



Engaging Sanitation Entrepreneurs

Supporting sanitation entrepreneurs in Lesotho – 20 years of experience

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(based on previous work by David Schaub-Jones and Kathy Eales)

Introduction

Recent work suggests that the local private sector is the predominant supplier of basic sanitation in the developing world; a diverse range of formal and informal businesses work on sanitation – delivering to both rich and poor communities, often with limited oversight or support.

In April 2009 BPD convened a multi-disciplinary roundtable to discuss this issue – how widespread it is and what the consequences might be. The focus was on what sanitation entrepreneurs are doing in the field and how best to engage with them. Thirty professionals from differing sectors – from sanitation engineers to health specialists, from Malawian entrepreneurs to financial lenders – debated the role that entrepreneurs currently play, how to support them and what opportunities the sanitation sector may currently be missing.

This case study on Lesotho, drawn from previous work by BPD on sanitation partnerships, was prepared as background to those discussions. It looks back on an established and successful programme, arguably a forerunner to what today is called ‘sanitation marketing’, to see learn how to engage and support the local private sector and how such efforts have evolved over time.¹

Background

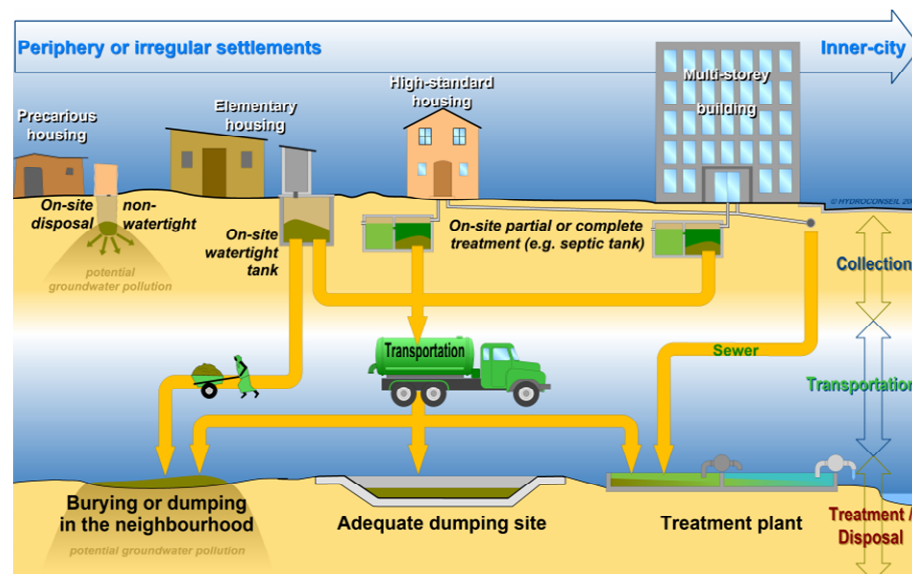


Figure adapted from Hydroconseil

¹ The text is intended to provoke thinking and debate about engagement strategies – their rationale and possible scope – and their legacy. It is not intended as an explicit review or evaluation of the sanitation situation in Maseru, nor as a critique of any existing or former sanitation programmes – the emphasis is on exploration and learning – the comments made herein should thus be interpreted through this lens. It is also based on a necessarily limited understanding of sanitation and development context in Lesotho.

Sanitation entrepreneurs are either service providers (e.g. building latrines, emptying pits) or manufacturers (making plastic toilets, soap etc). The roundtable discussions focussed on the service providers, whose market is segmented into a set of sub-markets, each with quite different characteristics, different types of entrepreneurial presence and different relationships to the public sector. This is graphically depicted above. We now look at how each of these plays out in Maseru.

