



An enabling environment for urban sanitation

Headline findings

- **Institutional:** Poor definition of organisational roles and responsibilities continue to be a central problem to effective programme implementation, over a decade after high-level commitments to address the issues were made. A deeper problem concerning the *lack of a planning culture* exists within certain tiers of government that constrain efforts directed at strategic planning.
- **Policy:** There is a lack of guidance on how to meet the human right to sanitation through a process of progressive realisation. The Sanitation Charter developed in Mozambique offers a pathway for downward-dissemination of national level policy, to incorporate the principles of sanitation as a human right, into localised strategy and planning processes
- **Legislation:** A key challenge in realising the human right to sanitation relates to tenure status and illegal occupancy of land, and the implications for recourse to action, for those whose rights are deemed to have been denied. A significant number of urban dwellers thereby lie outside normal jurisdiction.
- **Regulation:** The social enforcement of public cleanliness and 'no open defecation' supported by the involvement of local health workers and community leaders is working well in Kigali. This is an effective alternative to reliance on heavy-handed regulation, for which there is little willingness or capacity to enforce.
- **Micro-finance:** Availability of finance for households is a key driver in supporting demand creation for latrine ownership. Households become active consumers determining their own spending priorities. Demand creation and behaviour change programmes are shown to influence those priorities to include the construction of a latrine.
- **System finance:** The sanitation service chain lacks investment; despite intensive efforts it proved very difficult to collect reliable financial flow data along the service chain. This remains an important

knowledge gap, as it is unclear how and where available finance is best allocated to ensure that the overall system is functional. Whilst revenue can be generated from faecal sludge management (FSM), it is not recommended that the long term functioning of the system should be assumed to depend on the financial flows that *could* be generated. These income sources are better treated as welcome, but unpredictable, financial inputs to urban sanitation management.

- **Implementation capacity:** capacity gaps dominate the entire sanitation service chain. The stakeholder mapping process developed in Cameroon identified suitable starting points for allocating relatively modest resources to solve important problems. One example was to provide a more formalised mechanism for involving pit emptiers in city level discussions.



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Rebecca Scott

1. The enabling environment for urban sanitation

Urban sanitation systems can be broadly categorized as either physically networked (such as conventional sewerage) or as sanitation service networks, where on-plot latrines, whilst not connected to a sewerage system, are the first component in a service chain comprising: excreta capture and storage in a latrine pit or tank; emptying of the pit; transport of the contents; sludge treatment (though not widely done); and end-use or final disposal. This chain of sanitation services is collectively known as faecal sludge management (FSM) depicted in Figure 1. This is the predominant sanitation system in the towns and cities of low to middle-income countries. The projects within the SPLASH urban sanitation research programme have focused principally on: excreta capture and storage; and treatment and end-use.

It has long been established that technical innovation alone is insufficient to address the deficits in urban sanitation services. We adopt the term Enabling Environment to describe the range and inter-relationships of non-technical elements that are needed to support service delivery as illustrated in Figure 2. This Briefing Note identifies the specific research findings from the SPLASH urban sanitation research programme concerning the Enabling Environment.

2. Policy, strategy and direction

Policies and strategies play a part in setting the 'rules of the game' for activities carried out in a specific sector. They are both closely linked to financial planning and budgets, with the argument being that if an activity does not contribute towards a policy objective and has not been outlined as an action in a strategy, then it is not important enough to warrant the allocation of resources. In terms of policy and strategy availability in the project

countries, Rwanda has a Water Supply and Sanitation Policy and Strategy but there is no FSM component; Uganda has an Environmental Health Policy which covers WASH activities generally; Cameroon has an Urban Hydraulics Policy but it has no sanitation component; Kenya has a National Environmental and Sanitation Hygiene Policy; Ghana has an Environmental Sanitation Strategy; Mozambique has a National Water Policy; and Senegal has specific sanitation policies dating back to 1995, when an independent office for sanitation (ONAS) was created with subsequent developments to target peri-urban areas and to address faecal sludge management and treatment. In many cases, clearly defined policies or strategies that focus on sanitation or FSM are not available (Scott and Cotton, 2005).

