Sanitation as a Business
Using schools as an entry point to catalyze household sanitation in Malawi and Uganda

The problem
The Joint Monitoring Program (JMP) 2008 report claims that the world is on track to meet the Millennium Development Goal (MDG) for water, with the possible exception of sub-Saharan Africa. This statement is a marked change from the JMP mid-term report in 2005, which declared the world would not meet the Millennium Development Goals (MDGs) for either water or sanitation. Although several countries are still struggling to meet their targets, for the first time ever, the number of people without access to an improved water source is below 1 billion (884 million) (UNICEF and World Health Organization, 2008).

Sadly, the outlook for meeting the MDG for sanitation is not as optimistic. The JMP reports that since 1990, the percentage of the global populations without access to improved sanitation has decreased by only eight percentage points and that if the current trends continue, the world won't even achieve half of the goal, missing the sanitation targets by more than 700 million people (UNICEF and World Health Organization, 2008). Twenty-two percent of those without access to improved sanitation—more than half a billion people—live in sub-Saharan Africa (*ibid*).

That the world will not meet the MDG target for sanitation has greater consequence than simply many people not having a toilet. Some argue that access to a toilet alone can reduce child diarrheal deaths by 30% (UN-Water, 2008). It has been estimated that every 1 USD spent on sanitation leads to a 9 USD benefit in terms of improved health, increased work capacity, and educational potential. The World Health Organization made a conservative estimate indicating that a household of six would gain approximately 1,000 productive hours a year with the time saved from not having to queue for a toilet or search for a private place to defecate. "This time has an estimated economic value of well over 100 billion USD each year" (UN-Water, 2008).

The crisis in sanitation is not just that 2.5 billion people lack access to adequate sanitation, terrible that it is. Sadly, the crisis is also one of failed approaches to sanitation development. For decades, sanitation has played stepchild to water supply, and implementing agencies have confused slab construction with delivery.

Water For People, a Denver-based non-profit organization with programs in Latin America, Africa, and West Bengal, India, has learned from its struggles with sanitation. Water For People is shifting from traditional subsidy-driven sanitation approaches to a more service-oriented business model. This transformation is important, as Water For People's monitoring data

consistently show that our application of traditional sanitation models will not lead to meaningful and scalable sanitation solutions.

Water For People has been experimenting with a sanitation initiative that creates lasting relations between the private sector and households. The program is based on microfinance and ecological sanitation, building partnership between private sector and households without the continued support of Water For People or any other donor. Scale is built into this model. It is designed in such a way that the private sector can only grow and prosper if it extends its sanitation network to more households.

Addressing sanitation challenges in Malawi

A new vision on sanitation was initially tested in Malawi as a first step in the broader transformation of Water For People's traditional approach to sanitation. Water For People used a World Bank Development Marketplace grant (2007) to implement a multi-pronged approach to sustainable sanitation services that does not fall into the traditional highly subsidized latrine construction traps that plague the sector.

The key components of the program include:

- A toddler latrine program that eliminates open defecation amongst toddlers; familiarizes toddlers with latrine use and thus inculcates this behavior as normal for a child at the earliest ages, and links improved sanitation with forestry through the use of arbor loos (shallow pit latrines with moveable slab whose pit is filled with dirt and a tree planted when full).
- A school sanitation program using arbor loos (initially) to beautify schools, which includes competitions. Arbor loos are eventually transformed into permanent sanitation facilities.
- A loan-based program where families repay their loans with compost from ecological sanitation systems, and where the private sector providers (who provide the loans as well) sell the compost to a commercial fertilizer company. The private sector has an incentive to expand coverage by turning some of their profits into new latrines, which translates into new clients. This process increases the amount of compost they have to sell to the commercial fertilizer company, sanitation coverage expands without additional seed finance from Water For People, and families eventually make money as well as they eventually sell their compost to the private sanitation providers once their loans are repaid.
- Water For People is in discussions with USAID to develop a commercial loan guarantee program with Malawian banks so that new sanitation entrepreneurs can approach a commercial bank for the initial loan finance to replicate this model in other parts of Malawi, thus removing Water For People from having to finance each new initiative.

Water For People has been pleased with the development and implementation of this model in Malawi thus far. Considerable effort has been focused on understanding the Malawian compost market and developing memoranda of understanding with compost companies. The school work has been successful, and Water For People—Malawi is seeing uptake of latrines in communities through the loan-based program. Water For People—Malawi has also been collecting lessons learned over the past year of implementation. Some of the lessons have been listed in Appendix

A along with suggested ways to mitigate some of the challenges as Water For People expands the initiative. Water For People plans to scale up the initiative in Malawi.

Expanding the program

Using these lessons learned in Malawi, Water For People also plans to replicate this initiative in its new program in Uganda with some modifications. In Uganda, initial research indicates that there is only one commercial fertilizer company in the country. It may or may not be practical to work with that company. Other conversations have resulted in a few suggestions of how to deal with that potential challenge. Eighty percent of Uganda's economy is agriculture-based. Therefore, one suggestion has been to shift the value chain to generate income by selling more and higher quality produce to markets in Kampala. Another suggestion is that because Uganda does have a rich agricultural economy, it may be possible to sell compost directly to tea estates, sugar plantations, or banana farms. Tea estates, for example, have a high need for fertilizer, which currently is quite expensive. If a comparable product could be produced for somewhat less money, estate owners may jump at the opportunity to buy it.

Water For People proposes to partner with Global Water Challenge to expand this innovative school and community sanitation initiative in Malawi and Uganda.

