

EXPERIENCES OF DEVELOPING PIT EMPTYING BUSINESSES IN EAST AFRICA

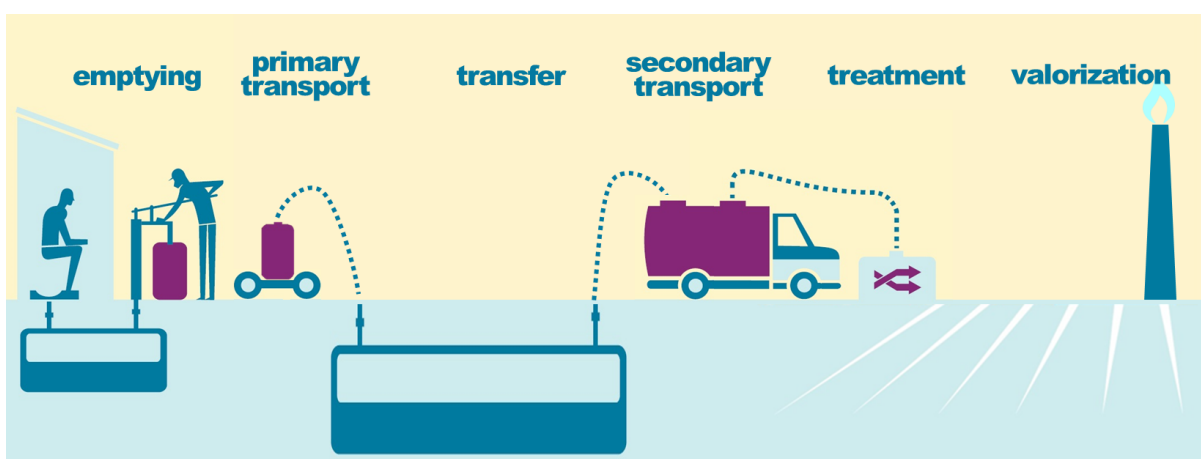
On 29 July 2015, the Stone Family Foundation hosted a panel discussion with three of its grantees—Water and Sanitation for the Urban Poor (WSUP), Water for People and WaterAid—at the WEDC conference in Loughborough UK. The aim of the event was for the three organisations to discuss their experiences establishing local pit emptying businesses in east Africa, and share the opportunities and challenges in this area. This document provides a short summary of the discussion at the event, supplemented by details provided in learning papers produced by the organisations (which are listed at the end).

Introduction

As is well known in the water and sanitation sector, the growth of non-sewered latrines in urban centres is only the first step in solving the public health challenge of poor sanitation—faecal waste in pit latrines needs to be safely removed from residential areas and disposed of. While many informal emptying services exist, there are relatively few examples of professional solutions that are both commercially viable and achieve the safe disposal of sewage—the process called faecal sludge management or FSM.

The aim of the event was therefore to share the findings from WSUP, Water for People, and WaterAid, which have all tested slightly different approaches to developing pit emptying businesses in east Africa. The panel focussed primarily on business models for manual emptying of pit latrines (ie, without the use of exhauster trucks) and, while the discussion covered all aspects of the pit emptying value chain (see Figure 1), it focussed primarily on the ‘emptying’ and ‘primary transport’ stages.

Figure 1: Pit emptying service chain
(Adapted from WSUP’s Urban Programming Guide¹)



Speakers

The panel was made up of three speakers, all of whom drew on a wealth of experience from their organisations:

- **Georges Mikhael, Head of Sanitation, WSUP.** Georges spoke about WSUP's experience in Lusaka, Zambia where it supported work led by Lusaka Water and Sewerage Company to implement a complete faecal-sludge management service in two peri-urban areas, where 95% of inhabitants rely on pit latrines.
- **Steven Sugden, Senior Programme Manager for Sanitation, Water for People.** Steven talked about Water for People's work setting up pit emptying business in Kampala, Uganda and Blantyre, Malawi. He also drew on his experience as the inventor of the Gulper, a pump designed to empty pit latrines.
- **Rémi Kaupp, Programme Support Unit, WaterAid.** Rémi shared the lessons from WaterAid Tanzania's project supporting sanitation entrepreneurs in Dar es Salaam, focussing in particular on testing different financing mechanisms for these small businesses.

About the Stone Family Foundation

[The Stone Family Foundation](#) is a UK charitable trust established in 2005, which focusses the majority of its funding (around £4m per year) on improving access to water, sanitation and hygiene in sub-Saharan Africa and south and south-east Asia. The Foundation supports innovative and entrepreneurial initiatives that have the potential to become long-term, sustainable solutions, and aims to provide seed capital—as a grant or an investment—to help exciting and promising new approaches prove their model and grow in scale.

