

UNIVERSITY OF ANTWERP

INSTITUTE OF DEVELOPMENT POLICY AND MANAGEMENT

Dissertation

**PHYSICAL AND FUNCTIONAL  
SUSTAINABILITY OF URBAN  
UPGRADING PROJECTS:**

**Water and sanitation facilities in the aftermath  
of the Kampala Integrated Environmental Planning  
and Management Project (2006-2012)**

**Lisa POPELIER**

Master of Development Evaluation and Management

Supervisor: Prof. Dr. Nathalie Holvoet  
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## **Preface and acknowledgements**

This dissertation is the final and principal component in obtaining my Master of Development Evaluation and Management at the Institute of Development Policy and Management in Antwerp. This year has been full of challenges and opportunities and it is time to thank the people who have supported me through all of them.

First, I want to thank all people who made this research possible. Within this large group of people I would like to express my special gratitude towards Prof. Dr. Nathalie Holvoet and Prof. Dr. Griet Steel for their academical support. Further, I would like to thank Wannes Gijssels, Ineke Adriaens, Mauriece Merewooma, Asadu Muwonge, Charles Tumwebaze, Kule Yosia and all other people who made my field visit in Kampala possible and turned it into a highly appreciated experience.

Second, my family deserves all respect for creating a positive learning environment and a safe nest to come home to. In addition, I genuinely want to thank all my friends for their belief in me and their attempts to distract me from school work and personal setbacks. Moreover, I feel honoured to have spent so many beautiful moments with my IOB colleagues.

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## **List of acronyms**

BTC	Belgische Technische Coöperatie; Belgian Technical Cooperation
CBO	Community Based Organisation
CIDI	Community Integrated Development Initiatives
ED	Executive Director
GPE	Governance and Political Economy
IEC	Information, Education and Communication
KCC	Kampala City Council
KCCA	Kampala Capital City Authority
KIEMP	Kampala Integrated Environmental Planning and Management Project
MDG	Millennium Development Goals
MoLG	Ministry of Local Government
MoU	Memorandum of Understanding
NGO	Non Governmental Organisation
NWSC	National Water and Sewerage Cooperation
PEAP	Poverty Eradiction Action Plan
PPDA	Public Procurement and Disposal of Public Assets Authority
ToR	Terms of Reference
VIP	Ventilated improved pit latrine
WATSAN	Water and Sanitation
WSP	Water and Sanitation Program

## **Executive summary**

This qualitative case study attempts to contribute to the debate on the sustainability of urban upgrading projects which is a key element in the development effectiveness literature. The study includes a literature review and a political economy analysis of the water and sanitation components that formed part of the Kampala Integrated Environmental Planning and Management Project (KIEMP, 2006-2012). The pre-paid water meters and the ventilated improved pit latrines that were constructed formed part of the larger project that targeted three informal settlements, namely Katwe I, Kisenyi II and Bwaise III.

Contemporary urbanization processes are challenging, especially in the developing countries where cities are growing at unprecedented urban growth rates. In general, cities have not been able to adequately cope with this pressure of numbers which has led to the emergence of informal settlements or slums. Slums dwellers have been confronted with eviction and clearance policies, but nowadays slum upgrading is the ‘linchpin’ of any urban poverty strategy (Langford et al., 2005). Depending on the context and the needs of the target population, slum upgrading interventions can consist of different building blocks, such as provision of housing and basic infrastructure, enhancement in tenure security and improvements of the physical, social and environmental environment.

Another factor that is indispensable in current development interventions is the participation of local stakeholders. Many results have been attributed to the adoption of a participatory approach, even though they are not always based on sufficient evidence. These claimed results include the increased effectiveness, efficiency, cost recovery, ownership, feasibility and empowerment of the participants. In addition, it is also expected that the aforementioned results will, in turn, enhance the sustainability of the project benefits.

Sustainability has in this dissertation been interpreted as the uninterrupted service over the foreseeable future through competent, adequate and financially sustainable operations and maintenance. While there are various ways to operationalize the sustainability concept, I decided to make a distinction between physical sustainability and functional sustainability<sup>1</sup>.

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<sup>1</sup> Functional sustainability refers to the extent in which the facility continues to fulfil the purposes for which it was installed.

Data collected during monitoring visit indicates that there are several threats to the sustainability of the public toilets. First, many defects have been observed and were mainly attributable to the lack of water or water related infrastructure. Therefore, many toilets facilities were still accessible, but could no longer provide hand washing facilities. Erosion of walls and floors was also rampant in the three parishes, although some caretakers had clearly tried to limit this damage. In addition, leaking roofs were found to be a recurrent problem, especially in Kisenyi II. Second, the toilets were found relatively clean particularly in comparison to the unimproved ordinary pit latrines that are used by the majority of the slum population. Third, the emptying of the service is perceived as the major challenge to the O&M of the facilities. Fourth, the level of use was relatively low because of a combination between unwillingness and inability to pay for the user fee. Fifth, the toilets are mainly used by the landlords that donated their land and by their tenants. While the toilets remained accessible for passersby in the majority of cases, a significant proportion has clearly started to privatize the facility.

Regarding the pre-paid water meters, it has been found that more than 40% of the meters were not functional at the time of the monitoring visit. Most informants identified the lack of spare parts as the main reason for thus underperformance. As long as the beneficiaries are in the possession of the token they are willing to pay the pro-poor tariff that is applicable on the pre-paid meters. However, a large proportion of the residents did not have this token and perceived it difficult to obtain one which compromised the coverage of the project.

The relatively high degree of community participation can to some extent explain why people continue to use and provide the O&M of the toilets. Community participation has taken various forms, such as the donations of land by landlords, the performance of O&M tasks by local residents, the financial contributions from beneficiaries and the engagement in the CBOs in community mobilization and behavioural change communication. These elements have triggered feelings of ownership. However, it has not always been clear who exactly enjoys the benefits of the increased ownership. The position of the landlord might differ greatly from the position of the tenants. In addition, the case has shown that the capacity built by the project should not be assumed to be sustained over time. The lack of permanent funding greatly hampers caretakers and CBOs to pursue their roles.

The poor functional sustainability can be mainly explained by the market-driven displacement that has taken place. Although economic development would have also occurred to some extent in the absence of the project, the integrated KIEMP project has undoubtedly created some sort of island of relative luxury that are attractive for middle-income households. The success of the complementing income-generated activities (e.g. charcoal briquettes) and the CBO that provided savings schemes shows the importance of strengthening the fallback position of the poorest in the upgraded slum.

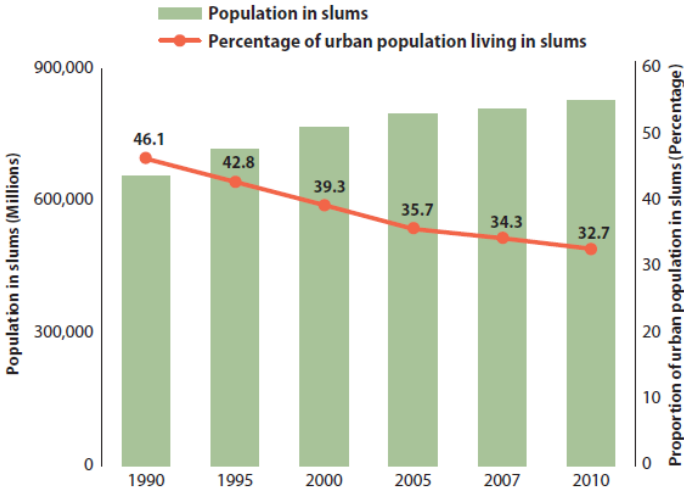
Further, difficulties have been encountered due to confusion about the roles and responsibilities of the different actors. While formal agreements (MoUs) had been signed, they have not proven sufficient to withstand the challenges that resulted from the institutional transformation from KCC to KCCA. The institutional shift has weakened the capacity of the local government and of the division offices in particular. It has resulted in the emergence of new governing rules that largely disregard the previously agreed commitments and responsibilities and dictate new power relations.

Finally, different stakeholders have demonstrated weak incentives towards the sustainability of the water and sanitation infrastructure. The willingness to pay for toilet use is almost non-existent which results in a discouraging situation for the caretakers. There are also few caretakers that are conducting regular repairs and their accountability towards their community is weak (e.g. due to absence of record keeping). Finally, sustainable access to water and sanitation for the urban poor has not proven to be a priority for KCCA and other actors in the political arena. .

# 1 Introduction

Positive news has been recently announced in the Millennium Development Goals Report stating that between 2000 and 2012 around 244 million of the former urban slum dwellers have gained access to improved water sources, sanitation facilities, durable housing or sufficient living space. The MDG target aiming to achieve a significant improvement in the living conditions of at least 100 million slum dwellers is therefore one of the few targets that has been greatly exceeded (United Nations, 2013). There is even more cause for optimism given the fact that the proportion of slum dwellers in developing regions has decreased from 39% in 2000 to 33% in 2012 (United Nations, 2013). These achievements show that the concern and political will expressed in the Millennium Development Goals have also resulted in serious attempts to improve slum conditions.

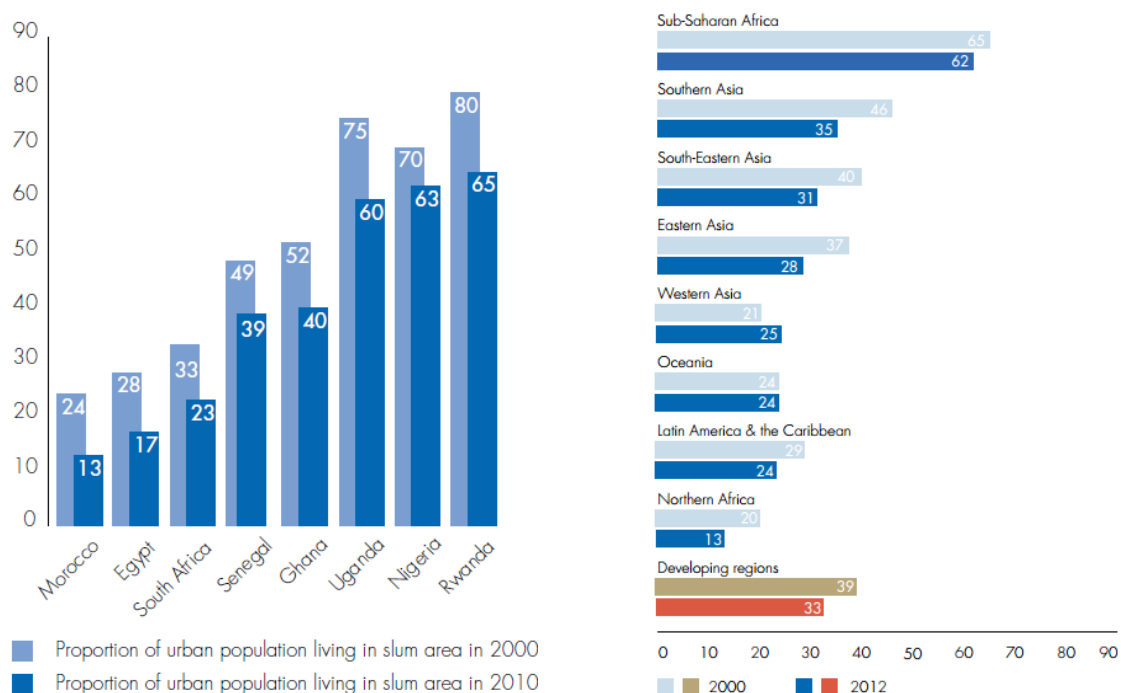
**Figure 1** Population living in slums and the proportion of urban population living in slums, developing regions, 1990-2010



Source: United Nations (2010: 62)

However, the excitement should be tempered as this progress has not been sufficient to offset the growth in the urban population living in slum conditions (United Nations, 2010). In 2012, the number of urban slum dwellers in developing regions was estimated at some 863 million and it is expected that the number will continue to rise in the near future (United Nations, 2013). Further, the proportion of slum dwellers in Sub-Saharan Africa is still very high and has only slightly been reduced from 65% in 2000 to 62% in 2012 as shown in figure 2 (United Nations, 2013).

**Figure 2** Proportion of urban population living in slums, 2000 and 2010 (left) or 2012 (right)



Source: The Millennium Development Goals Report 2013 (United Nations, 2013: 50-51)

The Millennium Development Goals also include a target which aims to halve the proportion of the population without sustainable access to safe drinking water and basic sanitation by 2015 (United Nations, 2013). Insistent economic and political crises, rapid urbanization, inefficient infrastructural delivery systems, low investment in the sector and bad governance are among the interrelated factors responsible for the low level of infrastructure in the developing cities (Ibem, 2009).

With respect to the access to safe drinking water, the global target has been reached, even though regions such as Sub-Saharan Africa and Oceania still remain behind (United Nations, 2013). In addition, the declaration of the Decade for Action ‘Water for Life’ running from the year 2005 to 2015 has not been able to prevent an increase in the number of urban residents without access to a safe water supply from 137 million (2006) to 296 million by 2015 (UN JMP 2008 described in Lüthi et al., 2010; McConville, 2006; United Nations, 2013).

Regarding the sanitation needs, the “progress” so far is frequently described as a “global scandal” (UN-HABITAT, 2013: 13). The MDG target has not been reached despite impressive improvements in Eastern Asia. Sub-Saharan Africa, on the other hand, is

remaining behind with this target as only 30% of the population had access to improved sanitation in 2011 (United Nations, 2013). In urban areas, it is expected that the number of people without access to improved sanitation will rise from 661 million in 2006 up to 898 million in 2015 (UN JMP 2008 described in Lüthi et al., 2010).

Based on these mixed trends, it is thus essential to continue searching for evidence and instruments that will foster the struggle against urban poverty in a way that ensures long-term, sustainable development (Field and Kremer, 2006). However, the resource-constrained and complex setting of cities in developing regions requires resource allocation based on rigorous and systematic evaluations of previous attempts to tackle urban poverty. Even though the evidence is often dispersed and conflicting due to the interdisciplinary nature of the topic, these assessments should allow policy makers and project managers to make more evidence-based decisions to replace, adjust or extend a project or program beyond a particular setting (Field and Kremer, 2006; Turley et al., 2013).

This case study is a qualitative assessment of the sustainability of the water and sanitation components within the Kampala Integrated Environmental Planning and Management (KIEMP) project. The KIEMP project has been implemented in three slums located within the capital district of Uganda in the period from 2006 to 2012.

This assessment can be deemed relevant from various perspectives. First, the slum upgrading approach has been the dominant approach in recent decades and infrastructure systems lie at the heart of urban sustainability issues (Sahely et al., 2005). Second, a meta-evaluation conducted in preparation of this dissertation (Popelier, 2013a) has shown that sustainability as one of the five evaluation criteria of the OECD is often poorly addressed in impact evaluations of slum upgrading projects. The progress in water and sanitation provision has been measured mainly on the basis of physical outputs with little or no attention on outcomes such as the continued use and maintenance of facilities (Isunju et al., 2013). Third, in line with previous research the meta-evaluation also confirmed that the literature on urban development and impact evaluations of urban upgrading initiatives is mainly centred on Latin America and Asia. In spite of its specific nature, Sub-Saharan Africa has received much less attention (Gulyani and Connors, 2002). Fourth, water and sanitation projects have a historically low success rate and have encountered serious sustainability issues as projects fall into disrepair. As summarized by McConville (2006), projects fail because of the lack of

understanding of a wide range of factors that can affect the project's sustainability. It is deemed important to have an in-depth analysis of the potential enablers and constraints for sustainable urban upgrading.

This dissertation is based on published academic literature, grey literature and (qualitative) data collected through interviews with different types of stakeholders of the KIEMP project during a five week fieldwork in Kampala. Theoretical insights and observations from the field visit are then combined and subjected to a problem-oriented political economy analysis of the sustainability of the water and sanitation infrastructure implemented as part of the KIEMP project. The purpose of this research is to inform actors who are involved in urban upgrading projects, particularly those that are (partly) donor-funded. Further, the intention is to demonstrate the importance of post-project evaluations and follow-ups to check on the sustainability of project outcomes.

The limitations of this dissertation include time constraints, especially during data processing. In addition, the lack of familiarity with the research setting and the wide array of potential explanations have forced me to set some (arbitrary) boundaries in order to ensure the feasibility of the study. In spite of these limitations, I will attempt to try to answer the following research questions in this dissertation:

1. What is the current physical condition of the public toilets and the prepaid water meters of the KIEMP project compared to the situation at the finalization of the project?
2. What is the current usage level and accessibility of the implemented infrastructure, namely the public toilets and the prepaid water meters of the KIEMP project?
3. How has the participatory project design enabled or constrained the physical and functional sustainability of public toilets and the prepaid water meter of the KIEMP project?
4. How has the broader institutional and political context enabled or constrained the physical and functional sustainability of the public toilets and prepaid water meters of the KIEMP project?

This dissertation includes three major parts, namely a literature review, a methodology justification and the political economy analysis. The literature review comprises chapters on urbanization and slum upgrading, community participation and sustainability. Then, a



political economy analysis is conducted based on the case of the water and sanitation project in Kampala. This analysis includes a description of the sustainability challenge in urban upgrading projects followed by the observations from the KIEMP project in Kampala. Thereafter a wide range of explanatory variables are discussed in a diagnostic framework which form the base for the action framework which provides some potential ways forward. In the concluding chapter, the aforementioned research questions will be answered to the extent possible based on the case study.

## **2 Urbanization**

### **2.1 Urbanization processes and the emergence of slums**

In general, the 20th century has been called the era of major urban transformation (Stren, 2003). The rapid increase in the overall population and the migration into the urban areas have resulted in a significant growth of the urban population (Turley et al., 2013). The migration flows into the cities are motivated by factors that push the people out of their previous residences such as natural disasters and low incomes from agriculture and by factors that pull people towards the city such as the aspiration for better living conditions and job opportunities (Greene, 2010). The population shift towards cities is further facilitated by improvements in transport and communication, and the increased links with urban citizens (Cities Alliance, 2013).

In the most recent decades new urbanization processes have developed which differ from historical patterns in terms of scale, rate, location, form and function (Seto et al., 2010). The main features of the current urbanization process are the emergence of megacities (> 10 million); the expansive growth of these cities; the adoption of western urban lifestyles and mounting aspirations; the increase in importance of cities as economic, social, cultural and political centers of the country; the unprecedented pace of urbanization; and the fact that the process is mainly taking place in developing regions, especially China and India (Seto et al., 2010; Varis and Somlyódy, 1997). Around 95% of the urban population growth is predicted to take place in the development world over the next two decades (Lüthi et al., 2010). As illustrated in Table 1, between 1950 and 2050 the urban population in less developed countries will have risen from 310 to 5327 million (x17) respectively (UN-Habitat, 2009). As a result, developing cities resemble “a patchwork of formal and informal settlements, new and

old infrastructure, and a variety of cultures and classes” (Lüthi et al., 2010: 50). Moreover, the high consumption levels of land, water and other basic amenities and forms a major challenge for sustainable development (Saheley et al., 2005; Seto et al., 2010; Varis and Somlyódy, 1997).