Box 1: The SPLASH data set

The aggregate data set from the SPLASH research programme is large and covers a wide range of research method. Key data sets include:

- 6,692 household surveys across 3 cities
- A randomised control trial across 40 slum areas in Kampala
- An evaluation of 2,040 household latrines
- A willingness to pay survey with 200 households
- Prototyping 8 latrine designs
- Pilot scale kilns and faecal sludge drying beds
- Over 150 focus group discussions, deliberative forums, community workshops and stakeholder consultations
- Key informant interviews with stakeholders from the whole sanitation service chain in 9 cities
- Bacteriological and physiochemical analysis of water and faecal samples

Figure 1. The sanitation service chain

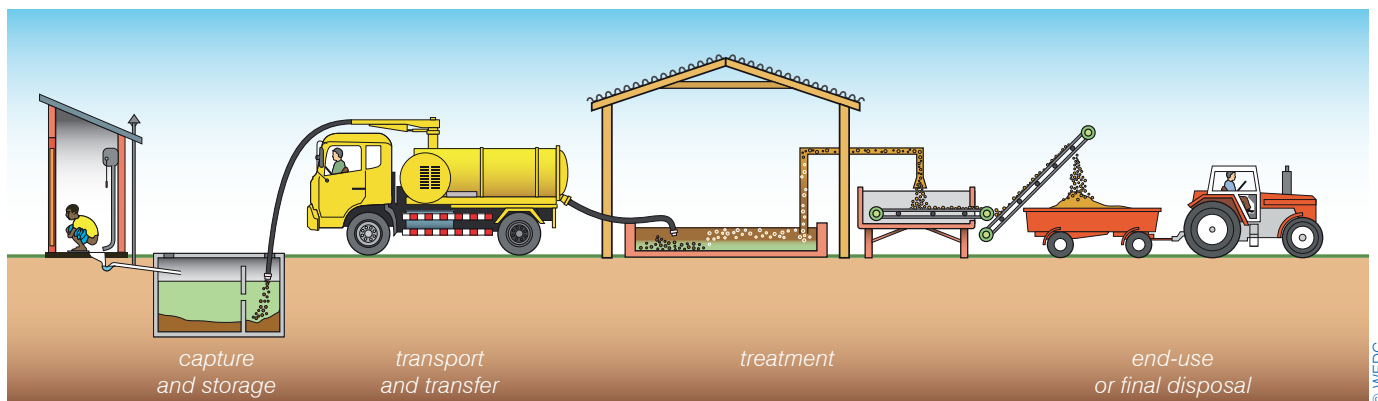


Figure 2. The enabling environment



A recent development now influencing activities in the sector is that of the rights based approach to sanitation based on the recognition of sanitation as a human right. The research in Kenya, Mozambique, Rwanda and Uganda noted that there is currently a lack of guidance on what the human right to sanitation is and how to meet it through a process of progressive realisation.

One of the key challenges in implementing the human right to sanitation in many cases will be that it requires significant changes to existing legislation; legislation related to tenure and illegal occupancy of land is particularly relevant. The research in Uganda found that although under the Public Health Act of 2000, landlords in Kampala are required to provide 'sufficient sanitary facilities' for tenants, the act is not effectively enforced. Under the human right to sanitation, those whose rights have been denied would have recourse to action through judicial, administrative or other appropriate channels. Unfortunately, in many cases, where tenants are occupying land illegally or do not hold formalised tenancy agreements they are generally considered to be outside normal jurisdiction and can have no recourse to action. In Kisumu, the City Council do not approve or regulate sanitation facilities in illegal settlements

because they are viewed as temporary until such time as they are evicted or demolished (Adogo *et al*, 2012). This challenge is recognised as a strongly political issue that transcends specific service sectors and needs to be championed by the highest levels of government if it is to be achieved.