Identifying sanitation entrepreneurs

A key challenge in developing pit emptying businesses is finding the right people to run them—as Steven Sugden pointed out at the event, no one starts out dreaming of working in pit emptying. And, even once the 'right' people have been identified, the right way to support them also needs to be considered.

Rémi Kaupp explained how WaterAid evolved its approach to recruiting entrepreneurs in Tanzania, learning from trial and error. In Dar es Salaam, the charity originally started by working with individuals already working in pit emptying and training them to become entrepreneurs. However this proved difficult, as the pit emptiers had little interest in or the right skills for running a business. Instead WaterAid started recruiting individuals who were already entrepreneurs, and 'sold' the idea of working in sanitation to them. This was a more effective approach—the entrepreneurs came into the business already able to manage cashflow and loans and collect payments etc, and so were able to apply those skills to a sanitation business and run it more successfully from the outset.

Steven Sugden agreed with this, and talked about how Water for People had recruited entrepreneurs by putting out an open invitation to lunch where they explained the opportunity in sanitation and the support the entrepreneurs would receive. Of the 100 individuals who attended, about 4–5 went on to set up a sanitation business.

'It is more effective in the long run to take a business person and train them in the sanitation industry than it is to take a sanitation person and make them into a business person.'

Steve Sugden, Water for People

Steven also pointed out that key to keeping these entrepreneurs engaged in sanitation business (which Water for People finds is often a bigger challenge than the actual recruitment) is providing the entrepreneur with a vision of the future potential of the business—for example, after a decade the entrepreneur should be aspiring to and seeing a the route to owning three tankers and employing staff to do the emptying. He stressed that showing

entrepreneurs that running a sanitation business does not necessarily mean emptying the pit themselves is crucial to keeping them engaged.

Georges Mikhael provided a different perspective, which challenged the idea that we should exclude pit emptiers from being involved in the businesses being supported. While it is a big step to expect pit emptiers—essentially labourers—to become business people, WSUP stresses the importance of including them as they have a valuable understanding of the geography and local demand. With the right entrepreneurial and management skills at the top, the emptiers could professionalise. The discussion, he emphasised, should in fact not solely be about who the entrepreneurs are, but rather how they are supported to gradually build their business. A member of the audience, Noémie De La Brosse from Practical Action, also made the point that, in some areas—such as the Faridpur in Bangladesh where she is working—there are no entrepreneurs interested in sanitation, so the only option is to recruit pit emptiers to run the businesses.

‘The local pit emptiers’ knowledge about demand becomes an extremely valuable asset if they are included in setting up an FSM business.’

Georges Mikhael, WSUP

Helping businesses to grow

Once the right people are on board, the next challenge is providing the right support to the business to help them become sustainable and ensure they have the public health impact they are meant to. Here the panel discussion touched on three main themes, as outlined below.

Building business skills

Many new pit emptying enterprises need help developing solid business skills, such as marketing, financial management, or employing a team. However, in the panel discussion, it emerged that there is no clear ‘right way’ to do this and there is still much experimentation and learning needed.

Both Rémi and Steven warned that NGOs are not necessarily the best placed to provide this support. They may not have the right skills themselves and there’s also a risk that businesses do not take the financial sustainability of the business seriously because support is coming from an NGO, who have a long tradition of giving things away for free.

An alternative approach, tested by Water for People and WaterAid, is working with a business development support organisation, with expertise in developing supply chains or financial management. These organisations provide consultancy support to the pit emptying businesses—with the NGO playing a more ‘behind the scenes’ role, often paying the consultancy fees. While this arrangement can help overcome the ‘NGO effect’, it is not entirely without challenges—the NGO still possibly has too much influence in terms of what support is provided because, ultimately, it is the one paying the bills. Rémi also made the point that NGOs need to assess the capabilities of these business development agencies very carefully—in practice it can be hard to find decent providers.

Steven also touched on a different peer-support approach used by the NGO PSI: instead of being prescriptive about how entrepreneurs should run their business, the NGO facilitates workshops for small sanitation businesses in which the entrepreneurs engage as peers to discuss common problems, such as price setting or managing transport, and share solutions.

Generating and managing demand

All panellists agreed that managing demand for pit emptying services is one of the most important elements of running a successful business—both in terms of generating demand and then coping with fluctuations.

Georges Mikhael talked about WSUP's work to build demand in Lusaka by developing marketing materials (flyers, posters, megaphones) to be used by the pit emptiers to promote their services. Early results suggest that it has been difficult to get pit emptiers to use these materials and project a strong business image. Georges also emphasised the important role that government plays in stimulating demand and talked about how WSUP worked with the Zambian Ministry of Health to integrate messages about pit emptying into their existing programmes (including the door-to-door Participatory Hygiene and Sanitation Transformation or PHAST approach).

Another challenge for sanitation businesses is coping with periods of lower demand—particularly outside the wet season—and because pit emptying is a service that a household will only purchase once every few years. The panel discussed some of the different ways that they had looked to address this problem.