**Table 1** Global trends in urbanization, 1950-2050

Region	Urban population (million)					Percentage urban				
	1950	1975	2007	2025	2050	1950	1975	2007	2025	2050
World	737	1518	3294	4584	6398	29.1	37.3	49.4	57.2	69.6
More developed region	427	702	916	995	1071	52.5	67.0	74.4	79.0	86.0
Less developed region	310	817	2382	3590	5327	18.0	27.0	43.8	53.2	67.0
Africa	32	107	373	658	1233	14.5	25.7	38.7	47.2	61.8
Asia	237	574	1645	2440	3486	16.8	24.0	40.8	51.1	66.2
Europe	281	444	528	545	557	51.2	65.7	72.2	76.2	83.8
Latin America and the Caribbean	69	198	448	575	683	41.4	61.1	78.3	83.5	88.7
North America	110	180	275	365	402	63.9	73.8	81.3	85.7	90.2
Oceania	8	13	24	27	31	62.0	71.5	70.5	71.9	76.4

Source: UN-HABITAT (2009: 10)

The challenges that result from the rapid urbanization process and the insufficient capacity of cities in developing regions to adequately respond have not received the deserved attention for a long time (Kool et al., 1989). The lack of alternatives forced many urban poor residents to squat or buy plots in illegal subdivision which led to the emergence of large illegal, ‘autonomous’ or ‘spontaneous’ settlements which are often referred to as informal settlements or slums (Kool et al., 1989). Within these settlements inhabitants live in precarious conditions deprived of the basic services and public infrastructure needed to satisfy basic human needs (Greene, 2010). A single valid definition for the informal settlements that arise within the urban areas is not available as slums emerge within different political, legal, historical, social, cultural and economic backgrounds. Besides these differences, they also vary in size, density, quality of the built environment, vulnerability to natural disasters and other technical aspects.

However, their common characteristic is that their residents are in one way or another at a disadvantage compared to other areas within the city mainly due to their relative poverty and the lack of political concern and commitment to improve their situation (Langford et al., 2005). Informal settlements or slums are often the only affordable and accessible settlement opportunity for the urban poor (Cities Alliance, s.d.; UN-HABITAT, 2003). In addition, the

deprivations of the urban poor are far more multidimensional. According to Satterthwaite (2002) the other aspects of urban poverty are (1) inadequate income; (2) inadequate, unstable or risky asset base; (3) inadequate shelter; (4) limited or no safety net; (5) inadequate protection of rights; and (6) voicelessness and powerlessness.

## **2.2 Historical background of the adopted policy approaches**

Different approaches have been adopted in the past to tackle the problems entailed by the proliferation of informal settlements. Initially, the new urban residents who were housed in informal settlements were theorized as marginal to the mainstream of modern city life according to the conventional marginality theory of the 1960s proposed by Lewis. This marginality theory considered them trapped in a culture of poverty from one generation to another (de la Rocha et al., 2004). The government policies in the 1960s were in line with this theory resulting in slum clearance, slum relocation and neglect at best (Gulyani and Connors, 2002; Kool et al., 1989; Werlin, 1999). This policy approach is also in line with the general belief that the emergence of slums was an unavoidable evil that would come to an end through economic growth (Kool et al., 1989). In some African countries, this policy approach remained the common policy into the 1990s (Gulyani and Connors, 2002).

However, towards the end of the 1960s people started doubting the expected 'trickling-down' effects of economic growth and the marginality theory was criticized and rejected on the basis of demonstrations of social mobility and survival of these so-called marginalized groups (de la Rocha et al., 2004; Kool et al., 1989). In addition, slum clearance and slum relocation were deemed to further aggravate the housing shortages and yield high economic and social disruption costs. The main reason for this is that the urban poor are heavily dependent on their location near the city in order to easily access job opportunities and establish social, survival networks (Mukhija, 2002; Werlin, 1999). The relocation or clearance of slums could also come with high disruption costs due to violent and politically troublesome reactions of slum residents (Werlin, 1999). Local authorities started to realize that the adopted strategies often created more problems than they have solved (Cities Alliance, s.d.; Nour, 2011; UN-HABITAT, 2003; Werlin, 1999).

As a result, the influential self-help paradigm emerged as an alternative approach during the 1970s and 1980s. This paradigm constituted the provision of sites and services and in-situ

slum upgrading (Gulyani and Connors, 2002). In 1972, John Turner came forward with his book 'Freedom to build' in which he proposed a new policy approach which focuses on the physical improvement of the slum environment and the transformation of squatters into legal owners (Turner described in Mukhija, 2002; Turley et al., 2013; Werlin, 1999). Turner's philosophy is mainly based on a benevolent view of communities as reflected in his emphasis on the potential and right of the urban poor to extensively participate in solving their own problems (Kool et al., 1989; Werlin, 1999). Even though Turner acknowledges all sorts of constraints inherent to the low incomes and negative government attitudes towards slum dwellers, Turner encourages the governments to respect, support and guide them instead of condemning and threatening their existing autonomous systems (Kool et al., 1989).

Many aid-giving and funding agencies believed that slum upgrading was the least expensive and most efficient strategy to deal with the proliferation of informal settlements and encouraged cities to adopt this new strategy from the 1970s and early 1980s onwards (Harpham and Stephens, 1992; Kool et al., 1989; Mukhija, 2002; Werlin, 1999). Since then, slum upgrading has been acknowledged as one of the more effective means of tackling the urbanization challenges and has become a 'linchpin' of any urban poverty strategy (Langford et al., 2005: 2). The concept of slum upgrading will be unwrapped and some further discussion on the approach will be included in the next section.

## 2.3 **Slum upgrading**

### 2.3.1 **The concept and main building blocks**

As mentioned earlier, no two informal urban settlements are the same. Given the fact that the design of any slum upgrading initiative requires careful analysis of the local setting, a range of strategies have emerged for upgrading informal settlements. What is included in a certain slum upgrading will therefore vary (Langford et al., 2005). Nevertheless, the primary goals of this approach are to provide secure land tenure and to provide or improve basic infrastructure and service delivery (Gulyani and Connors, 2002; Nitti and Dahiya, 2004). The initial idea was that the provision of secure tenure and the gradual improvement of the physical environment would then stimulate slum residents to use their capacities to further improve their living conditions so that they gradually become part of the wider, formal city (Nitti and Dahiya, 2004; Turley et al., 2013; Werlin, 1999).

Moreover, the focus of the programs has evolved from a straightforward physical upgrading towards integrated and comprehensive interventions (Cities Alliance, 2013; Imparato and Ruster, 2003; Turley et al., 2013). Contemporaneous upgrading projects can include anything from technical improvements to socio-political arrangements (Langford et al., 2005). This means that the upgrading has become inter-sectoral and according to some authors it is therefore better to adapt the terminology to multi-sectoral slum ‘improvement’ projects which should indicate that the strategy involves more than physical improvements solely (a.o. Harpham and Stephens, 1992). The most common issues addressed in current programs are listed below.

- Legalization of tenure status: Insecure tenure is one of the attributes of slums (UN-HABITAT, 2003). Therefore, security of tenure and property rights are often considered a requisite for economic development and poverty reduction (Field, 2007). Security of tenure can, for instance, be enhanced through regularization of rental agreements or through provision of tenure documents (Langford et al., 2005; Turley et al., 2013).
- Provision or improvement of technical services and social infrastructure: This core element of slum upgrading frequently includes the provision or improvement of roads, drains, street lighting, electricity, water supply sanitation facilities and solid waste management (Gulyani and Connors, 2002; Harpham and Stephens, 1992; Langford et al., 2005). Since projects became more integrated, upgrading often includes the construction or rehabilitation of social infrastructure such as primary health care posts, community centres and primary schools (Harpham and Stephens, 1992; Langford et al., 2005).
- Physical improvement of built environment and construction of new housing units: The right to housing can either be fulfilled through the construction of new units or through the rehabilitation or improvement of existing housing stock which often consists of previously constructed self-help houses (Langford et al., 2005).
- Provision of social services and capacity building initiatives: This component has featured much less prominently, especially in Africa. However, it can include the provision and improvement of the quality of educational and health services (Gulyani and Connors, 2002). Further, social protection and support, as well as anti-crime initiatives are sometimes incorporated in upgrading projects to address challenges that result from residential segregation (Field and Kremer, 2006; Turley et al., 2013). These social services can even be complemented with local economic development and

savings initiatives such as cash transfer programs, micro-credit initiatives or social investment funds (Field and Kremer, 2006; Turley et al., 2013; UN-HABITAT, 2003). Other software components intended to stimulate political participation, social capital and community management can also form part of the urban upgrading intervention (Field and Kremer, 2006; Turley et al., 2013).

In sum, slum upgrading can be defined as a cooperatively undertaken process of gradual improvement, formalization and incorporation consisting of physical (infrastructure), social (e.g. health, education...), economic, organizational, institutional (e.g. land tenure) and environmental improvements (Cities Alliance, s.d.; Langford et al., 2005). When assessing upgrading initiatives, a clear understanding of the different upgrading components is essential so that welfare effects can be attributed to the specific components to the extent possible (Field and Kremer, 2006).

### 2.3.2 Contemporary discussions and debates on slum upgrading

Even though the slum upgrading approach was adopted frequently since the 1980s, this approach also has to deal with serious criticism at micro and macro level. At micro-level, the criticism is mainly centred on the inefficiencies that are encountered in individual projects such as slow rates of implementation, poor cost recovery, poor operations and maintenance and inadequate levels of community participation (Gulyani and Connors, 2002). In the case study of the KIEMP project, the focus will mainly be on these challenges encountered at the micro-level.

The debate on whether upgrading projects should be integrated, multi-sectoral or sector specific is closely related to the aforementioned micro-level critique. Integrated multi-sectoral projects simultaneously address interrelated issues and are considered to have a greater impact on communities. The establishment of a major contract with various components is supposed to lead to a decrease in costs and coordination problems. Nonetheless, the failure of integrated projects is considerable due to complexity and lack of sufficient funding (Gulyani and Connors, 2002). Sector specific interventions, on the other hand, have increased due to the growth in expertise and funding for water and sanitation projects even though they are not always an efficient solution to tackle interrelated systems. The advantage of sector specific interventions is, however, that a considerably larger number of settlements can be reached (Gulyani and Connors, 2002).

Criticism at the macro-level is rather levelled at the lack of an overarching institutional framework and the need to integrate individual upgrading projects within wider programs and policies (Gulyani and Connors, 2002). Especially in the early years of the slum upgrading approach, it was in many cases perceived as a donor driven process. Therefore, the upgrading goals were rarely incorporated in national urban strategies (Gulyani and Connors, 2002). The Paris Declaration which promoted ownership and alignment (OECD DAC, 2005) is supposed to avoid this to happen in future donor interventions. Yet, the question who sets the upgrading agenda should not be ignored and when it is taken into consideration it adds a political dimension to the urban upgrading intervention (Roy, 2005). The ways in which local stakeholders and especially the urban poor can participate and co-design their own future living conditions will be discussed in the chapter on community participation.

Further, another fundamental critique comes from Roy who states that “the limitations of urban upgrading are the limitations of the ideology of space” (Roy, 2005: 150). With this statement, she challenges the assumption that aesthetic upgrading of the built environment and physical amenities will automatically result in sustainable human development (Kool et al., 1989). Roy (2005) argues that what is upgraded is the physical, built environment rather than people’s capacities or livelihoods. This ‘aestheticization of poverty’ (Roy, 2005: 150) still suffers from the same disease as previously adopted approaches, namely that it continues treating symptoms instead of providing structural and sustainable solutions that prevent the emergence of slums in the first place (Durand-Lasserve, 2007).

### **3 Community participation in development projects**

#### **3.1 Ends-oriented, normative definition of participation**

Participation has been defined in different ways depending on the context and time. Participatory methods have emerged as a reaction to the shortcomings of the previous top-down, externally imposed and export oriented development practices (Chambers described in Nour, 2011). Most of the times, the definitions are very normative as they describe how stakeholders should be included in development projects. In this sense, many researchers adopt an ends-oriented approach, because they consider the empowerment and increased incentives to participate in future projects as project outcomes as well (Lyons et al., 2001).

The definition presented below is based on a compilation of this type of definitions and is an adapted version of the definition provided by Imparato and Ruster (2003).

*“Participation is a two-way evolutionary process in which direct and indirect stakeholders, particularly people who are in a disadvantaged position due to their gender, age, education, income or ethnicity, are included so that they can influence, share and control the decision-making processes and outcomes in all stages of the project cycle and improve their human, organizational and management capacity to exercise their voice and choice inside and outside the project.”* (adapted from Imparato and Ruster, 2003: 20)

As a detailed decomposition and justification of this definition has already been presented in Popelier (2013b), only some key elements will be repeated here. First, participation is described as a two-way evolutionary process because of the ethic of ‘informed consent’ that prescribes that knowledge should be produced by, with and for local people (Chambers, 1994b). Through knowledge-sharing persisting poverty, isolation and unsustainable development is expected to come to an end (Mosse, 2011).

First, the main stakeholders that join forces in participatory urban development are non-governmental organizations (NGOs), private sector actors, local government authorities and the ‘community’, optionally organized in community-based organizations (CBOs) (Schübeler, 1996). The most cited axes of difference and consequent exclusion, namely gender, age, education, income and ethnicity (Saxena, 2011) are explicitly mentioned in the definition in order to emphasize that inclusiveness is the central idea of participatory development (Agarwal, 2001).

Furthermore, the participants should be given a dynamic and active role in contrast with the old, but all too familiar ‘decide-inform-justify’ (Delli Priscoli, 2004: 22) or ‘I manage, you participate’ (Saxena, 2011: 31) models. The human right to participation in terms of extensive consultation with and participation by, all of those affected should be central in participatory approach to urban upgrading (International Committee on Economic, Social and Cultural Rights described in Langford et al., 2005). In this way, capacities can be build that can be used in context of the project as well as in the normal day-to-day life (Nour, 2011; Saxena, 2011) project context. This effect is often referred to with the *empowerment* buzz word.



### 3.2 Means-oriented approach to participation

The means-oriented approach looks at the way in which the involvement of local stakeholders can be instrumental for the effectiveness, efficiency and sustainability of an intervention (Lyons et al., 2001). Currently, participation is the cornerstone of international best practice strategies for urban slum upgrading and all other interventions that deal with poverty reduction because it is deemed to add an enormous value to projects (Langford et al., 2005).

Table 1 gives an overview of achievements mentioned in the literature that are claimed to be attributed to the participatory approach. A distinction can be made between the objectives related to the project or program performance or efficiency arguments, and the benefits that relate to the broader context or the equity or empowerment arguments (Clever, 2001: 37).

First, increased *effectiveness* is probably the most cited benefit of community participation. According to the literature, participation enhances the targeting to the specific needs and preferences of the beneficiaries and gives access to local knowledge and know-how (Ibem, 2009; Imparato and Ruster, 2003). This will, in turn, lead to better joint decision-making and contextually tuned project designs (Khwaja, 2004; Nitti and Dahiya, 2004).

Second, people's participation is often considered to increase the *efficiency* of the project, because the participatory process allows all stakeholders to contribute with their comparative advantage at the most appropriate level of intervention (Nitti and Dahiya, 2004: 5). Moreover, Imparato and Ruster (2003) argue that essential information on the willingness to pay for the project deliverables can be obtained through a participatory process. Hence, a demand-responsive cost-recovery scheme – which may include financial and labour contributions – can be set up that promotes cost consciousness. Taken together, participation is expected to result in a cost reduction, resource mobilization and improved odds for cost recovery so that the project becomes financially more sustainable (Ibem, 2009; Nour, 2011).

Third, the participation literature also claims that the inclusion of local stakeholders will enhance the *feasibility* of the intervention (Imparato and Ruster, 2003). Community participation can be instrumental in ensuring the residents' acceptance, support and satisfaction with what is planned and implemented (Dungumaro and Madulu, 2003; Langford

et al., 2005). Moreover, potentially high levels of discontent and conflict can be better anticipated and reduced when the people are given the opportunity to be directly involved in decision-making (Dungumaro and Madulu, 2003; Ibem, 2009; Langford et al., 2005).

**Table 1** Claimed effects of community participation

Claims related to the project/program outcomes	Claims related to the broader context
<ul style="list-style-type: none"> <li>• Increased effectiveness</li> <li>• Increased efficiency</li> <li>• Increased sustainability of project deliverables</li> <li>• Improved project/program design (better targeting to needs)</li> <li>• Increased (sense of) ownership</li> <li>• Increased sense of responsibility</li> <li>• Increased cost recovery</li> <li>• Reduction of costs</li> <li>• Enhanced project feasibility</li> <li>• Enhanced resolution and reduction of (anticipated) conflicts</li> <li>• Enhanced joint decision making</li> <li>• Reduced resource constraints</li> </ul>	<ul style="list-style-type: none"> <li>• Local economic development</li> <li>• Increased sense of belonging</li> <li>• Better integration in the wider social fabric of the city</li> <li>• Contributes to good governance</li> <li>• Contributes to democratization</li> <li>• Contributes to decentralization</li> <li>• Contributes to poverty reduction</li> <li>• Transparency and accountability in management of public funds</li> <li>• Promotes equity</li> <li>• Promotes empowerment</li> <li>• Create new civic partnerships and cultures</li> </ul>

Source: own summary of the literature (CIDA, 2002; Cleaver, 2011; Delli Priscoli, 2004; Dungumaro and Madulu, 2003; Gulyani and Connors, 2002; Ibem, 2009; Imparato and Ruster, 2003; Khwaja, 2004; Langford et al., 2005; Lyons et al., 2011; Nitti and Dahiya, 2004; Nour, 2011; Schübeler, 1996)

Fourth, it is claimed that the participatory approach to development projects enhances the local *ownership* or at least the sense of ownership (CIDA, 2002; Imparato and Ruster, 2003; Nitti and Dahiya, 2004; Nour, 2011). This is expected to result in more extensive and efficient use of facilities, better maintenance and more reliable operation (Moser described in Nour, 2011). Further, the ownership in itself also strengthens the fallback position in the social bargaining that take place during decision-making processes (Khwaja, 2004).

Besides these project related claims, there are also a range of spin-off effects well beyond the life of the project (Nitti and Dahiya, 2004). The most cited spin-off effect is the

capacity building of the participant to manage their affairs and to interact more effectively with other stakeholders. The participants are expected to be ‘empowered’, i.e. have an enlarged scope to influence the actions that shape their lives and further common goals through an acquisition of knowledge and skills (Chambers, 1994a; Imparato and Ruster, 2003; Lyons et al., 2001; Schübeler, 1996). This empowerment can take place at the personal, project and community level (Lyons et al., 2001).

Moreover, some other claims have been made in the literature. Some authors have, for instance, argued that “participation teaches us the arts of Democracy” (Barber described in Delli Priscoli, 2004: 226) because it promotes transparency and accountability so that new governance structures ultimately transcend the old (Delli Priscoli, 2004; Imparato and Ruster, 2003). Further, stakeholder inclusion may also create better citizens with a greater sense of belonging and will to become integrated into the wider social fabric of the city (Delli Priscoli, 2004; Nitti and Dahiya, 2004). Additionally, participating in urban upgrading may have a positive income effect for the participants either directly (e.g. labour contract) or indirectly (e.g. by loosening the regulations that hampered the emergence of entrepreneurial activities) which may eventually lead to growth of home-based enterprises and informal businesses (Gulyani and Connors, 2002; Ibem, 2009).

This rather overwhelming list of expected benefits calls for some nuance. First, many of these claims, especially the claims that are not directly related to the project, are built on scant evidence or remain unproven (Cleaver, 2001; Das and Takahashi, 2009). Second, few researchers have taken into account the costs inherent to the adoption of a participatory approach even though they might not always be simply outweighed by the benefits (Isham et al., 1996). Third, there might be potential tradeoffs between the benefits that result from stakeholder inclusion (Mosse, 2011).