Collection: In Maseru, capital of Lesotho, roughly 90% of people use dry on-site toilets, with a high proportion of Ventilated Improved Pit (VIP) latrines; sound toilets are generally distinguished as being fly proof and having a door, sturdy floor, sealed slab and so on. Only the Central Business District (CBD) has sewerage, serving considerably less than 5% of the overall population; settlement is too dispersed and water supplies too unreliable for water-borne sanitation to be feasible more extensively, even if residents could afford it. Most sewage and sullage in Maseru drains away to conservancy tanks. There are relatively few septic tanks, because poor percolation rates in the fine clay soils undermine effluent drainage on site.

Transportation: Conservancy tanks are emptied by vacuum tankers operated by the urban Water and Sewerage Authority (WASA); emptying services for pit toilets seem to have largely collapsed, apparently as a result of fragmented responsibility for sanitation oversight within government. Maintenance problems in the sewerage network are becoming more evident, with manholes surcharging at low points in the sewer line due to pumping failures, close to the river that runs through the city.

Treatment & Disposal: Sewage and effluent drains into one of two wastewater treatment works in Maseru. Vacuum tankers empty conservancy tank effluent and pit sludge into oxidation ponds.

The context of sanitation provision in Lesotho

Lesotho, a poor country entirely surrounded by South Africa, has a population of roughly 2.2-million people. Maseru, the capital, is by far the largest urban centre. It's population is estimated at over 300 000, and growing rapidly; the next biggest urban centre has less than 30 000 inhabitants.

Beginning in the early 1990s, the tiny manufacturing sector has been boosted by the development of new garment and textile industries in Maseru and Maputsoe. Over 35 000 textile worker jobs have been created over the past decade, almost exclusively for women. There has been a huge movement of people to Maseru. Between 1996 and 2003, the population in Maseru alone grew from 200,000 to over 300,000 or about 7% per year. If current trends continue, a further 65 000 people are expected to move into the city by 2007.

Yet, beyond its CBD, Maseru largely retains the appearance of sprawling small town. Plot sizes remain large – generally 1 000 m² and more – and there are none of the shack settlements that typify rapid urban growth elsewhere in the region. Land allocation is largely controlled by traditional authorities. Residents negotiate with the local chief for a tract of land, and build a one or two room structure; over time, they may expand and upgrade their dwelling into a sizeable house. “We build one house for life”, explained one informant, “we don't move around.” The result is very mixed neighbourhoods: large face brick houses with satellite dishes stand next door to one-roomed cement block dwellings. This diversity has important implications for service provision, as different service levels are needed to ensure the needs of all residents are met.

Maseru's urban on-site sanitation programme - USIT

Lesotho is justifiably famous for its highly effective urban sanitation programme, launched in 1981 through the Urban Sanitation Improvement Team (USIT). This programme has been documented comprehensively elsewhere (Blackett, TAMS etc). In summary, USIT was established to promote dry on-site sanitation in Lesotho's urban areas, with the VIP toilet the preferred technology; it was overseen by the Ministry of the Interior, subsequently renamed Home Affairs and now Local Government. A parallel National Rural Sanitation Programme was established at the same time, under a separate Ministry, Health.

In its prime – the late 1980s to mid-1990s - USIT had 48 staff members, working in urban centres in nine districts across the country. Staff undertook four main activities: **sanitation promotion** and demand creation, including health education; **training** VIP toilet builders; **providing loans** for constructing VIPs; and **pit emptying**. A key driver, from 1988, was the campaign to eradicate bucket toilets and replace them with VIPs; this was achieved in Maseru by 1992. By 1995, the programme had supported nearly 12 000 households to build VIPs in Maseru alone. In a population of around 200 000, this is a significant proportion.



Brick VIP in foreground where roof tiles match those of the house behind. This 'customisation' of VIPs in Maseru is not uncommon – reflecting the 'status' marketing VIPs.