Box 2: Sanitation as a human right

Everyone has the right to a water and sanitation service that is:

- Physically accessible within, or in the immediate vicinity of the household
- Of sufficient and culturally acceptable quality;
- In a location where physical security can be guaranteed
- Supplied at a price that everyone can afford without compromising their ability to acquire other basic goods and services

(Albuquerque, 2009)



Photograph:
3K-SAN

3. Poor definition of roles and responsibilities

The lack of guiding documents means that the roles and responsibilities of the different stakeholders in the sector are not clearly explained. Sanitation is rarely the responsibility of just one organisation. This leads to an overlapping of operational mandates and a duplication of activities as well as gaps in responsibility, which further increases confusion around service provision and can lead to difficulties in implementing stated policy actions. Addressing this particular problem was taken up by the African Union following the eThekweni Declaration in 2008¹; nevertheless in all research project locations we found that the level of information sharing between different departments was low to non-existent. If the information needed by a department or organisation is difficult to find, it leads people into believing that it is unavailable or does not exist.

- The most striking example was highlighted in Cameroon, where there are seven different departments at the national level with a responsibility for the management and remediation of wastewater and excreta, with a further three departments at the sub-national (district) level. The institutional assessment found that there is little co-ordination between them and several areas of overlap.
- In Mozambique there are very limited levels of institutional responsibility for downstream impacts of poor sanitation and none at all for the environmental health impacts. This highlights the importance of considering the whole sanitation service chain. Where there is no department with a responsibility for oversight of the downstream impacts of poor sanitation, the service chain cannot function effectively because the treatment stage focuses on making the waste sludge safe for end-use or disposal into the environment.

- In Kampala, Kigali and Kisumu under the 3K-SAN research, and in Cameroon under the MAFADY research there was a full mapping of stakeholders, their roles, responsibilities, capabilities and information flows, in order to understand the interactions and communications between the different stakeholders. Findings from the institutional assessment by 3K-SAN focus on the legal and regulatory frameworks in place and the one in Cameroon relates principally to capacity and knowledge which are discussed later.

A lack of co-ordination and division of responsibilities has ongoing implications for the management and implementation of any activities in the sector but is particularly pertinent in the case of FSM where a systems-based approach that considers the whole service chain is of key importance. Availability of planning tools and assessment methods contributes towards more effective city-wide planning that explicitly considers the importance of the sanitation service chain. These include: shit flow diagrams; Sanitation 21; the Household Centred Environmental Sanitation (HCES) framework; and the Rapid Participatory Sanitation System Risk Assessment methodology developed as a result of the CLASS-A research in Maputo.

4. Laws and regulations

Laws and regulations are policy instruments. Laws generally provide the overall framework and regulations provide detailed guidance through a variety of mechanisms, for example, government orders that often have the force of law behind them. All projects found that a lack of capacity and poor definition of roles and responsibilities, led to the implementation of laws and regulations being largely ineffective.

The research by 3K-SAN in Kampala, Kisumu and Kigali showed that there was a disconnection between laws and regulations in place and the implementation activities on the ground. Their assessment concluded that the laws and regulations are too exacting to be achievable. One example of this is that all urban households in Rwanda not connected to a sewerage system are expected to have a minimum of a ventilated improved latrine and that manual emptying of pits is illegal, as it is in other countries. However, in circumstances where access to properties is difficult or the cost of using an emptying service is unaffordable people are left with no alternative. This stipulation is made in the building control regulations (Rwanda Housing Authority, 2012) but it is acknowledged in the Water Supply and Sanitation Policy and Strategy that VIPs and other latrines classified as 'improved' remain unaffordable for a majority of the population (Ministry of Infrastructure, 2010). The ability of the government and city authorities to enforce the building regulations is very low.