### **3.3 Participation in practice**

In practice, participation and the observed outcomes may differ from what is presented in the previous sections. Hence, attention should also be paid to the very things happening in order to avoid that the preoccupation with the ideological principles crowds out a pragmatic appraisal of the achievements (Mosse, 2011).

The first observation is that participation is multi-dimensional. Stakeholders can become involved at different stages and through different forms of representation. In general, participation is manifested in three ways. The conventional sense of participation is the incorporation of stakeholders in the decision making so that they can (co-)determine the design, planning and implementation of the development project (Gulyani and Connors, 2002; Schübeler, 1996). While this form of stakeholders inclusion can be used as a means to facilitate development projects as mentioned before, Khwaja (2004) argues that the community should not necessarily be involved in all decisions. According to that author, the best results will be obtained when community are genuinely involved in decisions that require local inputs or know-how (Khwaja, 2004). The second way in which residents of the informal settlements can participate is through contributions in cash or in kind, while the third form is through involvement in ongoing operations and maintenance (Gulyani and Connors, 2002; Schübeler, 1996).

Second, it has also become clear that involving communities with the purpose to establish a true partnership between communities, donors, local governments and other involved actors is quite difficult and has not always been as genuine as the normative definition prescribes (Gulyani and Connors, 2002). Consequently, the question whether the participatory approach is accompanied by a genuine redistribution of power or rather involves a hypocrite imposition of donors and policy makers who look for justification and legitimisation of their agendas, lies at the basis of fervent debate (Akerkar, 2001; Mosse, 2011; Nour, 2001; Williams, 2004).

Some academics have been criticizing the premise that participation is intrinsically and involves a transfer of power (Nour, 2011). They have claimed that participatory interventions do not always trigger the liberating and power redistributing mechanisms that are expected to occur. On the contrary, participatory development may perpetuate exclusion (Kothari et al., 2001 described in Nour, 2011). Even Chambers has acknowledged that “all too often participation proclaimed on the platform becomes appropriation and privilege when translated into the field” (Chambers, 2011: 168).

The ladder of citizen participation, proposed by Arnstein is one of the best-loved and most used tools to categorize the nature of the participatory process, i.e. non-participation, tokenism or citizen power, depending on the degree of redistribution of power (Arnstein,

2011; Cornwall, 2011; Pandolfelli et al., 2007). In an attempt to reconcile the attitudes and connect the discussion to what is really happening, Williams (2004) has concluded that the outcomes from participatory process are far from pre-determined and can range between subjection and transformation of the space for political action.

Third, the normative definition of participation may not correspond to observations on the ground because it does not acknowledge the room for manoeuvre of the participants. In reality, the structure of participation cannot be assumed to remain constant over the life of a development project (Lyons et al., 2001). The competing and altering interests of bottom-up and top-down groups and the lessons drawn from previous experiences may trigger shifts in the nature of the participation (White, 1996).

Finally, uncritical conceptualizations of the community as harmonious and non-hierarchical entities should be avoided because they obscure the local power differences that may constrain the community's capacity and impede the empowerment that it is intended to achieve (Roy, 2005; Williams, 2004). Moreover, the willingness and ability to participate depends on the resources, time and skills of the participants (Nour, 2011; Saxena, 2011) as well as on the surrounding institutions, the perceived bargaining power and the perceived probability of success (Cleaver, 2001; Pandolfelli et al., 2007; Schübeler, 1996).

## **4 Sustainability**

### **4.1 Conceptual framework**

Project evaluations are always trying to answer the question of success (Prokopy, 2005). One way to assess the rate of 'success' is through the concept of sustainability. The term sustainable development has been introduced in recent decades and provides a new perspective on the dilemma between the compatibility of economic development on the one hand, and the protection of environmental systems and quality of life for current and future generations on the other hand (WCED, 1987). Since the term has been defined in the Brundtland Commission of the United Nations in 1987, it has become a widely accepted paradigm in several disciplines (Sahely et al., 2005).

However, the operationalisation and the measurement of the concept has remained an obstacle in all disciplines (CIDA, 2002; Sahely et al., 2005). Sustainability of a development project will be defined here as the longevity of the benefits provided by a project (Ostrom et al., 2002). In connection with water supply and sanitation services, sustainability means the uninterrupted service over the foreseeable future – even after the exit of external assistance – through competent, adequate and financially sustainable operations and maintenance (Sahely et al., 2005; World Bank, 2003) so that a permanent improvement in the quality of life of the people involved can be generated (Imparato and Ruster, 2003).

Different measures and performance indicators can be useful to assess the sustainability of urban upgrading projects and infrastructure systems in particular. One way to classify the different performance criteria is by using the framework displayed in Figure 3. This framework is based on the literature on sustainability and makes a distinction between static and dynamic project sustainability.

Static sustainability has been described by the UNDP as “the continuous flow of the same benefits” (UNDP described in CIDA, 2002: 3). However, in line with the research conducted by Khwaja (2004), I opted to further disaggregate the concept of static sustainability into a physical and functional component.

First, the physical sustainability refers to uninterrupted operations and adequate maintenance of the facilities<sup>2</sup> (Word Bank, 2003). It compares the current physical state of the infrastructure with the condition of the infrastructure at the moment of the completion of the project or program (Khwaja, 2004). The main drawback of using the initial state of the infrastructure as the benchmark or target is, however, that the initial state might not have been adequate in the first place. In addition, comparing the current condition of the infrastructure with the condition at the start of the project might not be ambitious enough as it will not trigger incentives to upgrade infrastructure to a higher standard over time (McLaren and Simonovic, 1999 described in Sahely et al., 2005).

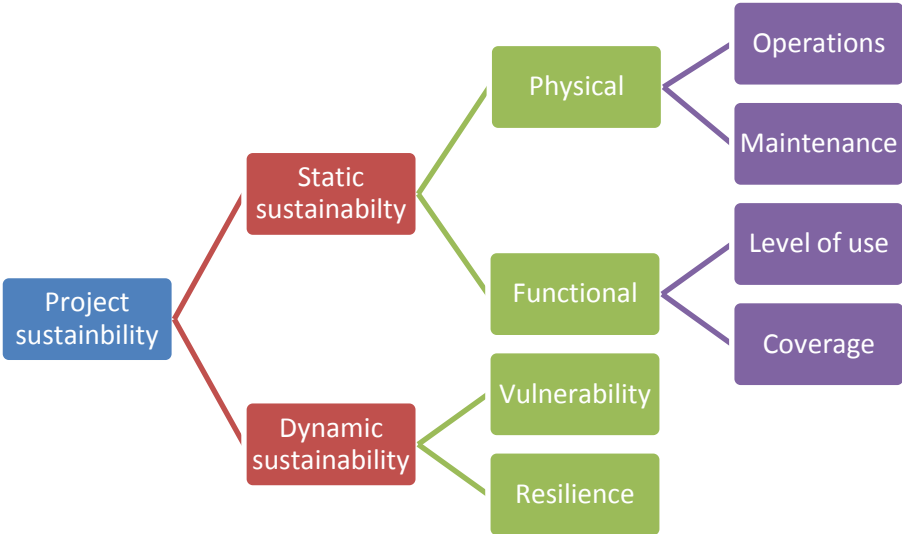
Second, the functional sustainability relates to the extent in which the services provided by the infrastructure are still fulfilling the purposes for which it was initially installed

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<sup>2</sup> This concept relates to the physical longevity of the infrastructure and is sometimes referred to as engineering sustainability (Sahely et al., 2005)

(Khwaja, 2004). On the one hand this includes an assessment of the level of use of the implemented infrastructure. On the other hand, the coverage, i.e. ‘the extent to which participation by the target population achieves the levels specified in the program design’ should be considered as part of the functional score of a project (Rossi et al., 2004: 183). In the case of water and sanitation services, the coverage will strongly depend on the accessibility of the infrastructure and thus on the (social) institutions and the affordability of the provided services.

**Figure 3** Schematic representation of performance sustainability measures



Source: Personal perspective on the literature on performance sustainability

Dynamic sustainability as alternative or complementing measure of project sustainability refers to the “use or adaptation of programme or project results to a different context or changing environment by the original target group and/or other groups” (UNDP described in CIDA, 2002:3). As with static sustainability, it is possible to further disaggregate the assessment of the dynamic sustainability into vulnerability and resilience measures.

Field and Kremer (2006) are among the few authors who advocate for a better assessment of the vulnerability<sup>3</sup> of urban projects to economic and political shocks. According to them, having a closer look at these shocks and their effect on participation, implementation and operation will provide important information about the likelihood that project benefits will be sustained in the future (Field and Kremer, 2006). However, literature on the impact of

<sup>3</sup> In the literature on sustainability of water and sanitation projects other terms have been used to refer to this category of sustainability measures, such as robustness and risk (Sahely et al., 2005).

natural disasters (e.g. Fomby et al., 2011) has taught us that besides the vulnerability to shocks, it is also important to look at the resilience to recover from those shocks. Both components of the dynamic sustainability assessment rarely form part of any evaluation of urban upgrading projects and programs.

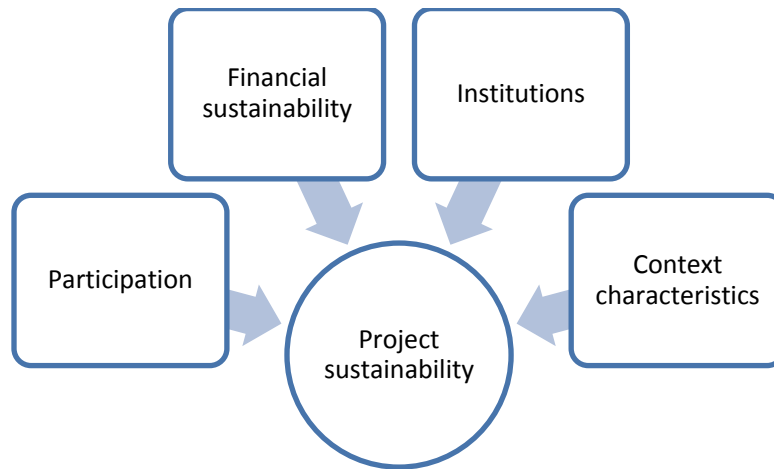
In the context of urban upgrading projects, which are often implemented with support from external actors (e.g. donors, NGOs) project evaluations often take place relatively soon after project completion. This complicates the collection of regular follow-up data to make rigorous assessments of any of the aforementioned sustainability indicators (CIDA, 2002; Field and Kremer, 2006). In the optimal scenario, evaluators would have been able to urge project managers to set up or integrate M&E systems to provide for information on both dynamic and static sustainability measures. However, in the absence of regular follow-up data, I consider ‘natural experiments’ such as institutional transformations a good alternative to investigate the sustainability potential of project outcomes. Nonetheless, in this dissertation the focus will be on the static sustainability of the KIEMP project, because the data collection took place just one year after the finalization of the KIEMP project. Therefore, it is difficult to distinguish the elements that can be attributed to the phasing out or exit of the donor from the elements that resulted from the institutional transformation from KCC to KCCA which took place relatively short before the project finalization.

#### 4.2 **Determinants of sustainability**

In this section, the underlying determinants of sustainability will be discussed. In other words, I will identify some fundamental determinants that can influence the longevity of development cooperation’s benefits (Ostrom et al., 2002), i.e. the project sustainability regardless of how it is measured. The determinants that will be tackled in the following subsections are schematically represented in Figure 4.



**Figure 4** Determinants of project sustainability



Source: Own interpretation and schematic representation of literature

#### 4.2.1 Participation

The claimed links between participation and improved project outcomes have already been discussed in general in the previous chapter (see section **Error! Reference source not found.**). Based on that literature review, it can be summarized that direct, meaningful and sustained community involvement and participation can – but not necessarily does – increase the efficiency, effectiveness, feasibility and the financial sustainability of the development project (see Figure 5). All of these are indispensable ingredients of a sustainable development set up (Langford et al., 2005). Moreover, community involvement is deemed to create (a sense of) ownership which lies at the heart of efforts made to promote the sustainability of the project deliverables (CIDA, 2002; Imparato and Ruster, 2003; Nitti and Dahiya, 2004; Nour, 2011).

Furthermore, according to the equity and empowerment arguments, participation in project may also foster community organization, energy and knowledge (Langford et al., 2005) which might be particularly important for the sustainability of the project when the project and the donors are phased out. Besides, the empowered participants can use the capacity built and their empowered status to contribute to the sustainability of the project (Lyons et al., 2001). Yet, the empowering effects of participation are not necessarily sustainable themselves (Lyons et al., 2001). As shown in previous sections, forms of participation can be considered dynamic and persons who were empowered in a certain type of participating role may no longer be so when the format of participation changes.

Consequently, the strength of the empowering mechanism depends on the depth, stability and formality of the participation (Lyons et al., 2001). High rates of residential mobility, for instance, may put at risk the sustainability of the project outcomes when so-called empowered participants leave the community (Imparato and Ruster, 2003).

**Figure 5** Claimed link between participation and sustainability



Source: Personal interpretation of the literature

4.2.2 Financial sustainability

In order to sustain project benefits the different incurred costs should be covered over time even after the donor has been phased out. The inability to pay for the costs is evidently one of the major reasons for the lack of maintenance and the substandard performance of development projects in the long run (Field and Kremer, 2006; Isunju et al., 2013; Werlin, 1999). In order to ensure this financial sustainability, (partial) cost recovery is considered a key condition.

The first cost category comprises the investment costs, namely the capital costs for land acquirement and infrastructure construction, and the costs for research and development. The second cost category includes the operation and maintenance costs necessary to ensure the efficient and reliable performance of the implemented infrastructure (Imparato and Ruster, 2003; Isunju et al., 2013; Sahely et al., 2005). Operation and maintenance costs for sanitation facilities comprise costs for pit emptying and cleaning, labour costs for the caretaker, water, toilet paper, soap and lighting costs (Isunju et al., 2013). Financial sustainability assessments are regularly based on the degree of cost recovery which is, for instance, measured as the percentage of households that paid the water tariff<sup>4</sup> (Prokopy, 2005).

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<sup>4</sup> Even though this measure demonstrates the attempt to be financially responsible, it does not tell whether the tariff payment is sufficient to cover all the costs (Prokopy, 2005).

The potential for cost recovery will strongly depend on context-specific factors such as (1) the complexity and the cost of the infrastructure (Varis and Somlyódy, 1997); (2) the size and certainty of the demand for the provided service (Isunju et al., 2013); (3) the efficiency of the implemented management, particularly the revenue collection and enforcement of financial agreements (Gulyani and Connors, 2002); (4) the income-levels, regularity of income and spending priorities of users (Isunju et al., 2013; Mugisha and Borisova, 2010); (4) social structures, social cohesion and community pressure (Isunju et al., 2013; Sohail et al., 2005); (5) transiency of the population (Mugisha and Borisova, 2010); (6) the social acceptability of the provided service (Mugisha and Borisova, 2010); (7) the political support (Gulyani and Connors, 2002; Varis and Somlyódy, 1997) and (7) the cost awareness and willingness to pay for the provided services (Gulyani and Connors, 2002; Varis and Somlyódy, 1997).

While this list of factors shows the potential source of failed cost recovery another question that is still causing agitated debate is whether the targeted population should (financially) contribute to the recovery of the incurred costs. On the one extreme, there are the proponents of the market-oriented approach who argue that all those who are served must also bear the full cost (Jaglin, 2002), because it generates some sense of ownership (Sahely et al., 2005). Users can make contributions in kind (e.g. participation in the construction) or make monetary contributions (e.g. direct payments for and operation and maintenance expenditures) (Schübeler, 1996; Sohail et al., 2005).

On the other extreme, there are the proponents of universal basic services that advocate for drinking water free of charge (Jaglin, 2002; Prokopy, 2005). In some cases, the perception within the community also remains that it is the government's responsibility to cover maintenance costs (Sohail et al., 2005). In addition, almost everywhere politicians are among the proponents of free services. Politicians may indeed truly believe that the poor cannot pay for the basic services. However, politicians are keener to promise cheap or free public services than to emphasize adequate cost recovery, which comes with political and administrative challenges that may endanger their re-election (Roy, 2002 described in Prokopy, 2005; Werlin, 1999).

While experience in service delivery does not directly support either of the extremes, some authors have been arguing that some community involvement in service provision and maintenance will indeed be necessary to balance the objective of universal service delivery

and financial sustainability (Jaglin, 2002; Kyessi 2005 described in Mugisha and Borisova, 2010). Some general conclusion with respect to this debate can be summarized here.

First, the willingness to pay for investment costs or O&M costs should be distinguished from the willingness to invest. Tenants will generally be less willing to invest than landowners. Yet, this does not necessarily mean that tenants are not willing to pay for the provided services (Scott et al., 2013). Second, there is a significant difference in what informal settlement dwellers are able and willing to pay (Prokopy, 2005; Scott et al., 2013). Third, with respect to water and sanitation, research has shown that communities tend to prioritize the upkeep of water supplies over sanitation. Consequently, the willingness to pay – regardless of the way measured – is deemed higher for water supply than for sanitation services (Sohail et al., 2005). Fourth, if the project is designed to recover costs from the low-income users it might imply the application of lower technical standards. Hence, financial contributions from the community may lock the urban poor into more inconvenient, poor quality services and may form just another barrier preventing safe water from reaching them (Jaglin, 2002; Prokopy, 2005). Fifth, research has demonstrated that the urban poor could save a considerable amount of money if they shift from buying water from private informal water vendors to piped water infrastructure (Varis and Somlyódy, 1997). However, this might not mean that people are willing, let alone be able, to pay for an end product that is not as concrete as the water bought from a water vendor (Sahely et al., 2005). Sixth, it is also possible that the investment costs are subsidized, so that households only have to meet the recurrent cost of O&M. Nonetheless, experience has shown that many subsidized latrines in slum areas are only operational for a short period because of poor operation and maintenance (Isunju et al., 2013). This is the issue that will be analyzed more in depth in the case of the KIEMP project.

#### 4.2.3 Land tenure and property markets

Land tenure institutions govern the use and allocation of land and natural resources (Place and Otsuka, 2000) and include three different components, namely legal tenure, tenure security and tenure status (Scott et al., 2013). Tenure security generally refers to the lack of fear of eviction and tenure status refers to the difference between landlords and tenants. Whereas tenure is mostly described dualistic, i.e. legal versus illegal or formal versus informal, the reality is that land relationships in informal settlements are often complex and contextually embedded (Gulyani and Connors, 2002; Scott et al., 2013).

Land tenure institutions and the property markets may affect the coverage of the target population, especially in the long term. Many slum upgrading projects have experienced the departure of the initial target beneficiaries as an ‘unintended’ consequence or as ‘creative destruction’ justified in the name of economic development and modernization (Durand-Lasserve, 2007: 4; Gulyani and Connors, 2002). However, this vocabulary has the flavour of a ‘casual shrug’ and condones the failure to think about the complex social systems through which development projects must be implemented (Roy, 2005: 156).

The departure of the original residents often implies a notion of compulsion<sup>5</sup> (Kool et al., 1989). However, many of the evictions are not recorded as such, because they did not require the use of force or because some compensation has been given to the displaced households. Rather they are referred to as ‘market-driven displacement’ or ‘market-driven evictions’ (Durand-Lasserve, 2007). These displacements result directly or indirectly from the insertion of benefits into a distorted market in which complex economic stakes have developed because of the commodification and commercialization of water, shelter and sanitation (Huchzermeyer, 2008). Thus, the reality is that tenure regularization, settlement upgrading and basic service provision without community organization or appropriate accompanying social and economic measures may lead to market-driven displacements with effects similar to the forced evictions that prevailed in the 1990s (Durand-Lasserve, 2007).