As much recent work has emphasised, from the perspective of householders, a toilet offers privacy, convenience, dignity and status – generally in that order. The health benefits of safe excreta disposal of excreta are secondary to most people, and an abstraction. USIT understood this well, and its promotional work focussed heavily on the status and comfort benefits of an improved toilet. Most dry toilets today in Maseru are made of cement blocks, with some households investing in face brick or plastered brickwork. Less expensive zinc top-structures, made with corrugated iron sheeting, proved less popular among owner-occupiers in Maseru (partly because they smell when they get hot and partly because they confer status less status) but were adopted widely in other small towns around the country.

A key factor underpinning the rapid success of the VIP programme in the late 1980s and early 1990s was that the VIP toilets promoted by USIT were virtually odourless – in sharp contrast to the bucket toilets they often replaced. Standardized VIP and DVIP (Double Ventilated Improved Pit latrine) designs were developed and tested in Lesotho, National Building Code regulations and health and hygiene education materials were developed jointly by informal co-operation between government agencies.

The sanitation programme run by USIT has proved highly effective at improving sanitation facilities amongst middle income urban households, but has had comparatively little impact amongst the poor. The sturdy VIP toilets promoted by USIT are generally beyond the means of poor households, and cheaper alternatives proved

Key question:

If health does not 'sell' toilets, how then to pass health messages via entrepreneurial approaches?

unpopular; unemployed people and those without title to their land are not eligible for loans, and lending criteria have been narrowed further in recent years.²

The profile of Maseru's population has changed profoundly since the 1980s, and USIT's orientation has not really kept pace with these changes. Yet it is still useful for the roundtable to understand how USIT worked and particularly how it supported sanitation entrepreneurs and their transactions with households (as well as considering that any approach will need to adjust to changing circumstances).

Unpacking the 'sanitation segments'

Collection

USIT was actively involved in assisting households who wanted to build or improve their dry toilets. It trained and certified builders, provided a range of standardised designs suitable for different conditions and affordability levels, worked closely with retailers of building materials, and administered a loan scheme funded through the Lesotho Bank. USIT staff would visit the householder's property, mark out a location for the toilet that would make pit-emptying easier one day, discuss materials and designs, assign a builder and provide some information around maintenance and hygienic operation.

USIT did not set a standard labour fee for toilet builders but established a 'recommended builders fee' (after some consultation with builders) which they would increase periodically. Some builders worked outside of USIT's network to charge a slightly a higher fee or enjoy greater independence, but one of USIT's great achievements has been to set national benchmarks around the design and quality of VIP toilets and act as a price leader in the market – to the extent that VIPs built independently of USIT are of similar quality to those built under close USIT supervision. Good linkages between USIT and toilet builders has facilitated quality monitoring and data capture on the number of toilets built, and USIT incentivised builders to remain within its network by rewarding them with tools once they had built a certain number of toilets.

USIT's approach to construction of pit toilets took account of the downstream requirements for emptying. Pits are generally positioned on the site where they are accessible to desludging equipment; most pits are structurally sound and lined and can accommodate desludging without collapsing; and floor slabs covering the pit are laid in segments with handles, to facilitate removal and desludging.

Today, households generally make their own arrangements to find a builder.³ There is no evidence that builders are organised or actively market themselves as toilet builders; it is for households to find a builder themselves⁴. USIT has limited outreach capacity

Key question:

How much do we know about the role entrepreneurs play in providing sanitation to poorer households or houses with tenants?

Key question:

USIT clearly played a strong 'broker' role between households and builders (entrepreneurs). Much of this has been funded with donor funding. Is this role compatible with developing 'true;' entrepreneurs?

² Many poor households live in rental accommodation, where responsibility for toilet provision lies with the landlord, not the tenant. Provision of services is neither required nor enforced, and BPD was told in 2005 that most landlords 'don't care' about sanitation. Five to ten tenant families commonly share a single toilet, and in some instances, far more.

³ Individual households are responsible for financing and building their own toilets, where owner-occupiers. They might build for themselves, or more commonly contract a local builder (who may or may not have been trained or certified by USIT). Tenants must however rely on the goodwill of their landlord to provide an adequate toilet. In the past, line housing or *malaene* (a series of rental rooms built in a row and very common in Maseru) was often built on the property where the landlord lived; a growing number of landlords now live elsewhere, and therefore have less direct incentive to ensure that facilities are adequate or usable.