¹ For details see: *The Africa – EU partnership (2008), Africa-EU Statement on Sanitation*
http://www.euwi.net/files/euwi/8509_tmpphpBRgY8Z.pdf

Box 3: The Ubudehe Programme, Rwanda

- Ubudehe is a 'home grown' solution from Rwanda designed to improve governance by creating opportunities for people at all levels of society to interact with one another, share ideas, create institutions and make decisions for their collective development.
- It also has a credit scheme attached to it in which each beneficiary/client signs a contract with the community and is informed of their obligation to pay back the credit so that the next beneficiary can gain access to the credit available.
- The community members and the future beneficiaries play a major role in monitoring and recovering the loans (Rwanda Governance Board, 2014).

There is a tendency for over reliance on regulations, which are expected to support the achievement of an 'ideal state of affairs' in theory, but which are in practice unenforceable and unrealistic given the existing circumstances. This problem was again highlighted through the institutional analysis in Cameroon, Kigali, Kampala and Kisumu.

- Construction standards in Cameroon (including those for dwellings) are supposed to be enforced through the use of building permits which are awarded by the Ministry of Housing and Urban Development and the decentralised community authorities. However, less than 20% of developers in urban areas apply for a building permit before construction and therefore do not receive an inspection to ensure compliance.
- In cases where the construction is inspected after completion, it rarely includes an inspection of the septic tank. The same problem was found in Kisumu, Kenya where of the septic tanks actually built, a majority were built without reference to engineering specifications or inspection by the city council (Adogo *et al*, 2012).

- Findings from Kampala, Kisumu and Kigali showed that existing laws are not responsive enough to changes in the sector. In Kisumu laws have not been updated to allow for the construction of composting, non-water based systems despite the fact that composting latrines have been successfully piloted in other areas of Kenya.

Regulations and laws, where there is no capacity to enforce them, can only ever be partially effective, if at all and may actually work against what is trying to be achieved through the regulation if people feel that they can 'get away with' not doing something they are supposed to do. One system that is working well in Kigali involves the social enforcement of public cleanliness and no open defecation. Although there are provisions made under the environmental organic law to punish littering, the dumping of waste and urinating or defecating in public, the Rwanda Environment Management Authority (REMA) which has the mandate to enforce these laws, lacks the personnel capacity to put the enforcement into practice. Open defecation has been socially unacceptable in Rwanda for decades, but there is also social consciousness that upholds good levels of public cleanliness supported by the involvement of local health workers and community leaders.

This experience from Kigali demonstrates an alternative method to heavy handed regulation based on social awareness and local peer-pressure. As this is an effective method for managing high incidents, of low level pollution, the few resources that REMA does have, can be used to tackle a lower number of incidents of higher levels of environmental pollution, such as the illegal dumping of waste, thereby allowing a more effective use of limited resources.

5. Access to finance

National level budgets

As part of the eThekweni Declaration in 2008, African countries pledged to increase the budget allocations for sanitation to at least 0.5% of Gross Domestic Product (GDP); however, most countries are struggling to meet this commitment. Furthermore the UN Water – *Global Annual Assessment of Sanitation and Drinking-water* (GLAAS) report of 2014 identified that only 40% of countries surveyed were able to absorb (that is, to utilise) more than 75% of the external aid for urban sanitation (WHO, 2014): there is finance available but not the capacity to use it fully.

Inadequate or poorly organised funding arrangements are an ongoing problem in the sanitation sector but co-ordinating budgets across multiple institutions or departments can be particularly challenging. In many



Photograph:
Rebecca Scott

cases sanitation does not have its own budget line and tends to be wrapped up with water supply².

- In Rwanda, although sanitation activities have been accounted for in theory, it was found that during 2012, there was zero finance set aside for the sanitation portion of the water supply and sanitation budget.
- The lack of adequate budgets for the full range of sanitation activities in Mozambique led to the selective prioritisation of investments, which did not necessarily contribute to a successfully functioning sanitation system. An unsurprising finding is that in cases where there is no budget available, the interest in planning activities that require a budget is diminished from the outset because it is considered a wasted effort.