While the upgrading project has increased the habitability, physical accessibility of the housing and the access to services and infrastructure for the residents of the target area, the displacement means that market competition has undermined the affordability and tenure security (Huchzermeyer, 2008). From a human rights perspective, the displaced residents are degraded of their right on secure tenure and habitable, affordable, physical accessible, acceptably located and cultural adequate housing (Langford et al., 2005). This also means that home ownership in the improved area can no longer be considered a secure form of tenure (Huchzermeyer, 2008).

With respect to the drivers of the displacement tendencies, practically all authors consider the intense competition among economic stakeholders and the consequent rising costs of housing in the targeted areas as the main cause for the departure of the initial

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<sup>5</sup> A further analysis of the levels of perceived compulsion and the corresponding type of migration can be found in Kool et al. (1989).

residents (Durand-Lasserve, 2007; Huchzermeyer, 2008; Kool et al., 1989). It is estimated that the provision of necessary infrastructure can add at least 30-40% to the sales cost of a housing unit (Giddings, 2009). In addition, the outside pressure resulting from the rising attractiveness of these areas to relatively richer population segments further stimulates the replacement of the original residents, particularly the most vulnerable residents (Huchzermeyer, 2008; Kool et al., 1989; Roy, 2005). Eventually, the 'upward filtering' may result in the gradual gentrification of the inner city and suburban low-income settlements (Durand-Lasserve, 2007; Harpham and Stephens, 1992). This means that relatively high-income households settle in those areas that were predominantly inhabited by relatively low-income households (Kool et al., 1989).

The extent to which this phenomenon will take place in the aftermath of an area-based development intervention depends on several factors. First, the settlement characteristics, such as the location and the area status, will have an effect on the attractiveness of the area (Kool et al., 1989). Residents of expensive, centrally located land will, for instance, have to withstand strong pressures from investors and higher income groups in search for desirable, centrally located homes (Harpham and Stephens, 1992).

Second, the housing situation in the city influences the strength of the pushing and pulling forces. For instance, scarce housing alternatives may put the 'over-adequately' housed residents in a vulnerable position (Kool et al., 1989). Furthermore, a property market in which several types of property rights coexist is more prone to market-driven displacements, because the protection that results from the customary and modern laws will affect the room for manoeuvre of the low-income households' for housing and negotiations on fair compensations (Durand-Lasserve, 2007).

Third, the characteristics of the upgrading project, i.e. the applied technical standards, the degree of cost recovery and the scale will strongly influence the attractiveness as well as the ability of the original target group to pay the additional expenses (Kool et al., 1989; Langford et al., 2005). In addition, rapid project execution may create islands of attraction in a relatively short period of time. Hence, the poorer residents may benefit from poor and slow implementation as the outside pressure for displacement will spread over longer periods of time, mitigate or fade away altogether (Kool et al., 1989).

The practical and psychological dimensions of the insecurity of tenure that may result from context-specific tenure systems and property markets can affect both the physical and the functional sustainability of the project benefits (Imparato and Ruster, 2003). Regarding the functional sustainability, displacement may lead to the failure of the slum upgrading project to serve target group in the long run (Harpham and Stephens, 1992; Imparato and Ruster, 2003). Many project appraisals have shown that the ultimate beneficiaries of urban upgrading projects are indeed not always the ones initially targeted or the poorest of the poor (Gulyani and Connors, 2002; Harpham and Stephens, 1992; Roy, 2005).

To avoid this leakage in the coverage caused by the displacement, two interested parties have to be outmanoeuvred, namely the landlords at the bottom end of the market who are keen to take on tenants in their inadequate structures and the lower middle-class tenants who are buying out the original beneficiaries of slum upgrading projects (Huchzermeyer, 2008). Moreover, the original target population can be supported through the provision of credit facilities (e.g. microloans for housing) so that the mismatch between the systematic irregularity of employment and the regularity of monthly payments is mitigated (Durand-Lasserve, 2007; Roy, 2005). Another possible action is to set up community-based land trust so that groups and communities instead of individuals face the challenges resulting from the market forces (Roy, 2005).

Slum dwellers themselves can also adopt several strategies to resist displacement. The first strategy is to reduce the cost that is born by the household for renting the same plot. This can be achieved by doubling up in the existing dwelling space or expanding households. The second strategy is to earn more money by increasing participation in economic activities or constructing additional rental rooms or storeys and subdivide existing plots to sublet. The almost universal result from these strategies is the densification of the improved areas (Harpham and Stephens, 1992; Kool et al., 1989). Further, some households decide to give highest priority to other basic necessities, cash in the increased value of the houses and move to areas with poorer quality housing (Harpham and Stephens, 1992; Kool et al., 1989).

However, the tenure status of the resident also influences the strategies available to avoid displacement. Renters have less to gain and more to fear because urban upgrading inserts improvements in a neighbourhood for which they will have to pay either directly or indirectly through increased rents. Thus, tenants have less mitigation options or strategies

available and are therefore often the first victims of any tendency towards displacement (Kool et al., 1989).

With respect to the physical sustainability of the project benefits, the fear of displacement may influence the incentives of the initial slum residents to fulfil their responsibilities, especially if they include financial or labour contributions. A case study in Senegal demonstrated, for instance, that tenants and people with low tenure security are not willing to invest in sanitation and that a higher perceived risk of eviction is thus related to a lower likelihood of improved sanitation (Scott et al., 2013). In cases where tenants are a majority, careful consideration should be given to the often conflicting interests of landlords and tenants so that an appropriate incentive structure can be created for both groups (Imparato and Ruster, 2003). Further, the arrival of a ‘new reservoir of cases’ means that new potential users need to be sensitized about the project and their responsibilities to ensure the physical sustainability of the project benefits (Harpham and Stephens, 1992: 116). In addition, if the project management wants to survive personnel turnover tasks and responsibilities will have to be institutionalized into agreements to assure that maintenance and operation continues in spite of displacement tendencies (Field and Kremer, 2006).

#### 4.2.4 Other institutions

A good understanding of the features of the involved community is also critical to assess the potential of participation to bring about sustained change in that community. Local-political structures, deep-rooted social and economic divisions, prevailing levels of social capital, and social institutions such as gender can significantly shape the incentives and capacities of different actors to engage in participatory processes (Isham et al., 1996; Isham and Käkhönen, 2002; Lyons et al., 2001). Hence, these factors will co-determine who will get empowered and who will experience an increased sense of ownership (Pandolfelli et al., 2007; Sahely et al., 2005; Werlin, 1999).



## **5 Methodology**

### **5.1 Research method: case study**

The social science research conducted for this dissertation has taken the form of a case study. Different definitions have been used to define case studies. In this dissertation, I will adopt the definition of Thomas, namely:

*“Case studies are analyses of persons, events, decisions, periods, projects, policies, institutions or other systems that are studied holistically by one or more methods. The case that is the subject of the inquiry will be an instance of a class of phenomena that provides an analytical frame – an object – within which the study is conducted and which the case illuminates and explicates”* (Thomas, 2011: 513)

As stated in the definition, a case study involves a subject and an object of inquiry. The practical, historical unity or subject of this case study is the physical and functional sustainability of the water and sanitation facilities of the KIEMP project (2006-2012) in Kampala, Uganda. As has become clear from the literature review the case subject relates to sustainability literature, literature on participatory development and urban development. However, these theories are all directly related to the overarching issue of ‘development effectiveness’. The case subject under consideration is a particular case within this larger category, as it will assess long-term development effectiveness in a largely donor-funded urban upgrading project. The analytical, theoretical framework or object of this study is a political economy analysis on which I will elaborate later in this chapter.

Case studies are preferable when ‘how’ or ‘why’ questions need to be answered, because they profoundly address complex causal relations (Bennett, 2004; Yin, 2009). In addition, the method is preferred when the researchers have little control over the events and when they study a contemporary phenomenon within a real-life context (Yin, 2009). The real-life event in this study is the sustainable operation and maintenance of the KIEMP project outcomes. Its complexity, the multitude of different types of stakeholders and its qualitative nature justify the choice for a case study method, as it will provide holistic and meaningful characteristics of the real-life event.

## 5.2 Case study subject

The dependent variable of this study is the physical and functional sustainability of the water and sanitation facilities in those parishes. In particular, the water and sanitation facilities under consideration refer to the prepaid water meters and to the pit latrines only, even though the sanitation component of the KIEMP project also comprised the construction of stone pitched drains and solid waste management. The focus is on the safe management of excreta only (WSP, 2011). More specific, the emphasis is on an on-site sanitation system, i.e. “a system in which the disposal of excreta takes place on or near the housing plot in the absence of networked sewerage” (Scott et al., 2013: 58). The pit latrines were selected, because community participation, community management in particular, is deemed most visible in this component.

The independent variables can be categorized into project characteristics (e.g. quantity and quality of the infrastructure, extent of community participation...), parish characteristics (e.g. socio-cultural composition, location relative to the commercial centre...) and contextual factors (e.g. national land policies). The case has been selected based on project documents and literature on the specific context. Based on the dependent variable, the rationale for this case is the revelatory case (Yin, 2009), because literature on sustainability of urban upgrading projects in Sub-Saharan Africa are relatively scarce.

However, the ‘value’ of the dependent variable was relatively unknown before the start of the field study. Therefore, the case has also been selected because of its independent variables. Depending on which particularity is considered, the rationale for the case study is different. First, the KIEMP project included both software and hardware components and was claimed to be conducted in a participatory manner as it was, for instance, ‘demonstrated’ through the active involvement of CBOs. Based on the theory available on participatory development this would positively affect the sustainability of the project outcomes so that the case can thus be classified as a crucial, most-likely case (Odell, 2001). Second, the institutional transformation replacing the Kampala City Council (KCC) with Kampala Capital City Authority (KCCA) caused instability and disruption of the working relations. This shift together with the phasing out of the involved donor and the handover of its responsibilities to the local institution poses a threat to the long term operations and maintenance of the

facilities. With respect to this institutional variable, the rationale for this case is also a crucial, but least-likely case (Odell, 2001).

Additionally, due to the specific nature of each of the parishes and the variations of the projects components implemented in each of them, this case study can be defined as an embedded, single-case study rather than as a holistic, single-case study (Yin, 2009). In sum, this is an embedded, revelatory, crucial, single-case study that aims to confirm or infirm theories on the enabling and constraining factors for sustainable urban infrastructure upgrading (Odell, 2001; Yin, 2009).

### **5.3 Case study object: Political economy analysis**

In this section I briefly introduce the political economy approach which I will adopt in this dissertation. The choice to apply this approach is based on the claim – made by UNDP among others – that water and sanitation challenges are rooted in power, poverty and inequality (UNDP, 2006). While technical and financial support are indisputably important for efficient and sustainable service delivery, the water and sanitation deficits are rooted in institutions and political choices, not in the physical availability (Harris et al., 2011; UNDP, 2006).

Even though the term political economy is in itself an evolving concept subject to multiple understandings and definitions, the political economy of water and sanitation could currently be described as an analysis of the social, political and economic processes and actors that determine the extent and nature of the investments and service provision (WSP, 2011). This approach allows the researcher to determine what development outcomes occur, but also why these outcomes occur and what might be done to further improve them. Moreover, the analysis has proven particularly useful while tackling problems of persistent sub-optimal outcomes as it also pays attention to the systematic constraints which may hinder successful operations (Harris et al., 2011). The purpose of adopting a political economy approach is to consider whether the challenges related to sustainable water and sanitation projects have a governance and political economy dimension that need to be addressed, rather than identifying governance as the main overall bottleneck (Fritz et al., 2009).

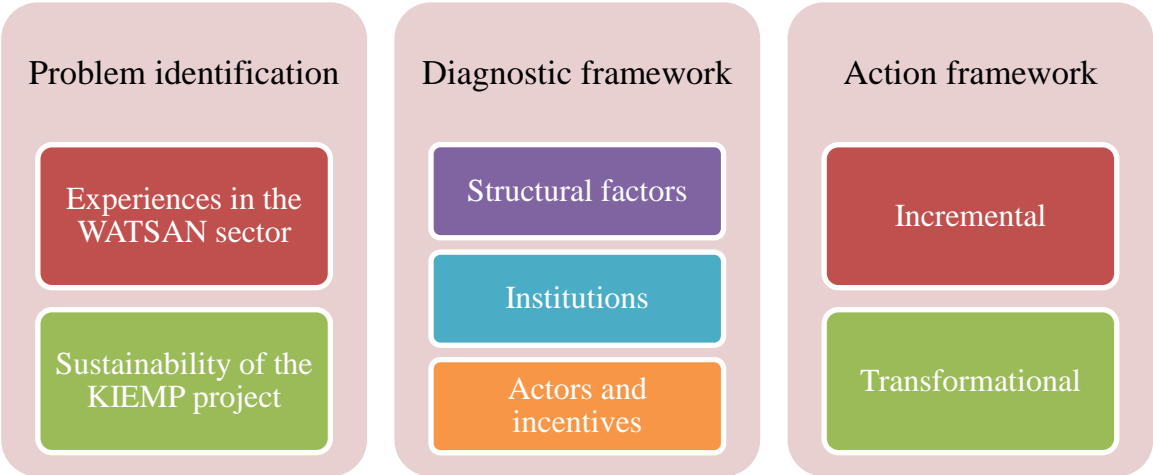
Many researchers have approached the water and sanitation deficit through a sector government assessment. This approach is, however, normative, i.e. comparing the observations against idealized criteria/characteristics, while the political economy attempts to be diagnostic, i.e. starting from political and economic realities within the specific sector under consideration (Harris et al., 2011). It is important to understand the difference between the two approaches because it is based on the understanding that ‘first-best solutions’ might be technically superior, but that their advantage can be lost or reversed due to particular conditions in which they are implemented (Fritz et al., 2009). The political economy analyses in the WATSAN sector are still in their infancy and very few analyses have incorporated both water and sanitation components (Harris et al., 2011). In addition, the focus has mainly been on the ‘pure investment’ decisions, ignoring the decisions to provide continued support for the maintenance and operation of previously implemented infrastructure. Given the fact that allocating resources involves a trade off between investing in new infrastructure and providing support for previously implemented infrastructure, I deem it relevant to analyse the sustainability of water and sanitation projects through this political economy framework.

As described by Harris et al. (2011) there is a wide range of frameworks available that informs operational practice by donor agencies. There are three levels of analysis, i.e. country-level, sector-level and issue-specific analysis. Regardless of the level of analysis the four crucial elements that are analysed within these frameworks are the structural factors, institutions, actors and their incentives (Fritz et al., 2009; Harris et al., 2011; WSP, 2011). Even though the processes that arise from political and economic processes at the broader levels will definitely have relevant action implications for a specific issue under consideration, our focus will be on the issue-specific analysis, namely sustainable provision of water and sanitation facilities in urban settings.

Within the available issue-specific frameworks, Harris et al. (2011) argue that the “Problem-driven governance and political economy analysis” established by Fritz, Kaiser and Levy (2009) is the most adequate to shed light on a single issue or a set of issues within the WATSAN sector. This framework uses the outcomes or the identified problems, opportunities and vulnerabilities as the entry point rather than the broad context. Approaching a certain issue through this entry point is supposed to make it easier to move beyond the mere identification of constraints and also identify relevant action implications and ways to use the room of manoeuvre to fuel forward change (Fritz et al., 2009; Harris et al., 2011). Harris et al.

(2011) have concluded on the basis of different papers that there is a spectrum of options for translating the findings of the political economy analysis into action ranging from incremental actions to transformational actions which seek to expand the reform space and thus tackle the root causes of the constraints to successful operation.

**Figure 6** Political Economy Analysis KIEMP project



Source: Framework based on Fritz et al. (2009) and Harris et al. (2011)

**5.4 Case study quality**

In spite of the appropriateness of the case study method for the selected case, the method’s limitations and potential validity threats should be taken into consideration during the entire research process. In the academic literature, the validity concept is adopted to refer to the approximate truth of an inference (Shadish et al., 1995). For qualitative research there is considerably less straightforward literature available on how to tackle validity threats. Nonetheless, in the remainder of this section I briefly describe some actions that I have undertaken to ensure a good quality case study.

First, case selection bias have been mentioned regularly as potential limitations of case studies (Bennett, 2004). While the selection of the case subject might have been influenced by both idiosyncratic (e.g. the availability of contact persons) and methodological reasons, the object of the case study has been purely selected based on methodological considerations. The methodological grounds for case selection have been explored in the previous sections of this chapter.

Second, bias towards confirmation is also often cited as a concern with respect to the case study method (Bennett, 2004). As a university student without professional links or previous experience in the development sector and as an external observer of a finalized project, there is, however, no reason to strive towards confirmation of hypotheses. Thus, there is no reason to assume systematic confirmation bias in this dissertation.

Third, in the context of qualitative research it is difficult to convince the reader that the presented analysis is based on a sufficiently operational set of measures rather than on subjective judgements (Yin, 2009). This refers to the threats to construct validity, i.e. the understanding of constructs (measures) and their assessment (Shadish et al., 1995). The most cited manner to deal with threats to construct validity is to use multiple sources of evidence (Yin, 2009). As aforementioned, this dissertation is based on academic literature, 'grey literature', project documents, in-depth interviews, a focus group discussion, and field observations and monitoring. The triangulation of different data collection methods is deemed to contribute considerably to the quality of this dissertation.

Yin (2009) also advocates the establishment of a chain of evidence to increase the construct validity. In order to fulfil this suggestion, a list of the informants is included in the Appendix. Further, a case-study database which includes interview guides, transcripts of audio-recorded key informant interviews and monitoring sheets is available upon request. In addition, a former member of the KIEMP project team, namely Ineke Adriaens, has reviewed a draft of this dissertation in order to control for subjective perceptions.

Moreover, within the method of in-depth interviewing, I aimed to triangulate data by including all relevant stakeholders regardless of their interest and position within the KIEMP project. Nonetheless, this aim entailed that communication challenges<sup>6</sup> arose between the researcher and the 'most local' stakeholders, namely the residents of informal settlements. Limited financial resources and time constraints made me turn to rather experimental ways to attempt to limit the bias that stemmed from the translation from non-professional interpreters. First, I did not call upon the same 'interpreter' for all my field visits. Second, I underscored the importance of literal translations. However, all interpreters regularly needed a reminder of this aspect. Third, I used different persons with different profiles as interpreter, ranging from

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<sup>6</sup> As Kampala is located in the Buganda Kingdom, many of the slum residents speak Luganda. Only a small proportion of the slum population is capable of participating in an in-depth conversation in English.

local caretakers or community leaders to staff from KCCA division offices. In the latter case, I emphasized in a conversation prior to the field visit that they were not supposed to make themselves known as KCCA staff. Instead, they were supposed to introduce themselves as interpreter and limit their questions to the questions that were provided in advance by the researcher or to questions that arose by the researcher at the time of the conversation. It is hoped that systematic bias resulting from non-professional translation could be anticipated through this precautionary actions.