⁴ A particular challenge for entrepreneurs wanting to establish a customer base is that once a pit latrine has been built, transactions between the household and entrepreneurs (or for that matter, agencies such as USIT) are comparatively infrequent: pit emptying might only be needed every five years. This means there is little regular contact between the household and the service provider and thus no customer relationship to speak of. Moreover, when it comes to pit emptying, the client – the owner of the toilet facility – might not be the same as the user – such as a tenant. And the entrepreneurs may be different. So unless there is a blanket programme of toilet construction or pit emptying, demand for support or service provision is disaggregated and sporadic.

these days, and consequently keeps a very low profile. Its target market among owner-occupiers is largely saturated. Only a handful of people approach it each month, primarily to access the loan scheme USIT administers for the salaried employees who qualify for it.

Transport

USIT's original plan in the early 1980s was to promote double pit VIPs (DVIPs); when one pit chamber was full, it would be sealed, the pedestal would be relocated over the second chamber, and the contents of the first pit would be left to mature as compost. After two or more years, all pathogens would have died off, and the contents could be removed manually and buried. For various reasons – cost, cultural aversion to handling excreta and questions about the effectiveness of pathogen die-off – VIPs gained ascendancy.

USIT then explored pit-emptying, and experimented with a number of technologies: conventional vacuum tankers, mini-tankers called Microvacs and Mini-Brevacs and hand-operated pumps. Of these, the mini-tankers were by far the most effective, largely because they could reach areas not accessible to the conventional tankers. But these were largely experimental vehicles, expensive to import and not mass produced, and maintenance became prohibitively expensive. Over time, USIT reverted to relying solely on conventional vacuum tankers.

Financing

Access to credit for owner-occupiers was available through a USIT scheme financed by the National Bank of Lesotho. The applicant had to pay for the digging of the pit, and purchase 25% of the materials up-front. The loan was then used to purchase the remaining materials and pay the labour costs of construction.

The process of applying for a loan was relatively onerous, requiring four or five visits to the USIT office over several weeks. Those who did not meet the eligibility criteria were required to buy their materials incrementally. Anecdotal evidence suggests that households made informal arrangements with builders and paid off the cost of construction by instalments (TAMS).

The scheme was meant to act as a revolving fund. In theory, interest paid on the loans should have increased the pool of money available, making it possible to fund a growing number of loans and poorer households. In practice, though, the amount available remained static, in part because of defaulting. Although only 5% of the 12 000 Maseru households who built a VIP with USIT assistance had taken advantage of this scheme by 1995 (TAMS), the default rate was sufficiently high by the mid-1990s to prompt a considerable narrowing of lending criteria; currently, only salaried applicants are eligible for USIT loans.⁵

This means that the majority of households who might now need financial assistance to build a toilet are unable to access it through the USIT programme. Equally, steady price increases have raised the cost of most USIT-designed VIP toilets close to M4 000 (\$400 USD), which puts them out of reach of a poor family. More affordable toilets are

Key question:

USIT developed standard VIP designs, but the cheaper ones were unpopular. It also had little success developing cheap collection systems. Can we realistically expect entrepreneurs to succeed 'downmarket' when USIT failed?

⁵ USIT, confronted with the first defaults, decided that it would cost more to pursue someone through the courts than to write off the loan. The problem was that this set a bad example and encouraged others to follow. In hindsight, it may have been better to 'invest' in a successful prosecution and then publicise it widely to dissuade others from following suit. A lesson for others to heed perhaps!

