



**Multi-level sanitation governance:  
Understanding and overcoming the challenges in  
the sanitation sector in Sub-Saharan Africa**

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**ABSTRACT**

The provision of sanitation facilities – a basic necessity for human health, well-being, dignity and development – remains a mammoth challenge for developing countries, in which the vast majority of the 2.5 billion people without improved sanitation facilities reside. Sub-Saharan Africa (SSA) is one of the regions where decent, dignified and functional toilet facilities remain largely inaccessible. Most countries in SSA will not meet the Millennium Development Goal (MDG) for sanitation. There are sharp contradictions in the region between formal and informal sanitation institutions. There is also a disconnect between actors at the macro, meso and micro governance levels. This paper shows how analysis of multi-level governance, path dependency, and institutional inertia can be used to improve understanding of some of the challenges in the sanitation sector in SSA, and discusses approaches that can contribute to improving the sanitation situation in a sustainable way. In addition, the paper asserts that demand-driven strategies and private sector involvement in the sanitation sector is paramount for establishing new sanitation paradigms and socio-technical regimes. We conclude that a good understanding of actors at all levels – that is, their various roles as well as interactions and the way they interpret and respond to policies – is key to accelerating progress in sustainable sanitation coverage in SSA.

**Keywords:** Sanitation, hygiene, functionality, multi-level governance, institutions, institutional inertia, path dependency, coordination, socio-technical regimes, demand-driven

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## 1. INTRODUCTION

Progress in improved sanitation coverage in sub-Saharan African (SSA) countries has remained extremely slow despite enormous international assistance, largely in the form of supply-driven subsidies (European Union and European Court of Auditors 2012; Szántó et al. 2012) and national interventions with limited financial resources. In SSA, about 70% of the population still relies on unimproved or shared sanitation facilities or resorts to open defecation (Morella et al. 2008; World Health Organization and UNICEF 2013). The region appears certain to miss the Millennium Development Goal (MDG) on sanitation (World Health Organization and UNICEF 2013; WaterAid 2013b). While the international community is committed to addressing the unfinished business of the MDGs, attention is now shifting to the post-2015 development agenda and Sustainable Development Goals (SDGs). Sanitation remains a top priority for achieving sustainable development and alleviating poverty, and will also play an important role in the coming SDGs (IISD 2013).

## 2. IMPACTS OF INADEQUATE AND DYSFUNCTIONAL SANITATION FACILITIES

Sanitation systems, technologies and proper hygiene practices should provide multiple barriers against different types of pathogens in human excreta (Stenström 2011). However, decent and functional toilet facilities that offer cleanliness, comfort and convenience remain inaccessible for the majority of people in SSA. Safety aspects are also compromised because, where toilets are built by householders themselves there is little or no supervision of the construction. The situation is worsened in many SSA countries by a lack of commonly agreed minimum standards for sanitation (WaterAid 2011). Pits do not ensure safe containment of excreta and hence pose a threat to human health especially in slums and informal settlements (Szántó et al. 2012). Dysfunctional sanitation systems increase exposure to disease causing pathogens present in unconfined or poorly disposed human excreta (Boschi-Pinto et al. 2006). The health risks associated with dysfunctional systems are well established (Cairncross and Feachem 1993). Whereas there is still much uncertainty regarding actual disease transmission routes, the role of safe sanitation for human and environmental health is undisputed (Esrey 1996; Fewtrell et al. 2005; Prüss-Üstün et al. 2008). Thus, if both human and environmental health aspects are considered (Kvarnström et al. 2011) the sanitation coverage figures reported by WHO/UNICEF JMP would be significantly lower.

Rosemarin et al. (2008) highlight the interconnectedness between sanitation, water, health and poverty, and the key role that improved water and sanitation conditions play in meeting the MDGs. Undoubtedly, dysfunctional sanitation technologies and systems have much wider impacts than on just health alone. Poor health impairs the productive ability of people and keeps them away from school, farm and other income generating activities. According to UN-Water (2008), the reduction in diarrhoea by meeting the sanitation MDG target would add almost 200 million days of school attendance per year. In addition, more than 300 billion working days would be added annually world-wide if the sanitation MDG target is achieved.

Dysfunctionalities and inadequacies in the sanitation sector are costly for society (Pruss et al. 2002; United Nations Development Programme 2006; Prüss-Üstün et al. 2008; Fewtrell et al. 2005; Yardley 2010; Cheng et al. 2012). The wider economic impacts – beyond the effects on human health – of the sanitation backlog have been increasingly acknowledged (Bartram and Cairncross 2010; Bos and Gijzen 2005). The World Bank Water and Sanitation Program (WSP) is quantifying the burden of dysfunctional or inadequate sanitation in economic terms that are easy for key actors in the sector to understand and hence take appropriate action. These estimates show that inadequate sanitation costs 18 African countries a colossal sum of USD 5.5 billion per

year. In relation to Rwanda, Uganda, Tanzania and Burundi, the WSP studies estimate that poor sanitation costs Burundi about USD 30 million/year, Rwanda some USD 54 million/year, Uganda about USD 177 million/year, and Tanzania a whopping USD 206 million/year. These losses are equivalent to around 1% of the national GDPs of these countries. The greatest proportion of this cost is as a result of premature death due to diarrheal diseases (WSP 2012).