Fourth, internal validity refers to the claim that a certain observed covariation between A and B is also a causal relationship (Shadish et al., 1995). Especially in explanatory research, it is important to make valid conclusions on how and why a certain event ‘A’ led to event ‘B’ (Yin, 2009). I attempted to start the field study with a considerable theoretical background, but without blueprint interview guides. This approach has limited the probability that I have omitted explanatory variables from the analysis. In addition, the wide range of informants allowed me to approach the case from different perspectives which further contributed to a good understanding of causal relations. Finally, I have visited each parish at least once in the morning and once in the afternoon, in order to respond to the dynamic nature of the settlements. Unfortunately, it was not possible to visit the parishes after sunset as the safety of the researcher could not be guaranteed by the community. Hence, I am aware that the short term of the field visit and my nature as external observer has led to a certain level of indeterminacy and inability to exclude all but one explanation (Bennett, 2004).

However, I argue that this does not void valuable reflections and their potential to function as hypotheses in other real-life settings as it is my intention to contribute to theoretical propositions rather than simply generalize findings to populations and settings. This in fact answers the way I took into consideration external validity, i.e. the extent to which an observed causal relationship can be generalized to other cases (Shadish et al., 1995). The consultation of various theories before and after the field observations, allowed me to increase the external validity through the positioning of the topic within a sound theoretical framework. However, it is necessary to mention that the case subject of this research comprises three separate parishes with different characteristics. While some explanations hold for one or two of the parishes, it might not hold for the third parish. Therefore, each parish has been visited various times and the field visits to a particular parish were not conducted in a

strict sequential way. This allowed me to go back to check if an explanation that arose in one parish was also valid for the other parishes.

## **6 Kampala Integrated Environmental Planning and Management Project**

### **6.1 Project objectives and design**

The Kampala Integrated Environmental Planning and Management Project, hereafter referred to as the KIEMP project, was a bilateral multi-sector aid project funded by the Government of Belgium (€5.5 million), the Government of Uganda (€1.1 million) and Kampala City Council (€0.5 million)<sup>7</sup>. The project started on 1<sup>st</sup> August 2006 and was finalized 31<sup>st</sup> July 2012 which was one year after the scheduled date due to a no-cost extension (BTC Uganda and KCCA, 2013). The project had a co-management structure between the Belgian Technical Cooperation (BTC) and the Kampala City Council (KCC) which was replaced in 2011 by the Kampala Capital City Authority (KCCA). This co-management design is in line with the local ownership commitment expressed in the Paris Declaration in 2005 which advocates the co-ordination of the development actions by the partner countries themselves (OECD DAC, 2005).

The general objective of the project was “to improve the quality of life of poor communities in the suburbs of Kampala” through the achievements of three major results, namely (1) strengthened institutional capacities of KCC in terms of environmental planning and management; (2) behavioural change of slum communities on the use and maintenance of the local infrastructures; and (3) improved environmental and housing conditions in the selected slum areas (BTC Uganda and KCCA, 2013; Coupe et al., 2013).

As shown in Figure 7 the Kampala district is divided into five areas, namely Kawempe, Rubaga, Nakawa, Central and Makindye (Kulabako et al., 2010). At the time of the project design these areas were referred to as divisions, but since the shift from KCC to KCCA these areas are referred to as municipal councils which can be further divided into parishes that, in turn, comprise different villages or zones (Tumwebaze et al., 2014). The KIEMP project area

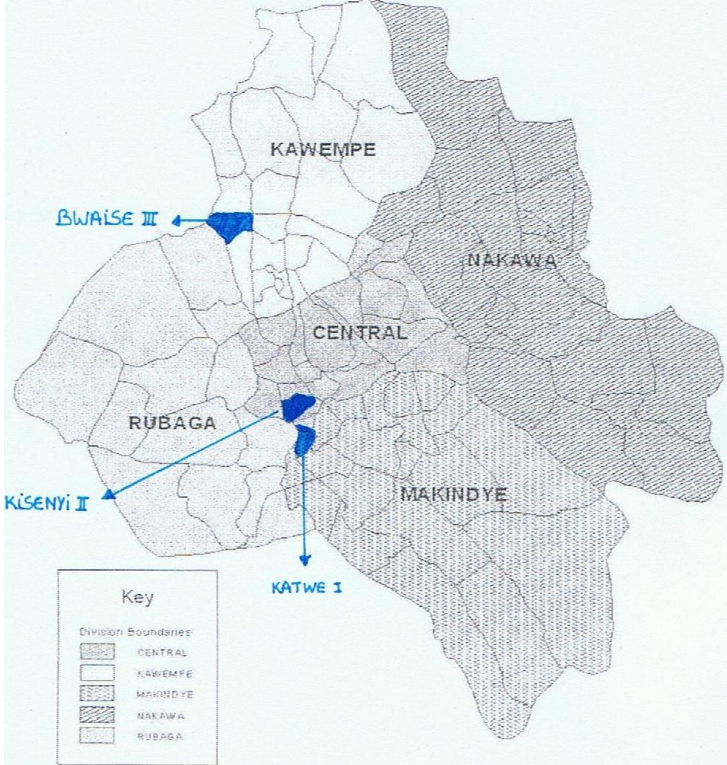
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<sup>77</sup> The construction of the public toilets and pre-paid water meters accounted for 723.614.824 UGX (209.487 EUR) and 269.829.095 UGX (78.155 EUR), respectively based on conversion rates of 26/08/2013 (De Tijd, 2013).



consisted of three parishes which were classified as informal settlements, namely Katwe I (Makindye division), Kisenyi II (Central division), and Bwaise III (Kawempe division).

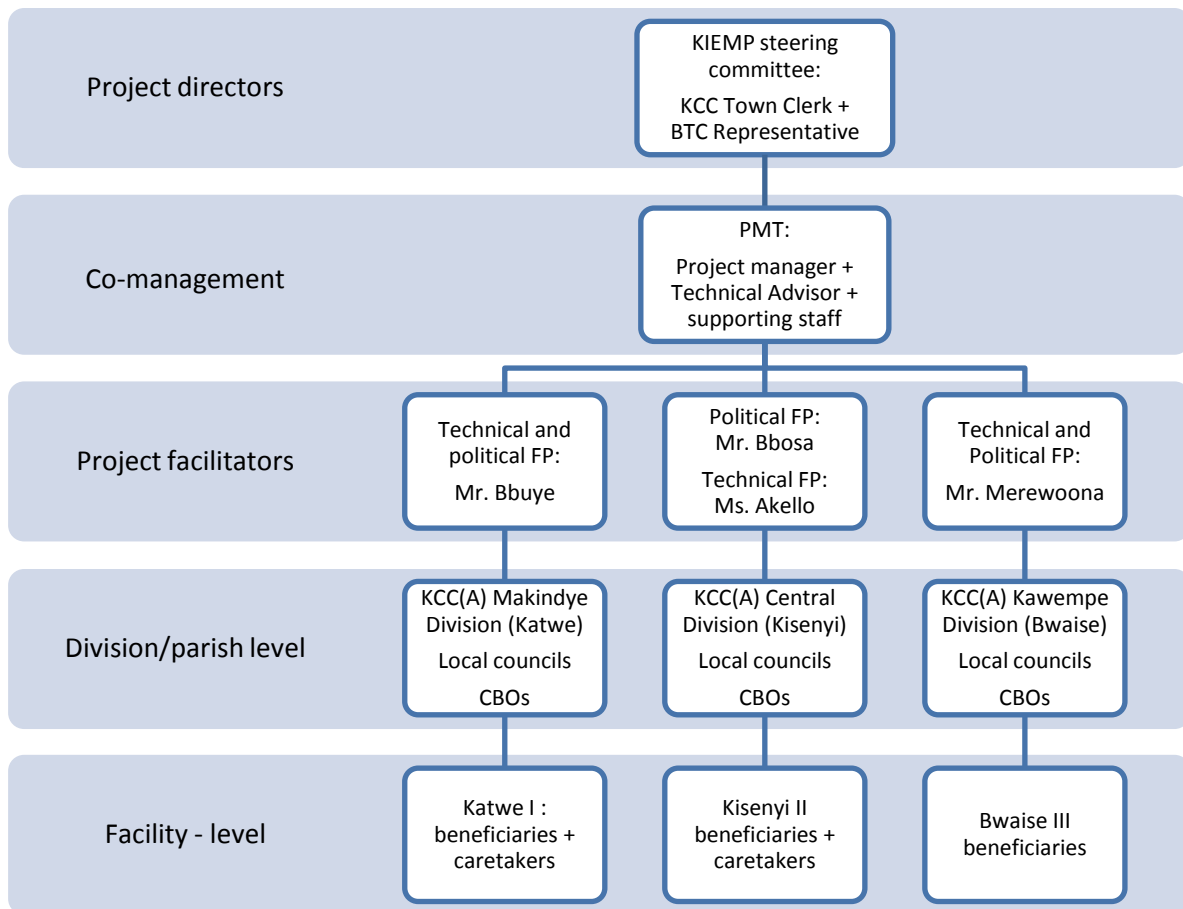
**Figure 7** Location project parishes within Kampala district



Source: Modified version from the OVC Service Provider Mapping Report (KCC, 2008: 2)

In KIEMP management structure is displayed in Figure 8. The project was co-managed by a project manager (appointed by KCC) a technical advisor (appointed by BTC). The main role of the technical and political focal persons was to link the community and the CBOs with the division levels. Only Kisenyi II had two focal persons, while in the other two parishes it was deemed that strong individuals were able to combine to technical and political role.

**Figure 8** Organization chart KIEMP project



Source: MoLG and BTC (s.d.) and personal communication I.A. (14/07/2013)

The general strategy adopted to achieve these results consisted of a bottom-up approach to assure community participation, implementation through the KCC/KCCA Divisions and the adoption of ‘bare-minimum’ standards for housing and infrastructure (MoLG and BTC, s.d.). Further, the project integrated different infrastructural components, including access roads, tertiary and secondary drainage channels, pit latrines and water supply standpipes. The construction of dwelling units and greening (planting trees and greening of public spaces) were initially among these components, but were significantly scaled down after the mid-term review (Coupe et al., 2013).

In the three target parishes, a different mix of infrastructure components were implemented as can be seen in Table 2. These hardware components have been complemented with two software components, namely social mobilisation and behavioural change (Adriaens, 2011; Coupe et al., 2013).

**Table 2** Infrastructure components in the three parishes

	Katwe I	Kisenyi II	Bwaise III	TOTAL
Drains	Yes	Yes	Yes	-
Roads	Yes (0,825 km)	Yes (1,1 km)	No	-
Water supply standpipes	Yes (14 pipes)	No	Yes (18 pipes)	32
Pit latrines	Yes (9 toilets)	Yes (12 toilets)	Yes (14 toilets)	35

Source: Compiled from different KIEMP project documents

## 6.2 Pit latrines

In total, 35 public ventilated improved pit latrines (VIP) have been constructed in the year 2008. A watertight pit should prevent seepage which is particularly crucial in areas with a high water table. Given the swampy areas, especially Bwaise III, the pits have been reinforced with steel bars and lined with concrete to ensure structural stability and to withstand the collapsible clay soils (Adriaens, 2011). The standard facility consisted of four toilet stances, two bathrooms, one urinal and a water tap. However, in some cases the design was modified within the limits of the provided land. Small shops for the sale of non-food items were, for instance, attached to three of the toilet facilities.

Each toilet is supposed to be managed by a caretaker who is approved by the community and who is allowed to collect user fees that cover the expenses that result from the operation and maintenance of the toilet. The caretakers are accountable to various committees: the user committees including residents that use the specific facility, the zonal KIEMP steering committee at urban village, and the parish development committees (parish level). The project made these local institutions responsible for the monitoring of the work of the caretaker (Adriaens, 2011).

## 6.3 Water supply standpipes

In Kisenyi II, a pilot project (different from KIEMP) with pre-paid water meters had already been set up in cooperation with the National Water and Sewerage Cooperation (NWSC). That was the reason why the KIEMP project decided to construct 18 pre-paid in

Bwaise III, 14 pre-paid standpipes in Katwe I and no additional standpipes in Kisenyi II (BTC Uganda and KCCA, 2013).

The pre-paid technology is the key instrument in the pro-poor strategy of the National Water and Sewerage Cooperation (NWSC) towards improved water and sanitation services of informal settlements in Kampala. The NWSC is a parastatal established in 1972 and fully owned by the Uganda government and its main functions are the provision of water and sanitation services and the development of water and sewage systems in urban centres (Mugisha and Borisova, 2010; NWSC, 2008). Their pro-poor policy is based on price differentiation according to the ability to pay for the water service. Entities that use water for commercial purposes pay a higher price than the slum dwellers that enjoy the benefits of a pro-poor tariff and social connection policy (BTC Uganda and KCCA, 2013). Further, the pro-poor policy is based on the observation that socio-economies in informal settlements are hand-to-mouth. This implies that the slum dwellers are often unable to save for their utility bills on a monthly basis. The pre-paid water responds to this challenge by permitting consumers to pay as or before they consume (NWSC and AquaConsult, 2003a).

Technically spoken, the pre-paid water meter use SmartSystems, i.e. a particular computer interface, that is operated through tokens that users can purchase from vendors and that have to be inserted in the machine to activate the water dispenser (NWSC and AquaConsult, 2003a). Thus, the pre-paid water meters are in theory accessible 24 hours by all the community members who possess a token, because the system is self-managed, i.e. no water vendor needs to be present to fetch water (Coupe et al., 2012). It is deemed that the investment cost associated with the implementation of prepaid public water points is higher than would be the case with conventional meter. Yet, the prepaid system has the potential to result in improved cost recovery (Mugisha and Borisova, 2010).

#### 6.4 **Software components**

The software components of the KIEMP project included social mobilisation, i.e. capacity development and awareness raising of local stakeholders to enhance understanding and ownership (Baltissen, 2012) and behavioural change communication, i.e. changing perceptions, attitudes and practices regarding the use, maintenance and management of the provided infrastructure (Adriaens, 2011). An Information Education and Communication

strategy was designed that included activities related to several KIEMP components, i.e. water, public toilets, drains, solid waste management, urban agriculture and greening (MoLG and BTC, s.d.).

Initially, the CBOs were only engaged to conduct activities related to the social mobilisation of the community, while a consultancy was expected to implement activities related to behavioural change. However, when the consultancy failed to deliver some key elements of the assignment, the contract was terminated (BTC Uganda and KCCA, 2013). At that moment, the KIEMP project team had already acknowledged the potential of the CBOs to trigger social mobilization so that they decided to take on board the CBOs for the behavioural change component as well. In total, twelve CBOs signed a Memorandum of Understanding (MoU) and their capacity was strengthened through collaboration with a local NGO called CIDI (Adriaens, 2011). Besides providing support to social mobilization activities, CIDI was also contracted to undertake advocacy for the project and legal advice, especially for land related issues. Moreover, CIDI developed specific Terms of References (ToRs) defining the roles of the different committees, especially the KIEMP division steering committee (Baltissen, 2012; CIDI, 2011). Furthermore, local community leaders, focal persons and residents from the three informal settlements went on study trips to other slum areas such as those in Nairobi, Kenya. The study trips have been welcomed as an effective way to create awareness, capacity, understanding and behavioural change, mainly because of the unique selection of participants, i.e. local level stakeholders as opposed to high-level politicians and civil servants (BTC Uganda and KCCA, 2013).

With respect to the prepaid water meters, the NWSC also had their own IEC strategy as part of their larger pro-poor policy. The IEC strategy of the NWSC used similar instruments as the CBOs, namely posters, flyers, meetings, door to door mobilisation, and the participation in radio and television talk shows (interview J.O., 16/07/2013).

## **7 Political Economy Analysis**

### **7.1 Water and sanitation challenges in developing cities**

The challenges that characterize the water and sanitation sector are the increase of the demand for the provided services, the set up of institutional structures and arrangements for the scaling up and replication of projects in order to ensure universal access and the incorporation of the sustainability objective (Katukiza et al., 2010). It is the latter challenge that forms the center of this analysis. In general, the success rate of water and sanitation projects has been low (Gulyani and Connors, 2002; McConville, 2006). Cases of good practice are still considered islands in “a sea of neglect of urban services” (Sohail et al., 2005: 47). The Operations Evaluation Department of the World Bank has, for instance, acknowledged that less than half<sup>8</sup> of their water and sanitation projects conducted between 1970 and 2001 were likely to be sustainable because of problems of maintenance. While worldwide the sustainability ratings have been improving in the 1990s, the water and sanitation sector continues to rank low among all sectors with respect to its sustainability (World Bank, 2003). The reasons why urban communities watch water and sanitation interventions, implemented on their behalf, fail are diverse.

First, the political will to emphasize adequate cost recovery, to set up appropriate O&M systems or to search for long-term solutions are often lacking (McConville, 2006; Varis and Somlyódy, 1997). Foreign donors have not sufficiently taken this into account and have poured money in the sector without much thought for the political and social institutions that were in place to ensure long term support of the project (McConville, 2006).

Second, due to the adoption of supply-driven interventions the potential contribution of local stakeholders has not yet been recognized, or at least it has not been realized (Breslin, 2003; Schübeler, 1996; World Bank, 2003). Promoting a maintenance culture in communities that have never been fully involved in the project and where decisions have been imposed on the community by outside players has proven very difficult (Breslin, 2003; Gulyani and Connors, 2002). Moreover, projects fall into disrepair as no (sense of) local ownership has been created and no capacity to sustain the system has been built (Breslin, 2003).

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<sup>8</sup> For Uganda in particular, 67% of the projects were considered ‘likely sustainable’, while the other 33% percent was categorized as ‘unlikely sustainable’ (World Bank, 2003).

Third, water and sanitation intervention often fail because insufficient attention had been paid to selecting the appropriate technology (Howe and Dixon 1993 described in McConville, 2006). A multitude of stakeholders with conflicting interests (e.g. financial versus technical) are involved in the selection of the technological features. Hence, sustainability largely depends on the ability to balance the objectives and to make the inevitable tradeoffs in an optimal way so that extremely high and unaffordable O&M costs are avoided (Breslin, 2003; Lüthi et al., 2010; Sahely et al., 2005). The selection of adequate technological standards is further hindered because policy-makers tend to focus on network sewerage and centralised systems while low-cost on-site sanitation is still the reality and primary concern for the vast majority of the urban poor (Lüthi et al., 2010).

Fourth, financial performance of the water and sanitation services is often poor due to insufficient cost recovery or inadequate pricing of the provided service (Varis and Somlyódy, 1997). Inefficient organization of the service delivery, lack of enforceable arrangements for cost recovery and non-optimal use of available resources, both natural and human, also account for the limited achievements and lacking commitment to maintenance in the sector (Gulyani and Connors, 2002; Nour, 2011; Sahely et al., 2005; Varis and Somlyódy, 1997; Werlin, 1999).

Finally, the challenges of providing water and sanitation services are exacerbated in rapidly growing and congested developing cities (Lüthi et al., 2010). First, the congested and precarious locations of the urban informal settlements raise the construction and maintenance costs. Due to the integrated nature of the water and sanitation systems, the set of technically feasible alternatives is more limited and complex (Imparato and Ruster, 2003; Lüthi et al., 2010; Varis and Somlyódy, 1997). Second, urban settlements often host a more heterogeneous population which requires good understanding of potential cultural and political obstacles (Lüthi et al., 2010; McConville, 2006). Furthermore, a larger range of different stakeholders are involved so that responsibilities of urban stakeholders might be less straightforward than in rural settings (Lüthi et al., 2010). Third, scarcity of land, a commoditized urban land market and the lack of secure tenure make it more difficult to achieve sustainable infrastructure solutions (Lüthi et al., 2010). In the urban congested setting, the need for public use areas may entail removal of existing structures and resettlement of local residents (Imparato and Ruster, 2003). Fourth, urban administrations

often lack the capacity to plan, provide and sustain the service provision in marginalized areas (Breslin, 2003; Lüthi et al., 2010).