Barriers to introducing entrepreneurs into the formal emptying market

USIT's intention was to pilot an effective pit-emptying scheme, and then hand it over to an appropriate authority – such as the Maseru City Council, or WASA. In 1995, it was agreed in principle that USIT should be absorbed into WASA – but nothing ever came of this, largely because USIT could not recover the real costs of its pit emptying services and WASA did not want to take on this liability. At the time, residents were paying M60 directly to USIT – when the real cost was roughly three times as much. To this day, the tariff remains roughly a third of the actual cost.

In 1999, an attempt was made to outsource emptying of both toilet pits and conservancy tanks. The Privatisation Unit within the Ministry of Finance put out a tender, but failed to find a service provider willing to provide this service at a rate that was affordable to Maseru's residents without subsidies. A key problem was that the Ministry lacked basic data to inform realistic costing of a pit emptying service, and so had no basis to negotiate with a tenderer. To address this, an Interim Sanitation Services Unit was established in 2001, with WASA taking over USIT's pit-emptying activities, and working closely with the Ministry of Local Government and the Privatisation Unit through an inter-agency steering committee. By 2005 no change had occurred.

Regardless of which agency undertakes service provision, it is clear that emptying of pit latrines needs to be monitored and regulated more closely to make sure that householders' needs are served. Because official tariffs are fixed far below an economic rate, there is little incentive either to WASA or to the tanker drivers to service the pit market more effectively (while an average of 20 pits were emptied each month in the mid-1990s, at a time when the population was much smaller and there were fewer pit toilets, in 2005 there was little evidence of any pit desludging taking place at all). WASA is keen to outsource pit emptying, but without accurate data on the number of pits and tanks, their location and how often they require emptying, it is difficult to write or adjudicate tenders.

It is worth noting that the entrepreneurs in Maseru's pit emptying business are all employed by WASA as tanker operators, and moonlight on the job. Independent entrepreneurs are unlikely to emerge to service Maseru's dry toilets as long as they have to compete with WASA's heavily subsidised service, and as long as they have to self-fund investment in prohibitively expensive pit-emptying equipment. Cheaper robust technologies are needed urgently.

needed. Equally, government may need to consider a programme of carefully targeted subsidies.⁶

Impacts

USIT achieved a change of attitude towards sanitation in urban Lesotho. Writing in 1994, Isabel Blackett noted that *"in newly developing areas, people are now building VIP latrines when they build a house. Landlords must provide sanitation to get a reasonable rent, and it is becoming socially unacceptable and embarrassing not to have a clean latrine."*⁷ (Blackett 1994).

A decade later, the impact of USIT's work is still evident. Well-built latrines are evident throughout the city. Although relatively few builders are contracted or monitored by USIT, the standard and quality of construction remains high and VIPs are the benchmark.

As described above, the Lesotho government's programme targeted owner-occupiers. It focussed largely on demand creation, and deliberately emphasized dignity and status

⁶ Experience with a revolving fund for sanitation in Vietnam has been more successful. This has facilitated the building of almost 200 000 household facilities over a 7 year period. Repayment rates were near 100%. Moreover, it is estimated that the public money spent by the programme has leveraged around 25 times that in private investment. This programme had some success in reaching the poor (sometimes with investment at more than 20% of annual earnings). (All information from a forthcoming WSP publication on sanitation financing, authored by Sophie Tremolet).

⁷ USIT had a couple of strategies regarding landlords in the late 1980's. One was a 50:50 cost share with the landlord to build 2 new VIPs (one male and one female) for a group of rental units. This was seen as an incentive to the landlord which would help improved sanitation for the poorest. Similar initiative applied to USIT's schools programme - a 50:50 cost share with the school - to ensure demand from their side.

Key Question

USIT had success with middle income owners – those renting (often poorer) benefitted less.

How significant a share of the MDGs does this segment represent worldwide?

messages.⁸ These messages have been taken on well by middle-class households, but arguably offered less to poorer households who cannot afford permanent brick structures.

