits obtained and how?
- Are there any regulation regarding types of sanitation technology, land tenure restrictions, or other laws that could inhibit households from installing latrines?
- Do building regulations rule out sanitation options that might be cheaper and more attractive to poorer households?
- What regulations and public services exist regarding the disposal of fecal waste?


TORORO DISTRICT
ADMINISTRATIVE UNITS
Quarry
near Mbale
Gravel Sources
Trading Centers
with most
materials needed
MERIKIT
PAYA
MOLO
PETTA
TORORO
MUKUJU
NAGONGERA
KIREWA
KISOKO
KWAPA
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