In sum, the lack of active cooperation between government agencies, urban service users and private sector actors has made that urban infrastructure management structures are not able to deal with the economic, environmental, engineering, political, social and institutional challenges that characterize the sector (Lyons et al., 2001; McConville, 2006; Sahely et al., 2005; Schübeler, 1996; Varis and Somlyódy, 1997). Therefore, sustainability considerations have to be carefully planned into every stage of the project and particularly in the donor exit strategies (CIDA, 2002).

## **7.2 Water and sanitation situation in Kampala**

Around 90% of the residents in the informal settlements of Kampala use pit latrines because of their low cost, the unavailability of sewer lines, the low water requirements and the absence of other affordable excreta disposal options (Katukiza et al., 2010; Kulabako et al., 2010). In informal settlements like Bwaise III, the majority of these pit latrines are of the unimproved type, belong to the landlord and are shared with other households (Adriaens, 2011; Isunju et al., 2013). The pit latrines also need to be elevated as a consequence of the high water table, especially in flood prone areas like Bwaise III (Katukiza et al., 2010). Despite the implementation of ventilated improved pit latrines in Bwaise III, this category only accounted for 14% of the sanitation options in Bwaise III (Isunju et al., 2013). Moreover, open defecation by using polyethylene bags is a common practice in most of these settlements. It is referred to as flying toilets because the excreta regularly ends up on roofs, drainage channels and solid waste dumps (Katukiza et al., 2010; Kulabako et al., 2010).

Moreover, due to the poor road access and relatively high emptying costs, the toilet facilities can be typically found in filthy and unusable conditions (Kiyimba 2006 described in Kulabako et al., 2010). A lack of ownership and population dynamics provide potential explanations for the lack of willingness by the tenants to contribute to the maintenance of the shared latrines (Katukiza et al., 2010).

Regarding water supply, Kampala has infrastructure, but the access to piped water in informal settlements is still limited (Katukiza et al., 2010). Only 35% of the dwellers in



informal settlements had access to water services in 2001 and the estimated daily per capita water consumption (around 16-18 liters) remains below national policy recommendations and below the quantity recommended by the WHO (Katukiza et al., 2010; Kulabako et al., 2010). Access to safe drinking water is limited due to unreliable supply, high costs charged by caretakers and vendors, long distances and the unplanned nature of the settlements (Katukiza et al., 2010). The residents in informal settlements mostly rely on public water kiosks and public water points. However, springs and local wells are still the second predominantly used water source (Katukiza et al., 2010; Kulabako et al., 2010; Mugisha and Borisova, 2010) due to easy access, the absence of tap water, the unreliability, cost and distance to other water alternatives, and the misconceptions on the quality of the water (Kulabako et al., 2010). In addition, it is also common practice of households to use their private connection to serve the community (Kulabako et al., 2010).

Given the fact that the NWSC is the only organization authorized to produce and distribute piped water services in Kampala, the urban poor's access to water in the future strongly depends on their pro-poor policy. This policy currently focuses on the provision of water at a subsidized tariff through pre-paid water meters (Kulabako et al., 2010; NWSC and AquaConsult, 2003a). The pre-paid water meters are considered successful and various donors have engaged in scaling up the initiative (interview D.T., 03/07/2013). According to Kulabako et al. (2010) the scaling up of this innovation is necessary if NWSC wants to meet the increasing demand and ensure the affordability of the water.

Most of the determinants that have been identified in the literature and were summed up in the previous section are also present in the case of Kampala. In particular, the low access to improved sanitation and safe water results from low political support, inadequate enforcement of public health and planning regulations, lack of coordination, high population densities and low capacity of the institutions (Kulabako et al., 2010). However, the failure can to a large extent also be explained by the lack of stakeholder participation and the inability to consider sanitation as a system that comprises collection, storage, treatment and safe disposal (Katukiza et al., 2010).

The table below demonstrates that the sanitation situation in the three targeted parishes at the time of the KIEMP baseline survey was rather typical for informal settlements in Kampala.

**Table 3** Sanitation in target parishes at the time of the KIEMP baseline survey

	Katwe I	Kisenyi II	Bwaise III
Use unimproved pit latrines	72.6%	59.0%	84.2%
Share pit latrines with other households	77.8%	80.0%	63.2%
Do not own personal excreta disposal facility	67.9%	78.9%	63%

Source: Adriaens (2011) and KIEMP (2008)

### 7.3 Sustainability of the KIEMP facilities

To assess the physical and functional sustainability of the public toilets and pre-paid water meters, monitoring visits were conducted because no monitoring and evaluation tool was in place to follow-up on the project outcomes. According to the former project engineer, a consultant was engaged who was supposed to develop a monitoring and evaluation tool, but that did not work out (interview E.K., 03/07/2013). Some major findings from stakeholder consultations and observations will be discussed below.

#### 7.3.1 Physical sustainability of KIEMP public toilets

During a five week field visit in Kampala every toilet that has been implemented under the KIEMP project has been visited at least one time for the monitoring of the facility. Two of the thirty-five public toilets that were initially constructed had been destroyed. One of these toilets (PT 17-05M) was located on a plot that – according to the residents of Katwe I – had to be cleared for the construction of a road which also formed part of the KIEMP project. Another one (PT 10-10C) was removed in Kisenyi II, to make place for the development of a local market.

With respect to the *operations* of the public toilets we should consider both the emptying and the cleaning of the toilet. Although only two of the thirty-three remaining toilets were found full during the five week field visit, almost all caretakers considered the *emptying* of the facility their greatest challenge. This situation is not only detrimental for the local residents and the traders from the nearby road who normally use the toilet, but also for the caretakers. The (perceived) reliability of the service decreases and no revenues could be collected for over two weeks. In order to avoid similar situations, a considerable number of

caretakers call upon private cesspool trucks in spite of the higher cost paid for the emptying service. Another challenge that relates to the emptying of the latrines is the fact that users are tempted to dump waste in the pits causing them to fill up more rapidly. In order to avoid that, a couple of public toilets in Kisenyi II have been given slabs so that it is less easy to dump waste such as clothes and bottles into the pit (see Figure 9). Nonetheless, the slabs installed were often considerably damaged and it is unclear if caretakers will have the capacity to maintain this higher technological standard.

With respect to the *cleaning* of the entire facility, it must be said that the facilities generally were relatively clean although performance varied. The toilets that were used by a large number of children were particularly challenging to keep clean. Nonetheless, it seemed that most schools were aware of the health benefits that the improved sanitation brought about. If unclean situations were encountered, it was mostly because of standstill water, flies and traces of human faeces on the floors or walls.

Regarding the *maintenance* of the remaining toilets it can be said that many defects have been observed, but that some are maintained much better than others. The first thing that could be observed is that the water-related infrastructure components are broken and thus non-functional in the majority of the facilities. Most of the times, the water tap itself has been reported stolen (see Figure 10). In addition, many toilet facilities were never connected or were disconnected from the water network by NWSC because they were unable to pay the high water bills. Moreover, the lack of water can also result from broken water pipes.

While project documents and the final evaluation report mention that several caretakers provide small jerry cans to substitute for the water taps (Coupe et al., 2013), this practice has been reduced considerably. The lack of water in the facility also has implications for the other parts of the facility that depend on the availability of water, such as the incinerator<sup>9</sup>. The incinerators were initially not part of the toilet facility and had only been installed towards the finalization of the project. In several cases, caretakers and users mentioned that they did not receive any instructions on the use of the incinerator so that they did not even know if the incinerator would be functional or not in case the water was available.

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<sup>9</sup> The incinerator looks like a chimney in which waste is burnt and the heat of the burning is used to heat water that then can be used for household activities.

**Figure 9** Improved pit latrine in Kisenyi II



Source: Taken by Lisa Popelier  
(PT 06-06C; 23/07/2013)

**Figure 10** Missing water tap in Bwaise III



Source: Taken by Lisa Popelier  
(PT 29-08K; 09/07/2013)

Further, damage to the walls and floors of the construction is also rampant. Nonetheless, there were observed significant differences in the degree of wall erosion among the toilet facilities as can be seen in Figure 11. According to one of the health workers in Bwaise III the differences in the extent of wall erosion can be explained because of difference in the quality of the initial construction. One of the residents of Bwaise III, for instance, accused the contracted constructor of selling part of the cement that was supposed to be used for building the toilet. Consequently, the facility suffered from severe wall erosion and seepage of water into the cesspools. However, the role of the caretaker should not be underestimated. In the some facilities managed by active caretakers, severe wall and floor damage has been avoided through regular repairs.

In addition, it was remarkable that damage to the roofs was more frequently observed in Kisenyi than in Katwe I and Bwaise III. Based on some testimonies the damage of the roof is caused by insufficient ventilation. What has caused the ventilation problem could, however, not been investigated due to insufficient engineering background on the construction of VIP latrines. Nonetheless, it is clear that the caretakers in general do not have the capacity or the intention to repair damage to the roof. Only one caretaker reported the replacement of the iron

roof sheets, while most other caretakers confronted with roof damages argued that replacing the roof would imply a large costs which cannot be borne by them.

**Figure 11** Different degree of wall erosion



Source: Taken by Lisa Popelier (PT 15-03M; 17/07/2013) – Taken by Lisa Popelier (PT 33-12K; 23/07/2013)

Other problems that were occasionally observed included blocked outlets of the bathroom and the urinal, which could generally be solved at a low cost. Further, some outlet pipes were also broken so that wastewater did not reach the soak away pit, but instead contaminated the surface soil of the toilet facility site.

**Figure 12** Roof damage of public toilet in Kisenyi II



Source: Taken by Lisa Popelier (PT 02-02C; 08/07/2013)

### 7.3.2 Functional sustainability of KIEMP public toilets

In general, I can conclude from the field visits conducted in July 2013 that the implemented sanitation facilities are still used and considered as an improvement by the communities five years after their construction. Initially, the plan was to go through the monitoring sheets that were kept by the caretakers to assess the *level of use* based on records of the expenditures, revenues and number of users, because it was observed that the level of used depended highly on its location (see also Adriaens, 2011). However, in spite of the training provided under the KIEMP project, none of the caretakers was either able or willing to provide these monitoring sheets. As a consequence, the level of use can only be estimated done through indirect indicators.

First, the caretakers were asked how much money they could collect on a daily basis. Assuming that the bias in reporting revenues is not systematically different between the three parishes, this can provide some idea about the intensity by which the toilets are used in the different parishes. When the toilet was accessible for passersby, the estimation of the money collected on a daily basis ranged from 600-10.000 UGX, 3.000-20.000 UGX and 400-6.000 UGX<sup>10</sup> for Katwe I, Kisenyi II and Bwaise III respectively. While it already indicates that caretakers Bwaise III on average collect the least user fees on a daily basis, the most important conclusion might be the large difference between the highest and the lowest amount reported. However, a severe drawback of this indicator results from the fact that toilet buildings located in purely residential areas were rarely accessed by passersby and mainly depend on monthly contributions by the users. Budgetary arrangements and how they affect the level of use will be discussed more in depth in the diagnostic part of the framework.

Second, the intensity of use could also be indirectly assessed through the emptying pattern. While going through the questions about the emptying of the facility with the caretaker, it emerged that some toilets had never been emptied since their construction in 2008. The fact that at least five toilets had never been emptied were located in Bwaise III (35,7% of the KIEMP toilets in Bwaise III) was a remarkable observation. This indicates the low level of use of those facilities especially if compared to the other parishes in which only

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<sup>10</sup> Converted to Euro: Katwe I (0,1737 – 2,8950 EUR); Kisenyi II (0,8685 – 5,7901 EUR); Bwaise III (0,1158 – 0,7370 EUR) based on conversion rates of 26/08/2013 (De Tijd, 2013).

one toilet in Kisenyi II was found that had never been emptied due to complete privatization of the facility.

Besides the level of use, it was also important to assess the *accessibility* of the pit latrines. The most straightforward case in which the toilets have turned inaccessible is through privatization. Personal appropriation is most obvious when a fence or wall is set up that (partially) restricts the access. This has occurred in two facilities in Kisenyi II and two facilities in Bwaise III (see Figure 13). It is also important to note that the privatization process already started when the project team was still in place, because it had been discussed in several project documents (Coupe et al., 2013). Additionally, the toilets were also supposed to have separate stances for men and women. Yet, the privatization of some toilets (example in Figure 13) has made this no longer possible.

While it is indeed only a minority of the toilets that have been clearly fenced off, the majority of the caretakers have installed padlocks to avoid that people are using and spoiling the toilets without the consent of the caretaker. While it is most likely that the installation of padlocks is beneficial for the user-fee collection and the physical condition of the facility, it may have adverse effects for the accessibility. It was frequently mentioned by users and non-users that the facility was almost exclusively used by the landlord and the tenants resulting in the assignment of toilet stances to particular households. Further, the padlocks form an additional barrier and limit the quick, easy and continuous access. Some caretakers try to address this shortcoming by giving a spare key to the tenants or relatives of the landlord, but new inhabitants and ethnic minorities might have the impression that the toilets are not accessible to them. In Kisenyi II, for instance, some Somali<sup>11</sup> residents had been asking the caretakers if they could also use the toilet facilities (interview B.S., 22/07/2013). Moreover, the padlocks create a situation in which the candidate-users are susceptible to the arbitrariness of the caretaker and landlords. In theory, the caretaker has the right to refuse someone (except children, elderly and disabled) who is not able or willing to pay. There might be a danger that in practice, also other, arbitrary reasons might be cited by the caretaker to exclude vulnerable people from using the toilet. Due to these (potential) practices aforementioned, the line between community 'ownership' of the facility and unjustified privatization by the landlord becomes rather blurred.

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<sup>11</sup> Somali is used in Kisenyi II to refer to Somali, Ethiopians and people from Eritrea (personal communication).



**Figure 13** Privatization in Kisenyi II (left) and Bwaise III (right)



Source: Taken by Lisa Popelier (PT 05-05C; 23/07/2013) – Taken by Lisa Popelier (PT 26-05K; 09/07/2013)

Hence, it becomes clear that there might be a trade-off between physical sustainability and the functional sustainability. Nonetheless, deciding which of the two should get priority is not a straightforward question and requires more research. In the mean time, temporary solutions can be looked for and experimented with, such as a caretaker in Katwe I who decided to lock the outside door at night, while keeping one stance open so that people who were eager to use the toilet could do so without damaging the facility or spoiling the drains.

### 7.3.3 Physical sustainability of prepaid water meters

The prepaid water meters have only been installed in Katwe I and Bwaise III. As the prepaid meters are small, less marked and not maintained by community members or local caretakers it has proven more difficult to find all of them. Moreover, several water meters had been relocated from their original location (see Figure 14), particularly in Katwe I, which made it more difficult to encounter all the meters during the monitoring visits. During these visits the meters were either tested by a local guide or local residents were consulted to gather information on the performance. As can be seen in Table 5, 14 out of the 24 visited meters (58,3%) were still functional.

The main reason mentioned for the non-functioning of the other meters (41,7%) was that the system inside was broken down. However, the ‘Smart technology’ that is installed in these machines cannot be easily repaired, not even by the O&M staff of NWSC. This results in prolonged malfunctioning of the meters. During interviews with two engineers from



NWSC they confirmed that the main reason for the malfunction was the lack of spare parts as had already been highlighted in the final evaluation and final report of the KIEMP project (interview D.T., 03/07/2013; interview J.O., 16/07/2013). The problem arises because the spare parts have to come from a private company in South-Africa. As NWSC is a para-statal organization, it needs to follow the procurement procedures of a public institution which causes delays in the acquisitions of the necessary spare parts. Some local residents and caretakers of the prepaid water meters have even decided to install additional protection to the machine with the aim to avoid the breakdown of the machine as much as possible (see Figure 15).

**Table 4** Physical sustainability KIEMP prepaid water meters

	KIEMP standpipes constructed	KIEMP standpipes visited		
		Total	Functioning	Protection
Katwe I	14	10 (71,4%)	5/10 (50%)	2/8 (25%)
Bwaise III	19	14 (73,7%)	9/14 (64,3%)	6/14 (42,9%)
<b>Total</b>	<b>33</b>	<b>24 (72,7%)</b>	<b>14/24 (58,3%)</b>	<b>8/22 (36,4%)</b>

Source: monitoring data gathered during fieldwork June-July 2013

**Figure 14** Relocated pre-paid meter in Katwe I



Source: Taken by Lisa Popelier (28/06/2013)

**Figure 15** Protected pe-paid meter in Bwaise III



Source: Taken by Lisa Popelier (SP 16-02K; 09/07/2013)

#### 7.3.4 Functional sustainability of prepaid water meters

As in the assessment of the functional sustainability of the prepaid water meters, I consider both the *level or intensity of use* and the *accessibility* of the water supply. With respect to the level of use, it can generally be concluded that the residents have welcomed the new water supplies and according to one of the caretakers “*They [local residents] love them so much nowadays*” (interview A.M., 26/06/2013). The fact that people have been welcoming the new prepaid system so enthusiastically, also demonstrates itself in the reaction coming from the people living nearby a standpipe that is broken down. During informal conversations with those nearby residents of Katwe I, they told me that they really need those meters and they are suffering so much without them (informal conversations residents Katwe I, 28/06/2013).

However, the story is not all that bright and it would not be a valid conclusion to say that everybody is willing to or is using the prepaid meters. During a visit to a protected natural spring in Katwe I, many women and children were found fetching water from the spring even though studies have demonstrated that the water from protected springs in these informal settlements are not suitable for drinking without treatment (a.o. Haruna et al., 2005). Moreover, many of the residents still use the private taps instead of the prepaid meters. The reasons for this are diverse. First, a considerable amount simply does not know yet about the existence and the functioning of those prepaid water meters. Frequently, these people have recently arrived in the parish or have been moving from one zone to another within the same parish. Second, residents often mention that the prepaid water points are located far from their home. Whilst the distance might indeed not be too far to overcome, the fact that water can also be bought from a nearby private tap implies an additional barrier as long as the perceived cost of time is not offset by a price advantage. Third, a user of the water meters in Kisenyi II also shared his concern about the fact that the tokens can break which would mean a considerable loss of money that had been already uploaded on the token. Engineer Otema of NWSC, however, denied that this is a problem that frequently occurs and affirmed that when it does occur the money can be transferred to a new token (interview J.O., 16/07/2013). Nonetheless, the fear to lose part of their little money might still form an additional constraint to the widespread use of the prepaid meters.

Regarding the *accessibility* to the water that is provided through this infrastructure, positive and negative elements should be taken into account. First, in case the meter does not have protection and the potential user has a token, the water can be collected by anyone at anytime of the day. The protection installed to avoid the meter to get spoiled has the same effect as the padlocks for the public facilities. It might be essential to ensure the physical sustainability of the facility, but it might constrain the access of particular groups of users at particular times of the day. Second, people need to have a token to be able to use the meter. Even though this token is provided for free if you register at the NWSC office, not everyone in the parish is aware or able to get their token. Moreover, the cornerstone of the prepaid system is that people have already paid for their water before they even receive one droplet. This may restrict the access to the poorest people who are not able to load a normal amount on their token before using it, so that they would have to invest time in uploading the token every time they want to fetch some water.