### **3. GOVERNANCE CHALLENGES IN THE SANITATION SECTOR**

The list of governance challenges in the sanitation sector in SSA is long, and includes low importance ascribed to sanitation; absence of relevant data and environmental indicators; poor coordination and communication between stakeholders; lack of clear and effective integration of water, sanitation and hygiene issues (WaterAid 2011; European Union and European Court of Auditors 2012) gaps in research, policy, coordination and programmes (DFID 2012); inadequate commitment and actual spending in the sector (UN-Water and World Health Organization 2012); inadequate implementation of decentralized solutions (Szántó et al. 2012); supply and technology driven interventions (rather than demand driven ones); inadequate capacity and up to date knowledge on sanitation and hygiene; inappropriate institutional and legal frameworks; insufficient focus on sanitation for the poor, especially those in the urban areas (Nyonyintono Lubaale and Musembi Musyoki 2011); and finally a lack of consideration of functionality during implementation, and a disconnect between sanitation and hygiene policy and prevailing practice (Ekane et al. 2012; Ekane and Gill 2013). A review performed by the European Court of Auditors of 23 EU-funded projects in six SSA countries representing a significant part of aid provided to SSA revealed that less than half of these projects met the needs of the beneficiaries (European Union and European Court of Auditors 2012).

The aforementioned governance challenges exist at different levels of society and the responsibility for addressing them rests on different actors or stakeholders – government, private sector and individuals or households. Some of these challenges are discussed in this paper drawing on experiences from multi-level sanitation governance research activities in a number of countries in East Africa. Rwanda, Uganda, Tanzania and Burundi are the countries cited in this paper due to their different leadership and governance structures as well as sanitation MDG progress record. Such differences exist among most if not all other countries in SSA.

The role of governance and awareness of the political constraints and opportunities in achieving development outcomes in the water and sanitation sectors is increasingly being recognized (Franks and Cleaver 2007; Harris et al. 2011; European Union and European Court of Auditors 2012). Sanitation governance entails on-going dialogue between public and private sanitation stakeholders in order to better understand expectations as well as problems, and the best way to develop common and shared understandings of what results to achieve. Translating these expectations into action means getting the perspectives and values of stakeholders into the process of policy formation and decision-making.

To understand the lack of progress in sanitation, research needs to move beyond aid-financed technology-driven action towards investigating the governance challenges of coordinating different stakeholders and actors across societal levels, from implementation at the local or household level up to steering at the national level (Hooghe and Marks 2001). The purpose of this paper is to introduce such multi-level sanitation governance, and to present path dependency and institutional inertia as useful concepts to improve understanding of the complex governance challenges plaguing the sanitation sector in SSA.

#### 4. DISCONNECT BETWEEN SANITATION POLICY AND PRACTICE

In East Africa, like in many other regions in SSA, translating policy on sanitation and hygiene into practice remains an enormous challenge. This section provides some examples from Rwanda, Uganda, Tanzania and Burundi.

In Rwanda, political leadership and commitment plays an active role in standards-setting, enforcement and investment support in addressing the sanitation gap (Jain 2011; WaterAid 2013a). Access to improved sanitation is at the centre of the country's ambitious Vision 2020, which aims to achieve 100% household sanitation and hygiene coverage by 2020. Furthermore, the water and sanitation policy is in line with the country's Economic Development and Poverty Reduction Strategy (EDPRS). One of the goals of EDPRS is to increase the proportion of Rwandans with improved sanitation services. This strategy also assigns roles and responsibilities to different stakeholders. For instance, the Ministry of Infrastructure (MININFRA) handles the design of sanitation technology and systems, while the Ministry of Health (MINISANTE) is responsible for hygiene and behaviour change. Even though WHO/UNICEF (2013) report that 61% of Rwandans used improved sanitation facilities in 2011, challenges remain, especially in rural communities and informal settlements. In the Burera district in Rwanda, Ekane et al. 2012; and Ekane and Gill, 2013) found contradictions between prevailing practices and hygiene and sanitation guidelines at the national level. For example, the new guidelines for latrine technologies usable in Rwanda prescribe standards for toilets (including design, structure, location and condition) as well as for personal hygiene. However, because socio-cultural and economic factors to some extent shape prevailing behaviour and practice, such guidelines and standards are often contradicted in practice. In the Burera district, it is common to find toilet superstructures that are not properly constructed, and urine diversion dry toilet (UDDT) pedestals that are not correctly used. The reasons for this are threefold: lack of prioritization of toilets at the household level, lack of awareness of guidelines and standards (especially among the rural population), and irregular and insufficient inspection of toilet facilities.

In Uganda, sanitation provision is mainly led by the government, which performs policy and regulatory functions, while most households take sole responsibility for providing access to their sanitation facilities. The majority of Ugandans (about 92%) provide their own sanitation services (Achiro 2012). Political leadership and commitment in Uganda has been more effective in improving rural water provision than it has sanitation (WaterAid 2013a). In 2011, 35% of the Ugandan population used improved sanitation facilities (World Health Organization and UNICEF 2013). In Uganda, sanitation has no line or leading ministry, and therefore falls under different ministries. The Ministry of Health (MoH) is the lead agency for hygiene promotion and household sanitation. Within the MoH, the Environmental Health Division (EHD) is responsible for developing environmental health policies, guidelines, standards, strategies and approaches. Poor coordination in this governance arrangement results in a weak institutional framework and enforcement of policies. Achiro (2012) reports that the monitoring of sanitation policy in Uganda is characterized by compromises and political interference.