This reinforces a deeper problem concerning the *lack of a planning culture* within certain tiers of government that constrain efforts directed at strategic planning. Whilst this has been previously identified in relation to city-wide planning (Tayler *et al*, 2003 based on Bharatpur, India) and system maintenance (Sohail *et al*, 2001 based on 11 case studies across South Asia), it is otherwise rarely recognised as a constraining factor which has to be addressed. In South Africa, planning only became a recognised profession in 2002 and the planning profession still appears to be weaker, than more established professions such as law, engineering and medicine, which can leave them working in isolation, rather than as part of the system (Coetzee, 2012).

Availability of finance for the poorest households

The research from Kigali, Kampala and Kisumu has shown that the availability of finance, be it formal, semi-formal or informal, is one of the key drivers in supporting demand creation for latrine ownership or use at the household level. In Kigali, where there is a nationally driven programme to support the use of bank accounts by the poorest people, there are lower levels of deprivation compared with Kampala and Kisumu, despite very low incomes.

The overall context is that less than 25% of adults in Sub-Saharan Africa have access to formal financial services which makes it difficult to make productive investments in a business, their family or dwelling (IFC, 2013). In Rwanda, access to microfinance and the use of savings co-operatives (SACCOs) is on the increase.

These mechanisms support the development of a savings culture and help to gain access to credit for a

number of goods and services. Increasing the availability of consumer finance is one of the recommendations for developing an enabling environment, in which private sector service operators can be successful (IFC, 2009). Households can become active consumers and whilst there may be many alternative services to spend their money on, each household can determine their own spending priorities. Influencing those priorities to make sure they include the construction of a latrine can be supported through demand creation and behaviour change programmes.

Revenue generation from within the sanitation service chain

It is well known that faecal material (both raw and in the form of digested sludge) has potential economic and financial value, particularly as a fertilizer for urban/ peri-urban agriculture (International Water Management Institute, 2007). Safe use of excreta requires some degree of treatment and hence the existence of a functioning service chain. The research by FaME highlighted that the sanitation service chain breaks down due to both a lack of investment and the inability to allocate it appropriately. Two examples of this are shown by the MAFADY research in Cameroon.

- Some communities allow indiscriminate dumping of waste from emptying trucks and tankers in exchange for payments which are taken by those in charge in the community. There are no attempts to use any part of the payment received to prevent or reduce the damage to the environment or potential health impacts of having waste dumped near to households.
- Although the potential to levy a sanitation tax exists in legislation, it has not been implemented and consequently cannot be used to finance activities within the sanitation service chain.

The research from FaME has considered the revenue generation potential of investing in treatment and end-use of the faecal sludge. It proved very difficult to collect data about financial flows within the system; very little is known about the financial streams within the sanitation service chain and how this finance should or could flow between the different stages. This lack of understanding is one of the barriers to improving the later stages of the sanitation service chain because there is currently limited co-operation on the research and development of innovative solutions, that are country or industry specific, for treating faecal sludge. The research from FaME has started to address this gap and as the use of the sanitation service chain concept develops and expands, there is potential to link the findings from FaME with other economic based programmes, such as the Economics of Sanitation Initiative from the World Bank Water and Sanitation Programme, in order to assess more fully the financial flows within the sanitation service chain.

2 *From 2011, the reporting of Official Development Assistance (or 'aid') disaggregates water from sanitation: see OECD DAC Creditor Reporting System: Guidance for the use of Water Supply and Sanitation Purpose Codes http://www.oecd.org/document/21/0,3746,en_2649_34447_1914325_1_1_1_1,00.html*

The overall implication is that whilst financial flows can be generated from FSM, it is unwise to predicate the long term functioning of the system on the flows that *could* be generated, given that the market demand for each product is highly context specific and prone to fluctuations in the market (in the same way that oil and gas prices fluctuate). The income sources are better treated as welcome but unpredictable additions to the overall financial inputs contributing to urban sanitation management.

6. Lack of human resource capacity and knowledge

Lack of capacity in both the public and private sectors with respect to managing the sanitation service chain relates to:

- Insufficient staff to carry out the roles and responsibilities assigned to them.
- The staff available do not have the necessary skills or educational background to allow them to carry out their assigned responsibilities, especially if the responsibility has been newly assigned.