**Figure 16** Alternative water supply:  
protected natural spring in Katwe I



Source: Taken by Lisa Popelier  
(Katwe I; 12/07/2013)

**Figure 17** Alternative water supply:  
private water tap in Bwaise III



Source: Taken by Lisa Popelier  
(Bwaise III; 09/07/2013)

## 7.4 Structural determinants

### 7.4.1 Urbanization processes in Kampala: demography and geography

Kampala is the capital and largest city of Uganda and functions as the centre of the country's industrial and commercial development. The natural increase of the population and the rural to urban migration partially because of government's economic development policies have led to a continued growth of greater Kampala (Giddings, 2009).

Demographically, it is estimated that the urbanization process will cause an increase of the population from an estimated 1.77 million in 2008 to more than 2.1 million by 2017 (Giddings, 2009). While the national average population growth rate is around 3.4%, the growth rate in the urban areas can go up to 9% as has been recently estimated by the Kawempe Division (Katukiza et al., 2010). Like most cities in developing countries, this current pressure of numbers results in the development of informal settlements because the majority of Kampala's residents are excluded from participation in the formal land market (Giddings, 2009). It is currently estimated that 61.2% of the residents of Kampala live in slums which have the lowest basic service levels such as toilet facilities (Kulabako et al., 2010; Tumwebaze et al. 2012 described in Tumwebaze et al., 2014).

In addition, daytime population is often much higher, especially in Katwe I and Kisenyi II because of their location close to the city center. Moreover, the location of the toilet facilities within the parish also determines how many of these daytime workers or passersby are using the toilet. Its effect on the financial sustainability is demonstrated in the quote below:

*Some are located in good places. Those that are close to businesses, close to markets, close to shops... those are very busy toilets. And there you get many users, so it is easy to raise money and to save. But now the problem is where you have toilets that are purely in a residential area. There is a problem, because in a residential area people do not pay at every use. (interview E.K., 03/07/2013)*

The importance of the location for revenue collection has been confirmed by several other informants. Nonetheless, the probability of proper use of the facility may be lower

because this user group does not have a long term interest in the area and has not been participating in the behavioural change activities that were organised by the local CBOs.

Geographically, the urban growth has begun to spill into adjacent townships and rural areas, including the city's former wetlands (Giddings, 2009). The Bwaise III parish is one of these illegally encroached peri-urban areas located on former wetland that is prone to flooding, especially in rainy seasons (Giddings, 2009; Isunju et al., 2013; Katukiza et al., 2010; Kulabako et al., 2010). The vulnerability to floods and the fact that the most residents of the targeted parishes are squatters can at least partially explain why the population is so dynamic and transient (Katukiza et al., 2010). In Katwe I, *"it is no longer flooding, because you see the drains"* (interview A.M., 26/06/2013). However, in Bwaise III flooding *"remains, because the area lies in the floodplain"* (interview Y.K., 22/07/2013). As a consequence, these slum dwellers are all the time on the move, looking for a place that best fits the employment opportunities (Kulabako et al., 2010). This is also reflected in the following statement:

*"Bwaise III, like I told you, is a very dynamic area. Today it will rain hard and there will be a lot of water so that people will shift. People keep moving in and out of that place. Some of them move because their conditions are a bit better and they will move to a different place. Some of them come because they think it is a bit cheaper."*

(interview H.N., 05/07/2013).

The main consequence is that it becomes almost impossible and very expensive for the local CBOs and the NWSC to continue fostering behavioural change and sensitization. As had already been reported in Kulabako et al. (2010) many stakeholders perceived the transient nature of the population as one of the key threats to the sustainability:

*"They are not permanent residents. You try to train this group, but within a short time they have shifted. Then a new group comes who doesn't know anything. So there is that challenge that you have to continue training and sensitizing again and again"*

(interview M.A., 03/07/2013)

#### 7.4.2 Socio-economic profile of target communities

An overview of the most relevant statistics that were obtained for the baseline survey of the KIEMP project (2008) can be found in Table 5. In sum, a large proportion of the residents of the three parishes have low average incomes and are earning a living in the informal sector (e.g. food vending and boda-boda transport) (Adriaens, 2011; Isunju et al., 2013). As described in the previous section, Kisenyi and also Katwe to some extent are rapidly developing into ‘business’ centres for these informal sectors due to their favourable location, while Bwaise III is located 4 km north from the city centre (Isnunju et al., 2013; Kulabako et al., 2010). Furthermore, the fact that no roads were constructed in Bwaise III under the KIEMP project, may partially explain why economic development is lagging behind in that parish compared to the other two parishes.

In addition, the low education level (Adriaens, 2011; Isunju et al., 2013) may account for the fact that so many machines are ‘spoiled’, for the reason that “*even older people believe that if they put in some metal they can get water*” (interview A.M., 28/06/2013). Moreover, relatively high illiteracy rates may explain why none of the caretakers was able to perform record keeping. Moreover, when CIDI, the NGO that was engaged in the capacity building of caretakers and CBOs, tried to encourage them to keep records, the following occurred:

*“They get sceptical. Some of them think we are trying to find out how much they are earning to be able to request some of it. I think that is basically why they don’t keep records. But also on the other hand, it can also be that the caretakers are illiterate and cannot write. That is also a challenge for record keeping.”* (interview R.M., 17/07/2013)

Dealing with an illiterate community makes it difficult to convince the caretakers of the fact that record keeping is a main tool for accountability to the local councils and to the beneficiaries. Indeed, the absence of records may not pose any problems as long as the toilet is well maintained, but in the other case “*where you find the toilets are dirty and yet money is collected, it raises suspicions in the community*” (interview M.A., 03/07/2013). The willingness to pay and thus the financial sustainability may be negatively affected. Another challenge results from the socio-cultural profiles of the communities, because all the different groups have “*their different ways of doing things and their different ways of understanding*” (interview H.N., 05/07/2013). Given the fact that the socio-cultural profile strongly affects the

norms and behaviour with respect to sanitation, it will be discussed under the section of informal institutions.

**Table 5** Parish characteristics according to baseline survey KIEMP project (2008)

	Katwe I	Kisenyi II	Bwaise III
Estimated population <sup>(2)</sup>	24.481 <sup>(1)</sup>	18.429 <sup>(1)</sup>	13.557 <sup>(1)</sup>
Unemployment <sup>(1)</sup>	23.1%	32.7%	14.5%
Employment in informal sector <sup>(1)</sup>	45.2%	37.2%	52.2%
Spent more than 10 years in area	72.4%	66.1%	81.4%
Percentage of houses of semi-permanent nature	44%	47%	42%
Percentage of households owning land in their area	30.8%	20.8%	<b>58%</b>
Willing to provide land for infrastructural development	54%	44%	67%

Source: (KIEMP, 2008); (1) (Adriaens, 2011; KIEMP, 2008); (2) estimates from 2004 in Adriaens (2011)

### 7.4.3 Technical features KIEMP project

As has been emphasized by many researchers the technology should be selected so that it is appropriate to the socio-economic and technical context in order to ensure its sustainability (Breslin, 2003; Sohail et al., 2005). While a study about sustainable sanitation technologies for Bwaise III indicated that urine diverting dry toilets rather than VIP latrines are the most favoured technology option for these settlements, the VIP latrines were also considered as physically appropriate (Katukiza et al., 2010). Water born systems (e.g. flush toilets) were not considered as an alternative, because the literature has stated that it often proves to be an anti-poor technology (Katukiza et al., 2010). Conversations with local stakeholders made clear that experience and sufficient sensitization made the relatively low-standard VIP technology acceptable to the community:

*“That [flush toilets connected to a waterborne sewerage system] would be nicer, but the sewer water is very expensive [...]. From experience we did not give them the waterborne*

*system, because they would fail to pay national water bills. They would be cut off and in the long run they would fail to use the toilet.” (interview A.B., 26/06/2013)*

However, as stated by Katukiza et al. (2010), the technical sustainability criteria also include the accessibility to vacuum trucks and pick-ups. Caretakers and local leaders did indeed complain about the fact that there are not enough cesspool trucks. *“It can take two weeks and people are suffering and spoiling the drainages”* (interview A.M., 28/06/2013). Moreover, the pipe keeps breaking at the end, so that its distance reduces and can no longer reach the facilities that are surrounded by (unplanned) housing units.

Furthermore, the choice to provide taps at the toilet facility has not proven to be sustainable, because almost all taps were reported stolen which seriously limits the potential of the facility. Lowering the standard of the hand-washing facility, increasing the capacity to enforce the bylaws against spoiling of the public facilities and increased sensitization about the importance of the water tap may be necessary to ensure its long term performance.

Regarding functional sustainability, a caretaker of a toilet facility located in a primary school mentioned that the two bathroom stances were a *“waste of space”* (interview T.I., 08/07/2013). The tendency to transform bathrooms into storage rooms has also been observed in other facilities. As has been recognized in the capitalization study of the project, this indicates that no bottom-up planning or real priority setting has been conducted (Baltissen, 2012).

With respect to the water supply, the choice of the SmartSystem of the prepaid water meters has a lot of potential and the technology is socially accepted as mentioned by one of the caretakers: *“They [residents of Katwe] love them so much nowadays”* (interview A.M., 26/06/2013). As much as the people indeed love the provided water infrastructure, the system has not proven to be very reliable. As one of the engineers of NWSC explained:

*“As you went to the field, I am sure that you found some of them not even working. The project did not talk spares and they assumed that National Water as the secondary beneficiary would be having those spares.”(interview J.O., 16/07/2013)*



After the construction of the pre-paid water meters they were indeed handed over to the NWSC, who was then expected to take care of the O&M, including the provision of spare parts. The lesson that can be drawn from this is that O&M of a technology choice should be considered more carefully.

#### 7.4.4 Policy context

In line with the Paris Declaration, Belgium tried to ensure aid effectiveness through the alignment of the objectives of the KIEMP project with the national development strategies of Uganda (OECD DAC, 2005). The objectives of the Kampala Integrated Environmental Planning and Management project are aligned with several national policies that were already in place at the time of the project formulation (e.g. the Poverty Eradication Action Plan 1998). In addition, the KIEMP project objectives also fit in several new policies that have been established in the years following the project kick off (e.g. the National Development Plan 2010/11-2014/15 and the National Slum Upgrading Strategy 2008) (BTC Uganda and KCCA, 2013; MoLG and BTC, s.d.).

Hence, the policy initiatives of the most recent decades indicate that the investment under the KIEMP project will remain relevant within the current national policy context. Thus, it is expected that the formal institutions of Kampala and Uganda in general will demonstrate political will to support and ensure the sustainability of the implemented infrastructure. Nonetheless, the expected impact of these policies can be questioned. First, they are given low priority within the context of other national policies which mostly prioritize rural poverty concerns. It is hoped that the Uganda's first National Urban Policy that is expected to be released by the end of 2013 may attract more attention to urban poverty concerns (Brown, 2013). Second, there is a tendency to perceive poverty reduction as an end product of economic growth, especially due to the focus on urban economic growth in the National Development Plan (Brown, 2013). While it has been impossible to assess the importance of this structural variable for the sustainability of this relatively small KIEMP project, it is hoped that the increased country ownership of policy translates into more attention for the long-term needs of sustainable urban development rather than into more space for the elite instrumentalization of the policy agenda for short-term political interests (Brown, 2012). The possible detrimental effects of short-term political interest are discussed in section 7.6.

## 7.5 Institutional determinants

### 7.5.1 Formal institutions: local government structures

On 1<sup>st</sup> March 2011 the political and administrative control over Kampala was handed over from the Kampala City Council (KCC) to the Kampala Capital City Authority (KCCA) as part of the Kampala Capital City Act in 2010 (BTC Uganda and KCCA, 2013). Since 2011 the KCCA is governing the city on behalf of the central government (Goodfellow and Titeca, 2012; Kirega-Gava, 2012). As a consequence, KCCA became the new project implementing partner of BTC in the KIEMP project (BTC Uganda and KCCA, 2013).

This subversion had a significant impact on the implementation of the KIEMP project (BTC Uganda and KCCA, 2013). During the one year no-cost extension of the project, attempts were made to ensure the institutional anchoring of the project and the mainstreaming of the project into the new institution (BTC Uganda and KCCA, 2013). Nonetheless, the Executive Director of KCCA wanted to start with a clean slate instead of patching up the old KCC. Therefore, she urged all former KCC staff to re-apply for their position which eventually led to many layoffs (Kirega-Gava, 2012).

The personnel ‘clean-up’ has weakened the capacity of the division not only because it has wiped out the results of the KIEMP capacity building activities, but also because the filling up of the vacancies took and still takes a lot of time.

*“But by the time we have a fine number of staff, they [user committees] will be reporting to the town clerks, because at the moment we [KCCA] are only staffed at 28%. With the next recruitment that is coming we are going to put 33%. That is one of the reasons why we are not following these sanitation committees critically, because of this gap of the personnel.”* (interview J.B., 16/07/2013)

During my field work in Kampala, I found that a lot of the project specific knowledge got lost, because it left the office together with the person working on the project. In other words:

*“There was not really proper handover within the new system. [...] That is why, when you need information, you need to go after the individual, not after the institutions. [...] We tried to introduce KCCA to the community and show them what we were doing and all that [...] but the gap still exists largely because of the timing. This transition came as the project was ending.”* (interview E.K., 03/07/2013)

Moreover, the institutional transformation also centralized the power back to the KCCA headquarter. This has not only created confusions about the roles of KCCA with respect to the public facilities as will be handled in the next section, but it also created inefficiencies as demonstrated in the next quotation:

*“There is also too much bureaucracy, because each and every aspect that has to do with Kampala has to come from the centre. That one is leaving the division with almost no say, no power to do anything on their own. [...] They have almost no budget at all for the maintenance of the public facilities.”* (interview R.M., 17/07/2013)

At the time of the fieldwork in July 2013 the responsibility to provide emptying services had only been transferred for two months to the division level. However, a lot more needs to be done if they want to increase the capacity at the division levels, because *“the divisions have not yet got back their full powers”* (interview J.B., 16/07/2013).

In sum, the transformation from KCC to KCCA has caused a decrease in the capacity of the division offices and has resulted in new governing rules that largely disregard previously agreed commitments and responsibilities. The lack of supervision and support in O&M generates in the long term a significant threat to the physical sustainability of the KIEMP infrastructure.

### 7.5.2 Roles and responsibilities

Clear allocation of roles and responsibilities among the stakeholders are highly desirable in the complex settings of urban upgrading projects so that actors complement each other rather than compete (Sohail et al., 2005). However, in practice, the institutional delineations can get quite blurred (Gulyani and Connors, 2002). In this section, the roles and responsibilities with respect to three key tasks are discussed, namely emptying, repairing and monitoring.

### 7.5.2.1 Emptying

Emptying was described by most of the caretakers as the main challenge to the O&M of their toilet facility. During the fieldwork several reasons could be detected such as the distance to the road, the long waiting period for the KCCA cesspool vehicle, the inability to collect sufficient funds and the high prices of the private cesspool vehicles. In addition, the KCCA “*will always talk about the fuel*” (interview R.K., 28/06/2013). However, the underlying factor is the lack of clarity on who was supposed to empty the latrines and at what price and that consequently “*nobody wants to take that responsibility*” (interview R.K., 28/06/2013).

According to the former members of the KIEMP project team, it was KCCA’s mandate to provide free emptying services to the KIEMP pit latrines. Several staff of the KCCA division offices, recently put in charge for emptying services, indeed confirmed this. For instance, in Kawempe division they communicated that “*nobody has paid for any public service, also not for emptying*” (interview A.J., 09/07/2013). However, at the KCCA headquarters the interpretation of the KCCA’s responsibility towards emptying is clearly different:

*“We say before we empty for you the toilet: one you must have a committee in place; two, we give you one trip and you pay for another trip. And three the request should be forwarded by the area councillor”* (interview J.B., 16/07/2013)

The main reason given for the new strategy, is that they “*cannot continue offering for free, because [they] don’t have the capacity*” (interview J.B., 16/07/2013). According to the health department of the city hall, the official price for one trip is now 65.000 UGX (18,82 EUR)<sup>12</sup> excluding bank charges. However, during the monitoring visits it has become clear that confusion about the price is also omnipresent in the field. Some caretakers state that they could obtain free services, while others claimed to have paid 80.000 UGX per trip. Of course, record keeping would have made it easier to check the truthfulness of these claims. Nevertheless, it remains valid to conclude that it poses a threat to the financial and physical sustainability of the toilet facilities, because caretakers cannot adequately plan these expenditures. Moreover, when the toilets are out of service for considerable periods due to the

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<sup>12</sup> Based on the conversion rate of 26/08/2013 (De Tijd, 2013)

lack of emptying service, the urban poor may no longer be willing to pay for the basic service, as they do no longer consider it worth paying for (Whittington et al., 1993).

What is more, the confusion within the KCCA offices has also put the staff that worked closely together with KIEMP, and who are in favour of free services, in vulnerable positions. Questions of power should never be neglected in urban governance (Beall described in Goodfellow and Titeca, 2012) as can be seen in the following testimony:

*“Last year I could come here and talk to my bosses here. I said that a KIEMP toilet was filled up and they would provide the cesspool vehicle free of charge. But nowadays, things have changed. [...] But when we are together [with the focal person for Katwe I] I could talk to Bbuye so it could be somehow fair. But right now I cannot convince those people when I am alone.”* (interview S.R., 22/07/2013)

Thus, the handover of the responsibility for the sanitation component from the KIEMP project to the KCCA has not proven successful due to unclear responsibilities and the poor state and limited capacity of the cesspool trucks. This imposes a large threat to the O&M of the facility and it is unpredictable whether the transfer of the emptying responsibility from the headquarter to the division office that occurred in the spring of 2013 will improve the service delivery of KCCA or will continue to force caretakers to turn to the private emptying market in search for a quick and efficient service delivery.

#### 7.5.2.2 Repairing

As has been described in the paragraph about the physical sustainability of the public toilets, the defects are many and omnipresent despite the guidelines that the caretakers have received for the execution of the O&M tasks. The problem, however, is again that the responsibilities are not clear (anymore) despite the fact that memoranda of understanding (MoU) have been signed between the involved partners. According to several informants these MoUs clearly stated the responsibilities of each stakeholder. So where did it go wrong? This question has been extremely difficult to answer at least partly because of the bias that results from being a Belgian. One of the former project staff referred to this bias as ‘Muzungu-bias’ (personal communication I.A., 04/09/2013) which means that caretakers will always try to ask for support regardless of their understanding of their responsibilities.

Hence, I can only touch upon some elements that could influence the extent to which the caretakers take up their responsibility to conduct repairs. First, the limited amount of revenues collected may make it impossible for caretakers to finance the repairs. Second, there is a lack of commitment to record keeping and thus also a lack of commitment to accountable management of the infrastructure. None of the caretakers could provide record keeping and some even started laughing after hearing me asking for it. Third, the caretakers may also be unable to conduct the repairs because they lack savings facilities. Some caretakers that were hired by the landlord mentioned that they daily passed the collected money to the landlord who would use it to buy the necessary materials. However, these were just some best-practices. Most of the caretakers are also the landlord and may not keep separate funds for the maintenance of the toilet facility. Fourth, the caretakers in the targeted parish may – as has been observed in other cases as well – become crisis managers who wait until the facility is in an emergency condition to react (Sohail et al., 2005). Fifth, caretakers may still be aware about the need for effective O&M and their engagement towards this goal, but that does not necessarily mean that these persons will be prepared to take up this responsibility over a long period of time. Finally, repairing the toilets and the drainages at the time of the exit (BTC Uganda and KCCA, 2013) might have taken away the incentives of good performing caretakers to continue doing repairs.