The percentage of the Tanzanian population that had access to improved sanitation facilities in 2011 was merely 12% (World Health Organization and UNICEF 2013). The approach to closing the sanitation gap in this country is demand-driven and relies greatly on the private sector and civil society (Kjellén 2008; Kjellén 2010). Rather than viewing provision of sanitation services as a human right, the country has adopted a commercial approach in which services must be paid for (EWURA 2008). The greater reliance on private initiative in Tanzania is also mirrored in water

sector management, where Kjellén (2008) states that even the piped water network development has been demand-driven and includes elements of market logic rather than central planning. It is clear from the Tanzanian case that over reliance on dispersing sanitation governance to private actors limits access.

In Burundi, access to improved sanitation was reported to be 50% in 2011 (World Health Organization and UNICEF 2013). As is the case in other countries in the region, there is more focus on water supply than on sanitation. The country lacks a national hygiene and sanitation policy due to the low priority given to the sector in the national development agenda. Geyer et al. (2011) explain that two water-related organizations have national responsibilities for water supply – Régie de Production et Distribution d'Eau et d'Electricité (REGIDESO) for urban areas and Direction Générale de l'Hydraulique et de l'Electrification Rurale (DGHER) for rural areas – while the shared responsibilities for sanitation (mainly in the capital city) between the Ministry of Health and the municipal service provider (SETEMU) are not yet clearly defined in regulatory and operational terms. As a result of inadequate public sanitation services and poor coordination among actors, the responsibility for investing and operating on-site sanitation solutions is predominantly that of private actors, establishments and households.

About 8% of Ugandans are served by a sewerage network, mainly in Kampala, which is more than the other countries discussed in this paper. Only 3% of inhabitants in Dar es Salaam, Tanzania, have access to sewerage systems (Szántó et al. 2012). Rwanda and Burundi are yet to construct sewerage systems (Sano 2007).

Despite their close proximity and similar sanitation challenges, Rwanda, Uganda, Tanzania and Burundi illustrate very different forms of sanitation governance. In Burundi, there is more emphasis on urban sanitation, mainly in the capital city but the roles of the actors in the sector are still not clearly defined. In Tanzania, the approach is demand-driven and relies greatly on the private sector and civil society. In Rwanda and Uganda, the central government plays a more important role, but with very different outcomes. It is clear that in order to understand why some countries struggle to break out of path-dependency with lingering poor sanitary conditions, the multi-level nature of governance in the sanitation sector needs to be better understood. Lessons need to be learnt from different types of interactions between the public and private actors across governance levels, and by comparing countries with different strategies and performances.

Failure to successfully integrate and coordinate different actors and activities at different levels of society in the sanitation sector results in weak institutional framework and enforcement for improved sanitation. There is, however, room for much improved coordination of this type of multi-level governance (Hooghe and Marks 2001). The rest of this paper outlines the research agenda of using institutional analysis and multi-level governance as a lens to examine and better understand the complex and multifarious sanitation governance challenges in SSA.



## **5. UNDERSTANDING THE SANITATION CHALLENGE AT MULTIPLE GOVERNANCE LEVELS**

### **5.1 Formal and informal sanitation institutions**

According to Ostrom (1990) and Amable (2004), institutions provide capacity for exchange of information among agents, monitoring of behavior, and the sanctioning of defection. Höpner (2005) adds that institutions are said to be coherent if they are designed according to identical principles. Different institutions can be structured in a coherent way, or they might impose different, perhaps conflicting, governance modes and therefore lack coherence.

Formal sanitation institutions such as policies, statements, guidelines, standards and strategies are formulated at the macro level. These formal institutions are interpreted, communicated and executed by actors at the meso level, while the actual implementation of the formal institutions on the ground is done mainly by households at the micro level. Thus, policy is usually interpreted via several layers of actors before policy reaches the household level. In addition, especially at the micro level, informal sanitation institutions such as norms and customs prevail and often contradict government standards and guidelines on hygiene and sanitation. As a result, prescribed minimum hygiene standards or sanitary requirements for toilets in terms of structure, design, health and safety are difficult to meet and maintain.

An example of the tension between formal and informal institutions was shown in a survey of 194 households with pit toilets and urine diversion dry toilets (UDDTs) in the Burera district, Rwanda. This showed clear contradictions between prescribed guidelines and prevailing practice. Data was collected on hand-washing activities, operation and maintenance of toilets (including the “sanitize-and-reuse” or “productive sanitation” system), and subsidies from UNICEF-Rwanda. 24 respondents stated that they were members of the local productive sanitation cooperative (Dusukure PHAST). The survey found that 31 of the households had received UDDT slabs from UNICEF-Rwanda, of which 28 had installed their UDDT slabs. However, seven of these 28 households indicated that they use water to flush faeces dropped onto the slab. Only about 3% had a hand-washing facility installed close to the toilet. Furthermore, during the survey it was observed that in 17 households the urine compartment of the UDDTs had been detached (Ekane et al. 2012).