Findings from Mozambique highlighted that sanitation implementation plans that include the broader elements of solid waste management and storm management, need to be developed in order to support the implementation of FSM activities as they are all linked. There were many instances where technical and implementation-oriented recommendations were changed into more nebulous policy recommendations which can be less useful in terms of implementation. Overall, the integration of service improvements risks being neglected, given the scale of the task (see Cotton and Franceys, 1991). This is considered further in the Briefing Note in this series on City Wide Planning.

However, there is an overall lack of technical knowledge surrounding possible treatment technologies for faecal sludge which limits the potential for revenue generation through resource recovery and end-use. This is also indicative of the need to develop a sounder understanding of national markets for alternative fuel sources.

Decentralised service provision creates additional problems in Cameroon.

- The law on decentralization gives urban communities responsibility for the creation and operation of community sanitation facilities and control of treatment facilities to the district municipalities. However, both parties lack the capacity to fulfil their roles effectively.

- Due to staff shortages at the city level (Yaoundé and Douala) hygiene education and promotion activities are limited to periods of crisis rather than being an ongoing activity. This is especially detrimental to families and households with higher levels of vulnerability, because it leaves them more exposed to the potential of suffering problems during periods of crisis.
- Staff that are tasked with the operation and maintenance of treatment facilities receive little or no training on the management of these facilities, which results in facilities being abandoned long before the end of their design life.

In a sector that relies on city wide, systematic planning, capacity gaps at the district and city levels have significant knock-on consequences for a wide range of activities needed to ensure a properly functioning sanitation service chain. This issue is discussed in more detail in Briefing Note 4 on City Wide Planning. Where public service providers fail, private service providers often step in to cover the gap; but a local, largely informal private sector does not fill all of the gaps.

- The ability of private operators to provide effective services is low because they are poorly organized in terms of safety and equipment (e.g. very old trucks, prone to breakdowns). In Kigali, Kampala and Kisumu, private sector participation is limited by low numbers of customers relative to the high costs of operation, which leads to low creditworthiness ratings for operators and further hampers the ability to generate additional income by expanding the business.
- Emptiers are working un-registered in Cameroon because the mechanism to provide permits for legal operation is not effectively implemented.
- Co-operative organisations of emptiers in Cameroon have never been sustainable, so they are therefore not represented at the administrative level of the cities and cannot actively participate in decision making processes affecting their businesses.

At the household level, the most significant capacity gap after the ability to pay for the construction, operation and maintenance or use of a latrine, was found to be a lack of technical knowledge which is discussed in more detail in the Briefing Note in this series on Demand Creation.



Photograph:
Stephen Pedley

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- The briefing notes in this series each focus on one of the key thematic areas that has emerged as a result of the research conducted under the SPLASH Sanitation Research Programme. These are;
- 1) Enabling environment;
 - 2) Demand creation;
 - 3) Vulnerability;
 - 4) City wide planning.
- Further details on the work from each project can be found at: www.splash-era.net
- Projects and cities (countries) where research took place:
- 3K-SAN:** Lead organisation – University of Surrey, Robens Centre for Public and Environmental Health, UK
Kampala (Uganda), Kigali (Rwanda), Kisumu (Kenya)
- CLASS-A:** Lead organisation – International Water Association (IWA), the Netherlands
Maputo (Mozambique)
- FaME:** Lead organisation – Swiss Aquatic Research Institute, Department of Water and Sanitation in Developing Countries (SANDEC), Switzerland
Dakar (Senegal), Accra (Ghana), Kampala (Uganda)
- MAFADY:** Lead organisation – Ecole Nationale Supérieure Polytechnique de Yaoundé, Cameroon
Douala and Yaoundé (Cameroon)
- U-ACT:** Lead organisation – Swiss Federal Institute of Technology Zurich, Centre for Development and Cooperation, Switzerland
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