Appendix A: Lessons Learned from Water For People—Malawi's initial Sanitation as a Business approach

Lesson Learned	Explanation	Suggested Mitigation
Communication	One of the districts in which the Malawi program has been implemented was one in which Water For People had previously been applying more traditional water and sanitation models. Government staff, local partners, and sanitation promoters were trained in and familiar with the previous model and had a difficult time adapting their methods to the new model. Water For People—Malawi attributes this challenge to not adequately involving these stakeholders in the development of the new initiative and not communicating the changes in the program as well as was needed to ensure all stakeholders were on board with the new methods.	Water For People—Rwanda and –Uganda will mitigate this challenge in two ways: 1. Because these are new programs, we will not be changing the way Water For People programs operate in the new districts 2. We will involve local stakeholders throughout the project design process and communicate more purposefully with community members and school communities.
Identification of business-minded sanitation promoters	Water For People—Malawi found that it was more complicated to select sanitation promoters for this project than for others. Whereas sanitation promoters in traditional projects needed to be proficient brick-layers and understand the concepts of sanitation, sanitation promoters in this initiative needed to be entrepreneurs with good business sense as well as masonry skills. The in depth interview process needed to find qualified sanitation promoters took longer than was allowed for in the initiative.	Water For People is currently reevaluating what type of promoter is needed for this initiative—whether sanitation promoters should be in business for themselves or if they should be a part of a larger private sector company who can direct and manage the needs of individuals requesting latrines and dispatch masons and compost collectors as necessary. In either case, Water For People will use this lesson learned to allow the necessary time to find qualified promoters.
Choice of technology and mode of repayment	In the Malawi initiative, it was assumed that every household would choose to purchase a fossa alterna latrine with its loan and that arbor loos would be constructed and used only by children. Thus, households would pay back their loans through sale of the compost. However, in Chikwawa District, Water For People—Malawi has seen that may households are interested in purchasing	Water For People attributes part of this challenge to inadequate communication, and so plans to work more closely with promoters to ensure that everyone understands the program well. That said, Water For People will also work to bring

	family arbor loos, instead. Many households find the prospect of adding a tree to their homestead very appealing, as it helps to control erosion, and a fruit tree provides both nutrition and income to the home. Additionally, it seems that the length of time needed to pay off the debt to the promoter may be too long. In cases where a family has chosen an arbor loo rather than a fossa alterna, sanitation promoters are working with households to determine another way to pay back their loans. In some cases, the promoter is agreeing to be paid in cash, and in others through work done by the paying household.	household payment per latrine collection up and/or bring the cost of the fossa alterna down so that fewer collections are needed in order to fully repay the loan. Finally, Water For People—Rwanda and –Uganda will look closely at technology choice and preference as they develop the initiative in these new countries. Erosion is a particular problem in Rwanda, and so beginning household sanitation with an arbor loo, as in schools, may be an option. However, homesteads are also densely packed, and so there is limited space for arbor loos.
Pricing compost	Finding the right price of compost has been a challenge in Malawi. Initially Water For People—Malawi priced manure at $42 per collection ($14/bag, and each collection results in three bags). However, at present in rural areas, compost is selling at only $4.30/bag, which is equal to approximately $13 per collection. Prices for compost in urban areas are slightly higher ($7/bag), and result in $21 each collection. At the same time, inorganic fertilizer sells for between $70 and $88 per bag. Water For People—Malawi thinks that once organic compost penetrates the market, that prices will be able to increase. However, until the price increases, it will take longer for households to repay their loans.	Water For People—Malawi has been working closely with Mr. Steve Sugden from London School of Hygiene and Tropical Medicine (see Appendix E) to understand the compost markets in Malawi. Water For People—Rwanda and –Uganda will also work with Mr. Sugden to understand the market in their respective countries. To do so, each office will look at all of the contributing factors to pricing fertilizer, including but not limited to transporting fertilizer from outside the country and the cost of moving it, etc to find a reasonable price. This work will also be done with the prospective buyers to understand how much they are currently paying for fertilizer.
Compost markets	Water For People—Malawi has fertilizer purchasing agreement with the company Optichem, which is based in Blantyre,	This challenge is one that Water For People thinks may be mitigated by moving away

	about an hour's drive from Chikwawa District in the south, but a full day's drive from Rumphi District in the north. Although discussions are still in progress, Water For People—Malawi anticipates that it will be unattractive for Optichem to make collections in Rumphi.	from individual sanitation promoters as the main entrepreneurs and into a model of a larger company that can manage masons and collectors. That company would have more incentive to collect compost from difficult-to-reach communities because that is how it makes its money, whereas the fertilizer company itself has less incentive. Water For People—Malawi, –Rwanda, –Uganda will continue to work through this challenge.
Sanitation ladder	In Chikwawa and Rumphi Districts in Malawi, most people are at the lowest rung of the sanitation ladder and are practicing open defecation. Most people did not even have a traditional pit latrine. The most logical step up the ladder would have been to a traditional pit latrine, or maybe to an arbor loo. Instead, through this initiative, they are expected to jump several rungs and purchase a fossa alterna. Water For People—Malawi theorizes that this challenge is among the reasons many households are opting for an arbor loo. To encourage households to purchase a fossa alterna has required in some cases, much more behavior change resource than Water For People—Malawi anticipated.	Water For People will learn more about the challenges in moving up the sanitation ladder to determine the best way to mitigate this issue. This challenge is another to consider when considering technology choice.