### **5.2 Path dependency in the sanitation sector**

According to Campbell (2004), when institutionalists (Nelson 1994; North 1990; Pierson 2000; Powell 1991; Roe 1996; Stinchcombe 1987) talk about path dependence they refer to a process whereby contingent events or decisions result in the establishment of institutions that persist over long periods of time and constrain the range of future actions for actors, including those that may be more efficient or effective in the long run.

The concept of path dependency highlights the extent to which existing technologies and practices structure avenues of future development. Patterns of path dependency have consequences for change and stability at various levels: within technological communities, amongst users and across the plane of social meaning, convention and expectation (Shove 2003; Rip and Kemp 1998). Shove (2003) states that the concept of socio-technical regimes consolidates the notion that path dependencies occur at different levels – macro, meso and micro. The rules, paradigms and dominant technologies that frame current actions and inform beliefs about what is and is not possible in the future are referred to as regimes or “landscapes”.

The “drop-and-store” (or pit toilet) and “flush-and-discharge” (or flush toilet) systems remain the two dominant sanitation regimes in SSA. Take up of other sanitation options such as the “sanitize-and-use” system has been slow at all levels – among decision-makers, experts, and individual households. Sanitize-and-use systems have been piloted in many countries in SSA and have proven to be good options in improving rural livelihoods. Yet, scaling up these systems in the region faces huge psycho-social, technical and capacity constraints (Haimi et al. 2008). The predominant type of sanitation solution in the country cases presented in this paper is the traditional pit toilet. Morella et al. (2008) report that about half the population in SSA – urban and rural alike – rely on traditional pit toilets. The number of this type of toilet is increasing faster in the region than any other toilet option – reaching an additional 2.8% of the population each year in urban areas and an additional 1.8% in rural areas. This is more than twice the rate of expansion of flush toilets and improved toilets put together. Most of these traditional toilets are usually not in a safe and hygienic condition (Geyer et al. 2011), and thus not fully functional.

Sanitation in general remains a taboo subject. This is undoubtedly linked to institutional inertia or institutional persistence. Genschel (1997) presents three reasons for institutional inertia: firstly, uncertainty – any changeover from an old to a new institution involves an element of uncertainty and risk; secondly, sunk cost – the need to learn rules, codes, and conventions as well as to develop particular skills, competencies, and tools. These take time, money and effort to build; and thirdly, political conflict – the potential for partiality makes a switch to new institutions prone to conflict. One way of understanding path dependency and institutional inertia in the sanitation sector is to investigate its psychosocial and socio-technical aspects, including perceptions related to sanitation systems and technologies. Shove (2003) points out that historically, the institutionalization of hygiene had an immediate impact on bathroom standards because sanitary reformers were convinced that when safely and properly constructed, bathrooms provided the facilities required to keep disease at bay. This of course applies also to toilets. Notions about purity and pollution (Douglas 2003), along with hygiene habits and cultural or religious traditions, greatly affect the way different sanitation solutions are perceived and taken up – or not. An increasing number of sanitation programmes exploit the feeling of disgust to trigger changes in hygiene behaviour, one example being Community-led Total Sanitation (Movik and Mehta 2010). Barriers for changing hygiene behaviour might include coping devices, established cultural models, real and/or perceived inconveniences, as well as social pressures, including stigma and ridicule (Thompson 2004). Massie and Webster (2013) stress that future hygiene promotion should take a participatory form, rigorously identifying and working with existing beliefs. Aspects of stigma, disgust and perceived risks of contamination make people unwilling to engage in the “toilet to farm” practice. So far efforts to introduce productive sanitation in East African countries have remained at the pilot stage. Szántó et al. (2012) report that despite efforts to introduce productive sanitation in East Africa, this system is still not taken to scale owing to barriers that include the high number of users that need to be involved in the maintenance of the toilet, and cultural and religious issues associated with dealing with human excreta.

### **5.3 The concept of multi-level sanitation governance**

The concept of multi-level governance enables understanding of policy and decision-making processes in which public authorities at different jurisdictional levels mobilize at the same time, and it does the same for processes involving the private sector, non-governmental organizations, social movements and households. This concept also enables understanding of complexity at and between levels (Stubbs 2005; Pahl-Wostl 1995; Hooghe and Marks 2001). Bache and Flinders (2004) identify four key dimensions of multi-level governance: 1) the increased participation of

non-state actors, 2) the need to move away from understanding decision-making in terms of “discrete territorial levels” and, instead, the need to conceptualize it in terms of “complex overlapping networks”, 3) the transformation in the role of the state towards new strategies of coordination, steering and networking; and 4) the ways in which traditional notions of democratic accountability are being undermined and challenged.