Georges Mikhael and Rémi Kaupp both emphasised the importance of diversification to create more stable businesses:

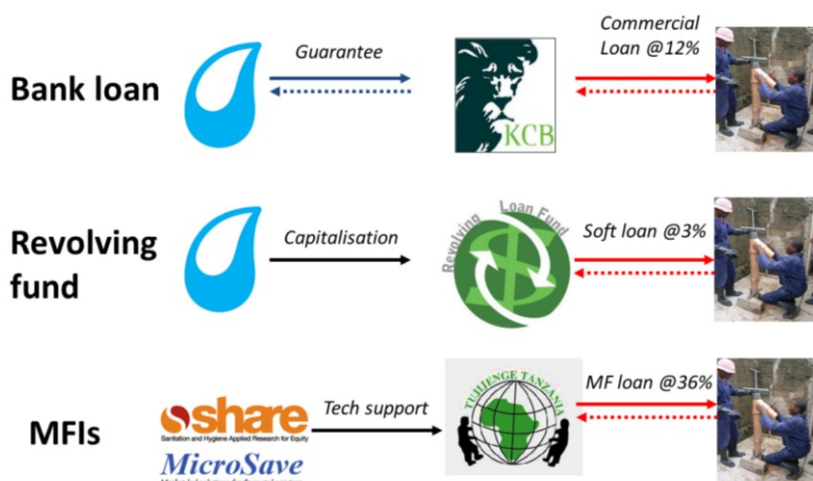
- For WaterAid, this meant also looking for institutional customers, eg, schools, health centres or restaurants, alongside households. Another approach is realising that pit emptying is often an add-on business to other activities, which can be linked together in some cases (eg, solid waste management or transport businesses).
- WSUP's experience in Lusaka was that combining pit emptying services with water supply worked well at smoothing out fluctuations in demand.

Steven Sugden provided a different perspective: for him keeping capital costs really low when introducing a pit emptying service within a city is critical as the demand is not sufficient or consistent enough for the financing of expensive equipment. As demand and awareness of the service grows, so does the reliability of the income and the confidence of the businesses to invest in more expensive equipment and vehicles. Developing services at scale is an incremental process governed by demand, consumer confidence and private sector capacities; not by donor driven two year project cycles.

Accessing appropriate finance

Most new pit emptying enterprises will need finance to start their business. As we know, accessing finance is challenging: banks typically will not lend because the businesses are so small and/or do not have any collateral. On the other hand, loans from microfinance institutions (MFIs) are often too small to cover the start-up costs. Rémi Kaupp talked about different models WaterAid has tested in Tanzania, as shown in Figure 2.

Figure 2: Finance models tested in Tanzania (credit: WaterAid²)



WaterAid found that the fixed repayments required of bank loans were too inflexible for the businesses, despite a lower interest rate than offered by the MFIs. WaterAid had more success with the revolving fund it developed, which offered loans at a very low interest rate and with more favourable repayment terms. This proved very useful

during the start-up phase when the businesses were very risky. Over time, WaterAid believes that microfinance will be a more suitable option as the businesses are more established, and has worked with the [SHARE](#) research programme and [MicroSave](#) to develop a six-month loan product with an MFI, [Tujijenge](#).

Steven Sugden talked about how you could tackle this issue in a completely different way—by leasing pit emptying equipment to the businesses, rather than them purchasing outright. He explained how Water for People had been testing this out in Kampala and, so far, it is proving successful. The leasing option enables the sustainable growth of active pit emptying entrepreneurs and helps people who otherwise lack the finance to afford the capital start-up costs to set up a business.

‘Offering entrepreneurs the option to lease equipment instead of buying it is a promising new way of helping them set up a business straight away—and ensuring it is resilient when demand varies.’

Steven Sugden, Water for People

Engaging with government

All three speakers agreed that establishing pit emptying businesses is only part of the solution to the FSM challenge in urban centres, and that government has a crucial role to play too. However, there were different views about the extent of government’s role and how it should be involved.

The role of government

The importance of appropriate government policy and regulation was something that all three panellists agreed was crucial for creating incentives that would ensure that the waste collected by pit emptiers was safely disposed of away from residential areas. Georges Mikhael talked about how, in some parts of West Africa, it is illegal to transport waste at night, and so pit emptiers often get arrested since this is when they work. Introducing laws and policies that promote safe emptying are important for ‘protecting’ these new, more professional, businesses from informal and less scrupulous emptying services.

Georges also talked about the importance of formalising businesses in this sector through certification. Steven Sugden agreed, adding that in Kampala, Kampala Capital City Authority is developing a system where all pit emptiers must get an environmental impact assessment, be a member of the pit emptying association and get a licensed to operate —if they are then found to dump illegally, they lose that license. There was also a discussion about whether the government had a role setting tariffs for pit emptying, and the panel seemed divided: on the one hand, this can help ensure that the service is affordable but it can also hamper profitability if that tariff is set without adequate understanding of the costs of providing a safe service.