The policy of not subsidising construction was vindicated by large-scale toilet-building by those who could afford to build – but that policy should now be reviewed, and should consider what measures are needed to assist the large number of poor households who currently have inadequate sanitation. The category of poorer households should also be disaggregated - between those who rent accommodation, and have neither tenure security or incentive to invest; and owner-occupiers, who may need financial assistance. Given that landlords are now a significant roleplayer and stakeholder in the provision of sanitation amenities, incentives and possible sanctions should be explored to safeguard the sanitation interests of their tenants.



Maleane rental house in Maseru. It is likely that 6 or more rooms are rented out to separate groups and they share the VIP.

In Maseru, there is little residual evidence of the strong partnerships which drove widespread sanitation improvement from the mid-1980s to mid-1990s. Then, there was co-ordination between donors, USIT, banks, builders, health promoters and households around construction, and at least a shared commitment to experimenting around pit-emptying. Key drivers were a national bucket toilet eradication programme, strong technical and financial support through donor programmes which transcended individual ministries, and the momentum generated by strong uptake from urban residents. But the last donor commitments came to an end in 1996, and the urban programme was taken over by government. Over the next few years, funds for social marketing and health promotion were cut back, lending criteria for home-owners were tightened, experienced staff were redeployed (or chose to move to South Africa where their skills were welcomed), and the USIT programme declined steadily.

Once the core external drivers of co-ordinating both policy and provision – donor-funded programme leaders – withdrew in the mid-1990s, there was increasingly poor co-ordination between the different roleplayers. The role of lead agent for sanitation has recently been re-assigned from the Ministry of Health to Natural Resources Ministry, but it remains to be seen whether it will assert its leading role pro-actively and consistently, and whether other roleplayers in sanitation improvement will accept its authority and align their policies, programmes and service providers behind it. Over time, USIT's role and resourcing has eroded steadily, yet no other agency has been assigned responsibility for this function. Meanwhile, responsibility for servicing urban pit latrines falls under WASA, which reports to the Ministry of Natural Resources; that Ministry has had no jurisdiction over either VIP construction or user education, and its agencies have played no role in these aspects of service provision.

⁸ USIT did discuss whether they could take the role of builders further with user and hygiene education (as BPD's work on Sanitation Partnerships discusses in other contexts) and get them to be more active marketers, but with limited results.

Key questions relating to sanitation entrepreneurship

USIT succeeded to ring about agency collaboration, large scale behavioural change and to broker a productive relationship between builders and households. Is a strong public sector role in doing these things indispensable? Who might do this in other settings?

A lot of what we might call entrepreneurship (innovation, risk-taking, scale) was arguably inherent in USIT and not the builders themselves – what conclusions should we draw?

Micro-credit and revolving loans were tried in Lesotho – is this needed in order to move households to contact entrepreneurs?

USIT was a 'broker' between household demand and supply (an accredited network of builders). It also co-ordinated bank loans and invested in design innovations. Are these roles fundamental?

A revolving fund in Vietnam (see footnote 5) has leveraged between 12 and 25 times more private investment (over \$50M USD). Yet the supply angle was largely left to take care of itself, to 'spontaneously' meet the new demand. Can this approach be relied upon elsewhere (in poorer contexts)?

Now many of the urban poor in Maseru are renters. They are less able and motivated to contact sanitation entrepreneurs (as are landlords). These are hard-to-reach groups. Is this surmountable? What experience is there elsewhere in doing so?

"If the purpose of any engagement is to improve the service to households, a major barrier is the informal nature of much of the household emptying that occurs currently. Most of this is done by informal firms who themselves state a preference for the more predictable market offered by businesses and the State. Managers see household emptying as complicated to monitor; it is difficult for a manager to really know how many trips the truck did during the day (and they fear 'moonlighting' by their operators). Moreover, when discussing their relationship with ONAS (the formal sanitation agency), the entrepreneurs tend to concentrate on the ad-hoc contracts they receive for flood relief and tenders during pilgrimages. It may be hard to switch the subject of conversation (and thus focus the engagement) to household emptying, without being overly distracted by these other issues."

Key sources

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