Different actors are involved in service delivery via multi-level processes within which different roles and power are dispersed among different actors (Pahl-Wostl 1995; Rotmans et al. 2001). In-between national policies (at the macro level) and individual households (the micro level) is the meso level, which includes the web of actors ranging from government employees (e.g. health inspectors) to private sector formal and informal service providers and civil society organizations. These multi-level actors, their roles and interactions constitute sanitation governance. The meso level actors operate in relation to the (macro level) policies, plans and strategies of national governments and donor agencies. The micro level actors de facto have a high responsibility in realizing sanitation. This is mainly because actions in the sanitation sector are organized in such a way that leaves hygiene behaviours to the discretion of the individual in a more or less private setting. Similarly, sanitation solutions outside of urban centres are commonly the on-site concern of individual household concerns. Sanitation services are, hence, cannot be “rolled out” in the same way as many other social or infrastructure services, but instead need to be in support of the hygiene behaviours and household solutions at the household level, with information, regulation, private sector involvement through financing (subsidies and/or credits) as well as necessary collection services. In short, it is households that mainly implement sanitation solutions, where the benefits of improved comfort, cleanliness, convenience and dignity for household members can be immediate. The full set of benefits, including health and a cleaner environment, will only be achieved when most community members access and use improved and functional sanitation, and adopt hygienic behaviours and prudent environmental management.

In Uganda, like in the other countries in the region, a common challenge is that the issue of sanitation lacks a specific “home”, that is, that no department or group has clear responsibility for it, and that it lacks a specific policy framework to support it. The result in this case is multi-level governance arrangements lack coordination and that institutional frameworks for promoting sanitation and hygiene are weak and confusing. Much of the confusion arises from the fact that there is no single government institution that takes responsibility for sanitation. The sector is spread across different ministries, agencies and government levels, budget lines as well as policy frameworks. For instance, the responsibility for managing access to sanitation, in terms of regulation, policy making, and institutional coordination, is entrusted to the government by the Public Health Act. This role is executed by a coalition of government agencies at the national level, including the Ministry of Health, Ministry of Water and Environment, and Ministry of Education, and by the district local governments and their structures at lower levels. Various measures have been taken by the concerned stakeholders to attempt to streamline the responsibilities for sanitation, notably the Kampala Declaration on Sanitation, the Ministerial Memorandum of Understanding (MoU) for Sanitation, and the National Sanitation Working Group. However, all these efforts have yielded little success largely because of the absence of a clear institutional structure through which they can be coordinated.

In the case of Tanzania, the formulation of sanitation policy and implementation is undergoing reform, and the emerging policy framework is ambitious, but complex. Sanitation has been overshadowed by the water supply sector, and is often integrated with water policy and investment. Some aspects of sanitation have been spread over related sectors such as health and education,

and the regulatory framework has not made a clear distinction between service delivery and regulatory responsibilities. The fragmentation of sanitation policy has been recognized in recent strategies, which put increasing focus on sanitation and coordination. A revision of the institutional framework, a memorandum of understanding between government ministries for cooperation and coordination, and development of a National Sanitation and Hygiene Policy, are examples of undertakings that aim to make the framework more coherent. The legal framework for sanitation has evolved over time through amendments to key laws. As a result, the framework lacks clarity, is contradictory, and has led to differences in service provision between urban areas, towns and rural areas. Furthermore, it has not been properly harmonized with legislation at the local government and does not reflect the more recent institutional changes proposed in the National Water Sector Development Strategy.

In Rwanda, coordination has been strengthened through a Sector Wide Approach that has facilitated a cooperative working environment (ODI 2012). The country has been successful in leveraging political will at all levels, adopting a working institutional framework, and formulating clear policies and strategies with clear deliverables. The government has introduced the Community-Based Environmental Health Promotion Programme (CBEHPP) to improve community participation and sensitization. Also, the President of Rwanda launched the Hygiene and Sanitation Presidential Initiative (HSPI) for domestic sanitation, which raises the profile of the CBEHPP.

## 6. CONCLUSION

Our research shows that coordination between actors and clear messages from the highest political levels are key factors in making sanitation happen. We highlight that in Rwanda, Tanzania, Uganda and Burundi, and in SSA generally, development of sanitation policy usually occurs at the central ministry level, with responsibility for implementation being that of the local actors, who usually have little or no capacity or resources with which to effectively implement and monitor sanitation facilities. We assert that there are many layers of policy interpretation before policy messages reach the household level where the implementation of sanitation mainly occurs. From specific examples in Rwanda, Uganda, Tanzania and Burundi, we ascertain that this is a common problem. Clearly, the multi-level form of sanitation governance is prone to known complications of coordination in such polycentric governance systems. The severe financial and technical resource constraints endemic in the countries discussed in this paper bring about additional coordination challenges. The adoption of a sector wide approach, formation of sector working groups, and of MoUs between actors are some of the strategies to improve coordination and coherence in the sector in these countries. Continued efforts to clearly assign rights and responsibilities for policy implementation and enforcement will help accelerate progress in the sanitation sector. In addition, ambitious sanitation visions and targets such as those in Rwanda and the other countries discussed in this paper should be matched with appropriate budgetary support for the visions and targets to be realisable.