The panel also agreed about government’s role in providing the infrastructure that would allow safe disposal of waste. The important role of transfer stations, where pit emptiers can safely discharge waste, was particularly emphasised as important for business profitability—otherwise the transport costs and fees associated with delivering waste to an out-of-town treatment plant would render the service unviable. Steven felt that this is clearly a role for government as there is little household demand or commercial incentives for stopping the practice of dumping in rivers and other sites away from the household.

Government’s ability to pay for these infrastructure improvements is clearly a key constraint, but Georges Mikhael argued that if the government cannot provide the necessary infrastructure, the sector should look at public-private partnerships as a way to overcome this.

Subsidies and charging for pit emptying

There was more debate on the question of whether the cost to the customer of pit emptying services should be subsidised by government. This is a big and complex subject that the discussion only touched on briefly but, broadly, the panellists agreed that it is important that the public sector contributes towards making these services affordable to low-income customers. This could be financed sustainably through many different mechanisms, such as surcharges for better-off customers. Targeting the subsidies to low-income customers could also be implemented in different ways, such as providing vouchers or by covering the cost of servicing the disposal points (ie, the front-end of the service is paid for by customers, the back end by a public entity).

However, Steven questioned the extent to which government funding is really a realistic goal in the short term. In the absence of government funding, the alternative source of subsidy is from NGOs and this is dangerous and can hinder sustainability by distorting the market—by creating the idea in the minds of customers that the service costs less than it does, which can mean that when that NGO subsidy is withdrawn the prices go up and demand collapses.

Georges and Rémi agreed that short-term NGO subsidies were unhelpful, but put more emphasis on achieving the long-term goal of securing government finance.

‘I beg a stop to direct subsidies! Government subsidies can work if they can afford to do so, but temporary external subsidies from NGOs only distort the market and detrimentally impact on the sustainability and growth of service provision.’

Steven Sugden, Water for People

How to engage with government

Georges Mikhael talked about WSUP’s experience of the best way to engage with local government to develop FSM services. In his experience, a key hook has been demonstrating how an FSM service could help increase authorities’ revenue collection—this has helped engage the authorities in a conversation about contracting sanitation services. Although still early days, engaging with local government this way appears to have borne fruit in Zambia—the lessons from WSUP’s work with Lusaka Water and Sewerage Company are being incorporated in Zambia’s national urban sanitation strategy. That said, Georges reflected that WSUP is still learning exactly what it takes to really change the behaviour of institutions before it will be able to scale up its approach beyond Lusaka.

‘We should support both businesses and institutions in as many ways as we can—but most importantly, the regulatory changes need to be gradual, well thought through and practical.’

Georges Mikhael, WSUP

Technology

The final topic of discussion was the technology for pit emptying businesses—primarily the equipment to empty the pit and transport the waste to a disposal point. All panel members emphasised that there is no silver bullet or perfect technology solution and they all reflected on the trial-and-error process of figuring out what works.

Steven Sugden recalled how Water for People had originally set out to introduce the gulper pump to pit emptying businesses, but then realised that focussing too much on one type of technology was preventing the development of the project. Rémi Kaupp agreed, and added that WaterAid has found that letting entrepreneurs develop their own technical approach, such as water pumps for more liquid sludge, is often a more successful strategy than prescribing solutions. Georges Mikhael explained how WSUP has tried a variety of different emptying equipment, but in the end, in the context of Lusaka, none of them work better than a shovel.

The panel discussed the product development process and Steven Sugden reflected on his personal experience, in which he realised that coming up with a good product represents only 10-20% of the solution, and that getting it to the market is by far the greater challenge. He pointed out that the demand for pit emptying equipment is not high (he estimates only 8-10 units per city in the first year of operation), making it very hard to establish a supply chain even for simple products. There's also the issue of quality: being able to produce something locally makes it cheaper, but risks variable quality products.

Looking ahead, Water for People is currently experimenting with using membranes to dewater pit latrines and decrease the frequency with which they need emptying. While bearing in mind that technology is only a small part of the solution, Rémi Kaupp added that he thinks new, promising technology is something that can get more people excited and engaged in the sanitation sector.

'Don't expect technology to be the answer to all challenges in your business. No technology can solve your financial problems.'

Georges Mikhael, WSUP



References and further reading

¹ Drabble, S. and Mikhael, M. (2015) *Introducing safe FSM services in low-income urban areas: Lessons from Lusaka*. WSUP.

² Kaupp, R. (2015) *A good business emptying toilets: Lessons from Tanzanian entrepreneurs* WaterAid.

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