In some of the countries presented in this paper, delivery of sanitation services in urban areas gets a higher priority than in rural areas, therefore it is more structured than in rural areas, in which the majority of the population reside. This urban/rural divide in service delivery partly explains the challenges in monitoring and enforcement, the lack of commonly agreed minimum national sanitation standards, and disparities between urban and rural sanitation coverage. Progress in rural and urban sanitation coverage differs from country to country. In Tanzania for instance, the significant increase in the percentage of the population using improved sanitation facilities is mainly in the urban areas while rural sanitation coverage has remained almost the same since

1990. In Rwanda, by comparison, a remarkable increase in sanitation coverage has been recorded mainly in rural areas (World Health Organization and UNICEF 2014). But irrespective of where increases are recorded, we stress that functionality considerations remain a major issue.

Since much of the responsibility for investing and operating on-site sanitation solutions in both rural and urban areas lies with households themselves, the range of informal institutions in terms of norms prevailing at the household and community levels need to be better understood and aligned with national policies. These informal norms dictate prioritization, investment, responsibilities and division of labour for operating and maintaining facilities – that is, who does what, why and how. In addition, the gender and equity-based biases resulting from such norms also need to be addressed in national implementation strategies.

Regarding new sanitation paradigms such as the sanitize-and-use systems, a greater involvement of private entrepreneurs and other meso-level agents in the sanitation sector and the creation of a value chain are vital for institutionalizing such systems. In addition, demand-driven strategies and capacity development are important in promoting ownership of sanitation facilities. The European Court of Auditors (2012) emphasizes that sustainable sanitation coverage is achieved through strategies wherein promotion and marketing of sanitation are funded rather than through supply-driven subsidies for sanitation infrastructure.

To conclude, this paper summarizes key observations on the importance of understanding informal institutions and path-dependency across multi-level governance arrangements. We believe that in order to better understand the present challenges and opportunities to improve sanitation in Rwanda, Uganda, Tanzania and Burundi, and in SSA as a whole, there is a need for a strong focus on these theories to guide research. If there is no such focus, future research and development efforts risk missing important factors that explain the path dependency and coordination challenges that exist in the sanitation sector.

## REFERENCES

- Achiro, B. (2012). *Constraints and Prospects of Law Enforcement for Improved Sanitation in Kawempe Division*. Makerere University, Uganda.
- Amabel, B. (2004). Diversity of modern capitalism. *Multi-level governance*. I. Bache, and M. V. Flinders (eds.). Oxford University Press, Oxford ; New York.
- Bache, I. and Flinders, M. V., eds. (2004). *Multi-Level Governance*. Oxford University Press, Oxford ; New York.
- Bartram, J. and Cairncross, S. (2010). Hygiene, Sanitation, and Water: Forgotten Foundations of Health. *PLoS Medicine*, 7(11). e1000367. DOI:10.1371/journal.pmed.1000367.
- Bos, A. and Gijzen, H. (2005). Health benefits versus costs of water supply and sanitation. *Water21*, October 2005(7.5). pp1–72.
- Boschi-Pinto, C., Lanata, C. F., Mendoza, W. and Habte, D. (2006). Diarrheal Diseases. *Disease and Mortality in Sub-Saharan Africa*. D. T. Jamison, R. G. Feachem, M. W. Makgoba, E. R. Bos, F. K. Baingana, K. J. Hofman, and K. O. Rogo (eds.). World Bank, Washington (DC). <http://www.ncbi.nlm.nih.gov/books/NBK2302/>.



- Cairncross, S. and Feachem, R. G. (1993). *Environmental Health Engineering in the Tropics: An Introductory Text*. 2nd ed. Wiley, Chichester, UK. <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0471938858.html>.
- Campbell, J. L. (2004). *Institutional Change and Globalization*. Princeton University Press.
- Cheng, J. J., Schuster-Wallace, C. J., Watt, S., Newbold, B. K. and Mente, A. (2012). An ecological quantification of the relationships between water, sanitation and infant, child, and maternal mortality. *Environmental Health*, 11(1). 1–8. DOI:10.1186/1476-069X-11-4.
- DFID (2012). *DFID Water, Sanitation and Hygiene Portfolio Review*. UK Department for International Development, London. <https://www.gov.uk/government/publications/dfid-water-sanitation-and-hygiene-portfolio-review>.
- Douglas, P. M. (2003). *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. Taylor & Francis.
- Ekane, N. (2013). *Sanitation Policy and Practice in Rwanda: Tackling the Disconnect*. SEI Policy Brief. Stockholm Environment Institute. <http://www.sei-international.org/publications?pid=2289>.
- Ekane, N., Noel, S., Kjellén, M. and Fogde, M. (2012). *Sanitation and Hygiene: Policy, Stated Beliefs and Actual Practice: A Case Study in the Burera District, Rwanda*. SEI Working Paper, 2012-07. Stockholm Environment Institute, Stockholm. <http://www.sei-international.org/publications?pid=2226>.
- Esrey, S. A. (1996). Water, waste, and well-being: a multicountry study. *American journal of epidemiology*, 143(6). 608–23.
- European Union and European Court of Auditors (2012). *European Union Development Assistance for Drinking Water Supply and Basic Sanitation in Sub-Saharan Countries: Special Report No 13/2012*. EUR-OP, Luxembourg.
- EWURA (2008). Energy and Water Regulatory Authority. *Energy and Water Regulatory Authority - Water*. <http://www.ewura.go.tz/newsite/index.php/2012-03-09-08-22-52/water>.
- Fewtrell, L., Kaufmann, R. B., Kay, D., Enanoria, W., Haller, L. and Colford, J. M. (2005). Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis. *The Lancet Infectious Diseases*, 5(1). 42–52. DOI:10.1016/S1473-3099(04)01253-8.
- Franks, T. and Cleaver, F. (2007). Water governance and poverty a framework for analysis. *Progress in Development Studies*, 7(4). 291–306. DOI:10.1177/146499340700700402.
- Genschel, P. (1997). The Dynamics of Inertia: Institutional Persistence and Change in Telecommunications and Health Care. *Governance*, 10(1). 43–66. DOI:10.1111/0952-1895.281996028.
- Geyer, N., Forster, M., Ludwig, A., Nahimana, V. and Ndayisaba, A. (2011). East Africa practitioners workshop on pro poor urban sanitation and hygiene, LAICO Umubano Hotel, Kigali, Rwanda, March 2011.
- Haimi, S., Ranta, L. and Hietaranta, J. (2008). Challenges in dry sanitation: Case from Swaziland and Zambia. *Experiences of dry sanitation in Southern Africa*. L. Akatama (ed.). Turku University of Applied Sciences, Turku.
- Harris, D., Jones, L. and Kooy, M. (2011). Analysing the governance and political economy of water and sanitation service delivery. <http://r4d.dfid.gov.uk/Output/187879/Default.aspx>.
- Hooghe, L. and Marks, G. (2001). Types of Multi-Level Governance. *European Integration online Papers (EIoP)*, 5(11). <http://eiop.or.at/eiop/texte/2001-011a.htm>.

- Höpner, M. (2005). What connects industrial relations and corporate governance? Explaining institutional complementarity. *Socio-Economic Review*, 3(2). 331–58. DOI:10.1093/SER/mwi014.
- IISD (2013). Summary of the Third Session of the UNGA Open Working Group on SDGs, 22-24 May 2013, New York, US. *Earth Negotiations Bulletin*. <http://www.iisd.ca/vol32/enb3203e.html>.
- Jain, N. (2011). *Getting Africa to Meet the Sanitation MDG : Lessons from Rwanda*. 63544. The World Bank. <http://documents.worldbank.org/curated/en/2011/07/14695214/getting-africa-meet-sanitation-mdg-lessons-rwanda>.
- Kjellén, M. (2010). Water vending in Dar es Salaam, Tanzania. *Shared Waters, Shared Opportunities: Hydropolitics in East Africa*. B. Calas and C. A. M. Martinon (eds.). African Books Collective, Dar es Salaam, Tanzania.
- Kjellén, M. (2008). The investment deficit in water distribution. *Meeting Global Challenges in Research Cooperation*. Utsikt mot utveckling, Vol. 32. Uppsala University, Uppsala, Sweden. [http://www.academia.edu/217320/Meeting\\_Global\\_Challenges\\_in\\_Research\\_Cooperation](http://www.academia.edu/217320/Meeting_Global_Challenges_in_Research_Cooperation).
- Kvarnström, E., McConville, J., Bracken, P., Johansson, M. and Fogde, M. (2011). The sanitation ladder – a need for a revamp? *Journal of Water, Sanitation and Hygiene for Development*, 1(1). 3. DOI:10.2166/washdev.2011.014.
- Massie, A. and Webster, J. (2013). Towards understanding the water and sanitation hygiene beliefs and practices of the Twa of south-west Uganda. *Waterlines*, 32(1). 5–22. DOI:10.3362/1756-3488.2013.002.
- Morella, E., Foster, V. and Banerjee, S. G. (2008). Climbing the Ladder: The State of Sanitation in Sub-Saharan Africa. <http://microdata.worldbank.org/index.php/citations/2969>.
- Movik, S. and Mehta, L. (2010). *The Dynamics and Sustainability of Community-Led Total Sanitation (CLTS): Mapping Challenges and Pathways - Institute of Development Studies*. STEPS Working Paper. STEPS Centre, Brighton, UK. <https://www.ids.ac.uk/publication/the-dynamics-and-sustainability-of-community-led-total-sanitation-clts-mapping-challenges-and-pathways>.
- Nelson, R. (1994). Evolutionary theorizing about economic change. *The handbook of economic sociology*. N. J. Smelser and R. Swedberg (eds.). Princeton University Press ; Russell Sage Foundation, Princeton; New York. 108–36.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge ; New York.
- Nyonyintono Lubaale, G. and Musembi Musyoki, S. (2011). *Pro-poor sanitation and hygiene in East Africa*, background paper presented at the East Africa practitioners workshop on pro poor urban sanitation and hygiene, LAICO Umubano Hotel, Kigali, Rwanda, March 2011.
- ODI (2012). Country Learning Notes. Rwanda: the development of sector strategies. <http://www.budgetstrengthening.org/countrylearningnotes/rwanda-the-development-of-sector-strategies.html>.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.
- Pahl-Wostl, C. (1995). *The Dynamic Nature of Ecosystems: Chaos and Order Entwined*. Wiley.
- Pierson, P. (2000). Increasing Returns, Path Dependence, and the Study of Politics. *The American Political Science Review*, 94(2). 251. DOI:10.2307/2586011.
- Powell, W. W. (1991). *The New Institutionalism in Organizational Analysis*. W. W. Powell and P. Dimaggio (eds.). University of Chicago Press, Chicago. <http://www.press.uchicago.edu/ucp/books/book/chicago/N/bo3684488.html>.

- Pruss, A., Kay, D., Fewtrell, L. and Bartram, J. (2002). Estimating the burden of disease from water, sanitation, and hygiene at a global level. *Environmental Health Perspectives*, 110(5). 537–42.
- Prüss-Üstün, A., Bos, R., Gore, F. and Bartram, J. (2008). *Safer Water, Better Health: Costs, Benefits and Sustainability of Interventions to Protect and Promote Health*. Geneva. [http://www.who.int/water\\_sanitation\\_health/publications/safer\\_water/en/](http://www.who.int/water_sanitation_health/publications/safer_water/en/).
- Rip, A. and Kemp, R. (1998). Technological change. *Human Choice and Climate Change - Volume 2: Resources and Technology*. Oxford University Press, U.S.
- Roe, M. J. (1996). Chaos and Evolution in Law and Economics. *Harvard Law Review*, 109(3). 641. DOI:10.2307/1342067.
- Rosemarin, A., Ekane, N., Caldwell, I., Kvarnström, E., McConville, J., Ruben, C. and Fogde, M. (2008). *Pathways for Sustainable Sanitation: Achieving the Millennium Development Goals*. IWA Publishing, London, UK; New York.
- Rotmans, J., Kemp, R. and Asselt, M. van (2001). More evolution than revolution: transition management in public policy. *foresight*, 3(1). 15–31. DOI:10.1108/14636680110803003.
- Sano, J. (2007). *Urban Environmental Infrastructure in Kigali City, Rwanda. The Challenges and Opportunities for Modernised Decentralised Sanitation Systems in Poor Neighbourhoods*. Msc thesis. Wageningen University, Netherlands.
- Shove, E. (2003). *Comfort, Cleanliness and Convenience: The Social Organization of Normality*. Bloomsbury Academic.
- Stenström, T. A. (2011). *Microbial Exposure and Health Assessments in Sanitation Technologies and Systems*. EcoSanRes Series, 2011-1. Stockholm Environment Institute, Stockholm, Sweden. <http://www.sei-international.org/publications?pid=1991>.
- Stinchcombe, A. L. (1987). *Constructing Social Theories*. University of Chicago Press, Chicago.
- Stubbs, P. (2005). *Southeast European Politics Online*, VI(2). <http://www.seep.ceu.hu/archives/issue62/abstracts62.htm>.
- Szántó, G. L., Letema, S. C., Tukahirwa, J. T., Mgana, S., Oosterveer, P. J. M. and van Buuren, J. C. L. (2012). Analyzing sanitation characteristics in the urban slums of East Africa. *Water Policy*, 14(4). 613. DOI:10.2166/wp.2012.093.
- Thompson, R. H. (2004). Overcoming Barriers to Ecologically Sensitive Land Management Conservation Subdivisions, Green Developments, and the Development of a Land Ethic. *Journal of Planning Education and Research*, 24(2). 141–53. DOI:10.1177/0739456X04269860.
- UN-Water (2008). Sanitation is an investment with high economic returns. Factsheet. <http://www.gwopa.org/index.php/resource-library/3166-sanitation-is-an-investment-with-high-economic-returns>.
- UN-Water and World Health Organization (2012). *GLAAS 2012 Report UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water: The Challenge of Extending and Sustaining Services*. World Health Organization, Geneva, Switzerland. [http://apps.who.int/iris/bitstream/10665/44849/1/9789241503365\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44849/1/9789241503365_eng.pdf).
- United Nations Development Programme (2006). *Human Development Report 2006: Beyond Scarcity: Power, Poverty and the Global Water Crisis*. Palgrave Macmillan, Basingstoke; New York.
- WaterAid (2013a). Keeping Promises: Why African leaders need to deliver on their past water and sanitation commitments. [http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=db67087d-6f01-4cd1-a3d5-989082ba504e&sc\\_lang=en-GB](http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=db67087d-6f01-4cd1-a3d5-989082ba504e&sc_lang=en-GB).

WaterAid (2013b). *WaterAid - Publications - Everyone, Everywhere. A Vision for Water, Sanitation and Hygiene Post-2015*. WaterAid, London. <http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=b5203641-de28-4c9e-acf1-a511562ead45>.

WaterAid (2011). *The Sanitation Problem: What Can and Should the Health Sector Do?* WaterAid, London. <http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=0e1f8c88-8684-4bb6-bc9c-8be62b8985c0>.

World Health Organization and UNICEF (2013). *Progress on Sanitation and Drinking-Water: 2013 Update*.

WSP, (Water and Sanitation) Programme (2012). Africa: Economics of Sanitation Initiative. <http://www.wsp.org/content/africa-economic-impacts-sanitation>.

Yardley, S. (2010). Joining the dots: Why better water, sanitation and hygiene are necessary for progress on maternal, newborn and child health. <http://tilz.tearfund.org/~media/files/tilz/research/j20066%20wash%20report%20web.pdf>.

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