With respect to the pre-paid water meters, all stakeholders agree that the responsibility for the O&M lies with NWSC. In theory, this looked very promising, because the project “[...] even bought the same machines that were from the same source as ours so that we [NWSC] don’t get into software challenges” (interview D.T., 03/07/2013). However, the success of the pre-paid water meters has been strongly compromised by the lack of spare parts, which are manufactured by a private company in South-Africa. As NWSC is a parastatal body it has to follow public procurement procedures which are extremely burdensome. Moreover, NWSC is very dependent on this one manufacturer who has strong bargaining power due to its monopoly position. As mentioned by a sanitation engineer of NWSC:

*“Sometimes small money does not make sense for these big manufactures. [...] They can ask us any amount they want. We cannot go anywhere.”* (interview D.T., 03/07/2013).

However, solutions to this problem may not be as straightforward as they seem, especially because Uganda is in the midst of its fight against corruption. Thus, relaxations in procurement procedures are unlikely to occur. Further, concerns about the patent and the low numbers make it impossible to start producing the spares locally, at least not in the short term. Hence, encouraged by a guideline developed by the Public Procurement and Disposal of Public Assets Authority (PPDA) NWSC is nowadays looking to establish a long term supply contract, also called a ‘framework contract’ so that you “*don’t have to go through the approvals*” anymore (interview D.T., 03/07/2013). However, this potential solution was already mentioned in the final evaluation report written one year before the fieldwork conducted for this study. Yet, the sanitation manager said that it “*may take us another six months*” to get the process of the framework contract in place. At the meantime, people are suffering and asked me: “*Do they need money? We can gather some money if that would give us the prepaid meter back*” (personal communication resident Katwe I, 17/07/2013).

#### 7.5.2.3 Monitoring and follow-up

In order to provide good service delivery, a dialogue between the users and the municipality should be taking place so that users have the opportunity of complaint and redress (Sohail et al., 2005). This function has been assigned through terms of references to the local councils at the level of the zones and at parish level. These local councils are responsible for the supervision and monitoring of the functionality of the KIEMP facilities (CIDI, 2011).

In addition, key stakeholders have learnt how to set up bylaws during various study trips, for instance to Kigali. The bylaws which the informants are most familiar with are, however, related to drains rather than the toilet infrastructure. In addition, enforcement is challenging, so that they feel that they “*need KCCA enforcement and local leaders to sit together and enforce these laws, these bylaws*” (interview S.R., 22/07/2013).

### 7.5.3 Land tenure system and property markets

#### 7.5.3.1 Land tenure system and land agreements

The land policy in Uganda is complex and has been subjected to several ambitious reforms<sup>13</sup> (LANDac, 2011) – even recently in February 2013 with the approval of the new National Land Policy (Migereko, 2013). There are four main systems of land tenure that can be identified in Uganda, namely *mailo*, freehold, leasehold and customary land (Foley, 2007; Giddings, 2009). In Buganda Kingdom which includes Kampala, the major tenure system is the *mailo* tenure system (Place and Otsuka, 2000) and accounts for 80% of the area covered by informal settlements in Kampala (NWSC and AquaConsult, 2003a). Gradually, tenants (*kibanja*) started settling on this land that was initially exclusively owned by notables and elites of the Buganda Kingdom (Foley, 2007; LANDac, 2011; Place and Otsuka, 2000).

Until today, the *mailo* tenure system is a major cause of conflict, because tenants have acquired very strong rights over the land that mostly belongs to absentee landlords. As a consequence of several legal reforms, occupants can become lawful or bona fide occupants if they comply with particular conditions<sup>14</sup>. This status provides them with security of occupancy and legal protection against eviction through obliged compensation and resettlement because of a combination of legal reforms (Foley, 2007; LANDac, 2011; Place and Otsuka, 2000). In addition, Bwaise III has evolved as a result of illegal encroachment of the land so that there is no legal status of ownership (Katukiza et al., 2010). Both elements have limited the potential to plan for water and sanitation provision in the informal settlements of Kampala (NWSC and AquaConsult, 2003a). In particular, it has created a situation in which *mailo* land owners cannot sell or utilize their land because they have to adequately compensate and resettle the tenants, whereas the tenants cannot develop or sell the land even if they own it under customary law. The main consequence is that the areas under *mailo* tenure system often remain very poorly serviced (Giddings, 2009).

Despite this complex tenure system, the KIEMP project managed to acquire all the land required for the infrastructure through land agreements in which landlords agreed to donate

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<sup>13</sup> Recent legal land policy reforms are the 1995 Constitution, the 1998 Land Act and the Amendments made in 2004 and 2007. For more details: Foley (2007), Giddings (2009) and LANDac (2011).

<sup>14</sup> The conditions include for instance the unchallenged occupation for more than 12 years and the payment of an annual nominal rent to the owner (Foley, 2007; Giddings, 2009).



their land for development of public utilities for a period of twenty years (Adriaens, 2011). This unique achievement can be accredited to the focal persons who engaged in a participatory process at parish level, incorporating community members and leaders in the negotiations about the selection of the sites for the infrastructures (Adriaens, 2011). While some of the landlords mention that they would have appreciated a compensation for the provided land, all contacted landlords were – five years after the construction of the facilities – still satisfied with their decision to donate land. Yet, some reflections need to be made.

First, the donation of land indeed eliminates the cost of land acquisitions. However, the features of the donated land may not be beneficial for the physical sustainability of the infrastructure. Besides the fact that some of the toilet facilities are constructed very closely to existing housing units and may thus pose a health risk (Coupe et al., 2012), no problems with the location of the toilets have been reported. This is probably due to the general acknowledgment that the officially required distance between housing units and sanitation infrastructure can never be met in the slums of Kampala.

Second, promoting the land donations as the ultimate form of participation is a more attractive discourse than admitting that funds are not available. In the project's specific agreement it was stated that KCC had to provide the land if necessary through purchase (MoLG and BTC, s.d.), but several informants indeed acknowledged that "*funds were not there to compensate all the people*" (interview E.K., 03/07/2013). Hence, it was the failure of the local government to allocate resources to land acquisitions that has made the provision of the basic services for the urban poor conditional on the goodwill of some landlords.

Third, several economic motivations can explain why landlords donated land. The donor-funded KIEMP project provided an ideal opportunity to upgrade their land at a low cost. Further, focal persons were assisting the process so that conflicts resulting from land tenure issues could be resolved easily. In addition, the promise of an indirect compensation through land appreciation, as explained below, has undoubtedly convinced some of the landlords to sign the land agreement:

*"We are bringing you a service which is going to increase your value or going to increase or improve your state of well-being [...] So that increase in value is what we call the compensation"* (interview E.K., 03/07/2013)

Hence, it seems that the landlords who engaged in the land agreements have taken this opportunity to avoid huge investment costs for services that should have been constructed a long time ago.

Fourth, *“the fact that the community freely gives you land is already a big step in ensuring sustainability because it is placed on land that is given by them, they feel that sense of ownership”* (interview E.K., 03/07/2013). However, the tendency towards personal appropriation of the implemented facilities may indicate that the landlord may not be willing to share this sense of ownership with the rest of the community. In the majority of the pit latrines, passersby were very few and some facilities had also partially privatized some stances by allocating them to particular tenants. Another remarkable finding was that privatization did not start after the finalization. A picture that very strongly resembles Figure 18 was already inserted in the final evaluation that was conducted while the project team was still present (Coupe et al., 2012). While the local councils have authority to settle disputes, including land ownership (Foley, 2007), questions should be asked about their capacity to enforce the land agreements. Moreover, there is a possibility that the impunity will encourage other landlords to appropriate the facilities as well, which would be detrimental for the functional sustainability of the project.

Fifth, the incapacity to enforce the land agreements has also become clear at times when landowners die or decide to sell the land. For example, since the death of the landowner of the Scanad Garage in Kisenyi II, the remaining mechanics and drivers of the privatized toilet did not know about the land agreement and the obligations that arise from it. Thus, the access of the beneficiaries to improved sanitation will remain dependent on the willingness of the new landlord to preserve the facility and its public nature.

**Figure 18** Privatization of toilet facility in Kisenyi II



Source: Taken by Lisa Popelier (PT 12-12C; 23/07/2013)

### 7.5.3.2 Land market

Land speculation and a consequent price escalation<sup>15</sup> have occurred in setting of Kampala. The combination of land speculation and unavailability of financing has made affordable land and housing very scarce for low and middle-income households (Giddings, 2009; USAID, 2010). Moreover, the failure of the formal land and property market and the urban planning strategies to respond to the urbanization process forces slum residents to revert to the rental market or informal market where property and land use rights may be purchased and sold without being formally recorded (Scott et al., 2013; USAID, 2010).

Furthermore, the infrastructure provided by KIEMP, especially the roads in Kisenyi and Katwe (Coupe et al., 2012), has turned these two parishes into “islands of relative luxury” (Kool et al., 1992: 191). The former project engineer explained how this can hamper the functional sustainability and how they tried to anticipate the displacement of the poorest residents:

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<sup>15</sup> For instance, in Kisenyi and Bwaise the price for a ¼ acre parcel rose from \$10,000 up to \$20,000 between 2002 and 2009 (Giddings, 2009).

*“Because we improved land they are getting more value out of their properties, but the originally poor persons have to get out because they cannot afford these services anymore.[...] It had been foreseen that when you improve services that means that you are also increasing the cost of living of the people. [...] But what we thought we could do is also try to introduce some kind of income generating activities to help communities cope with the increased services or the improved services, so they could afford it. That is why you will find those activities such as charcoal briquette production”* (interview E.K., 03/07/2013)

Hence, the integrated nature of the project has two counteracting effects. On the one hand, it increases the cost of living in the targeted area and thus makes it more challenging to continue living there. On the other hand, the economic development that was triggered by the project investments (e.g. roads) may have provided more income-generating opportunities, especially in Katwe I and Kisenyi II which are developing rapidly into commercial centres due to their favourable location. The extent to which the market-driven displacement is indeed difficult to assess, but one of the residents in Katwe I estimated that around 65% of the people initially living there had already moved since the project started. It is remarkable, however, that little attention has been paid to the social and economic disruption costs that result from these market-driven displacements, especially because these disruption costs are the main argument against the alternative urban development approaches (see section 2.2).

With respect to the water meters, the threat to the functional sustainability was most present when the area around the pre-paid meter had been sold to an investor for the construction of multi-storey buildings for middle or higher income households as shown in the figure below. The vacant plot visible on this picture, previously hosted several families. However, *“now somebody has bought it because of the infrastructure [the road]”* (interview A.B., 28/06/2013). As a consequence, the number of users of the nearby facilities decreases and three of the water meters in Katwe I had been relocated, because they were no longer used at their original location.

**Figure 19** Market-driven displacement in Katwe I



Source: Taken by Lisa Popelier (Katwe I; 28/06/2013)

#### 7.5.4 Participation in community mobilization and behavioural change communication

The KIEMP project has been profiled as exceptional and unique due to its participatory approach (Baltissen, 2012). Several forms of participation have already been handled in previous sections, such as the co-management between BTC and KCC(A), the donations of the landowners, the caretakers who are fully responsible for O&M of public toilets and the local councils that are required to monitor and follow up on the project benefits. While the next section will cover the financial contributions from the beneficiaries, this section will discuss how the CBOs have been engaged in the provision of the software components, namely community mobilization and behavioural change.

At the start of the project, CBOs were engaged to achieve the social mobilization for the KIEMP project. Later, when the contract with the consultant that was contracted for the behavioural change communication was ended due to underperformance, the project team decided to take the CBOs on board for the behavioural change as well. Their capacity has been built through trainings conducted by CIDI. In addition, peer-learning was made possible through study trips (e.g. Nairobi) for a group of caretakers, CBO member and local leaders. The fact that local residents rather than high-level politicians are selected to participate in the study trip, was also important in the capacity building and empowerment of the local levels (BTC Uganda and KCCA, 2013). In sum, it is expected that CBOs will use social pressure to ensure that community members contribute to the sustainability goals (Otiso, 2003). Therefore, a lot of effort has been made to empower and engage CBOs, as explained below:

*“What we did is we partnered with them and we trained them. We facilitated them in terms of funding to promote their activities. And the thinking was that later, when we pull out, they can still continue with these activities [...] because the good thing with those community based organisations is that they stay there. They are already part of the community.”*

(interview E.K., 03/07/2013)

Hence, the project team expected that the build capacity would bring empowerment so that they could continue doing these activities on their own after the project finalization. In the academic literature (a.o. Sohail et al., 2005) the sustainability effects that result from the involvement of CBOs in service provision have already been acknowledged. However, some underlying assumptions may not always be fulfilled.

First, in order to fully benefit from the community participation in sensitization, it is crucial to get them involved from the start (Adriaens, 2011). An employee of CIDI explained why this is so essential:

*“Because we were not on board at the start of the project as social mobilizers, communities didn’t really get to own the facilities then [...] They just saw structures there and they did not really own them then. But now they do, especially since the CBOs are there trying to follow them up.”* (interview R.M., 17/07/2013)

Second, community participation is not static and the empowerment effects that are achieved should not be assumed to be sustainable (Lyons et al., 2001). In spite of the provided trainings, one of the informants noticed that:

*“These CBOs have been lagging behind. Their performance has decreased. By the time they were being involved, they were okay. But these things have been decreasing. They are not performing well”* (interview S.R., 22/07/2013)

One of the main reasons mentioned by the CBO members was the lack of funds. As discussed in previous sections, *“it is very expensive for us [CBOs] to keep everyone sensitized”* (focus group discussion K.M., 11/07/2013), because of the transient nature of the population. During the project, KIEMP only facilitated the work of the CBOs through funding of the activities and meetings, but did not pay for the CBO staff time (Adriaens, 2011;

Baltissen, 2012). It was assumed that the provision of certificates would make it easier for them to attract funds from other donors, however, this has proven extremely difficult. Consequently, the lack of a permanent source of finance constraints their capacity to continue mobilizing and sensitizing the shifting community members, and thus also hinders them in ensuring the sustainability of the project benefits (Sohail et al., 2005).

Third, towards the end of the project, the project team tried to set up a sustainability network with the main intention to strengthen the partnerships among CBOs. While CBOs mention that they still work together for drainage clean-ups, their cooperation through this network is very limited regarding the other project components. According to the health department at KCCA, however, there has been established a Water and Sanitation Forum, i.e. a platform where NGOs, CBOs and the KCCA “*meet twice a year to discuss the progress on water and sanitation in Kampala*” (interview J. S., 12/07/2013). The reason why KCCA decided to set up this structure was because they “*thought it would be good to find out what the NGOs and CBOs were doing down there in the communities*” (interview J. S., 12/07/2013). Unfortunately, none of the CBOs that were involved in sensitization of the public toilets mentioned this forum. When asked for it, one of the CBO members said that she thinks it is only accessible for CBOs that are registered, but that her CBO nowadays lacks funding to go through this registration process as they are no longer receiving financial support (interview B.S., 22/07/2013).

#### 7.5.5 Participation in cost recovery

The investment costs in the case of water and sanitation facilities normally include land acquisition and construction costs (Isunju et al., 2013). The constructions were funded by the Belgian Government (BTC), the Government of Uganda and the KCC/KCCA (Coupe et al., 2013) and did not involve any financial or labour contributions from the communities. However, as extensively discussed before, landlords have provided their land and sometimes even cleared this land of structures without any financial compensation (Adriaens, 2011). The financial arrangements with respect to the O&M are hereafter discussed separately for the public toilets and pre-paid water meters.

### 7.5.5.1 Public toilets

With respect to the operation and maintenance costs there has been installed a user fee. *“The communities were given time to sit and discuss the fees on their own”* (interview E.K., 03/07/2013) and they agreed on a user fee of 200 UGX<sup>16</sup> per visit to be paid to the caretaker of the pit latrines. This contribution of the community should enable the caretaker to pay for the cleaning, repairs and the provision of materials that are used when visiting the toilets (e.g. water, soap, toilet paper...).

The ability of the caretaker to collect these user fees has, however, been constrained by two factors: the unwillingness to pay and the inability of the user to pay per visit. During a re-election bid in October 2010, president Museveni made the following announcement which significantly changed the willingness to pay of the beneficiaries:

*“It is unfortunate that the poor cannot access toilets because of charges ranging from sh200 to sh700. I want to stop this exploitation of the poor and introduce free toilets”*

(Mukasa and Mulondo, 2010).

The announcement has made that *the caretaker sometimes loses power, because they come and they use it free of charge”* (interview A.M., 28/06/2013). The focus group discussion with the CBOs of Bwaise III also revealed that the announcement affect not only the financial sustainability of the toilet facility, but also the livelihood strategy of the caretakers:

*“ Before the announcement, the landowner perceived the toilets as a kind of a business and they were motivated to maintain the toilets as people were also willing to pay the user fee. However, after the announcement and when people started to refuse paying the fee, the caretakers were no longer motivated to take care of the toilets as they can no longer make a living from it.”* (focus group discussion, participant J.K., 11/07/2013)

While some of the beneficiaries indeed became more reluctant to pay the user fee because of the announcement, one of the caretakers also says that the degree in which the

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<sup>16</sup> 200 UGX = 0,06 EUR conversion rate 26/08/2013 (1 EUR = 3454,19 UGX) (De Tijd, 2013)



announcement has affected a beneficiary's willingness to pay greatly depends on the understanding of the person:

*“There is someone who is just being stubborn and then there is someone who appreciates the work and knows that going there, I have to pay because they need to empty it and they need to clean it. So it depends on the understanding of the person.”* (interview L.S., 28/06/2013).

The reluctance to pay may also be strongly influenced by the fact that most people still have access to their private-shared unimproved pit latrine. One of the health workers in Bwaise III was of the opinion that as long as these free alternatives are there, it will be very difficult to convince the people to pay for the improved toilets (personal communication J.K., 23/07/2013).

The second factor that is constraining the ability of the caretaker to ensure financial sustainability relates to the inability of the beneficiaries to pay the user fee. Despite the fact that user fee was set through a participatory process, many users have communicated that it is unaffordable to pay 200 UGX each time someone of the household uses the toilet. As a consequence, tenants have been able to agree on a monthly fee with the caretaker in most cases. The level of this monthly fee varied but ranged from 3.000 UGX<sup>17</sup> to 6.000 UGX per household, which is far below the sum that would have been collected if a fee would be collected per visit.

In general, it can therefore be concluded that the caretakers of toilets located in residential zones are struggling more to gather sufficient funds for the O&M than the caretakers of toilets that are located in commercial zones where people pay per visit. In addition, the toilets located in residential zones are often more insulated by other housing structures, so that they cannot call upon the emptying services of KCCA due to the limited suction power and short pipes of these vehicles. While performing the O&M of business-oriented toilets (e.g. near roads or markets) may still provide a viable livelihood strategy, this does not seem the case for the caretakers in residential zones due to the double financial burden, i.e. low revenues and high emptying expenditures.

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<sup>17</sup> 3.000 UGX = 0,8685 EUR and 6.000 UGX = 1,7370 EUR based on conversion rates 26/08/2013 (De Tijd, 2013)

#### 7.5.5.2 Pre-paid water meter

The water tariff that is applicable for the pre-paid water meters installed under the KIEMP project corresponds with the cross-subsidized pro-poor tariff of NWSC. Until nowadays, slum dwellers can “*have a whole jerry [20 liters] can for 20 shillings*” (interview D.T., 03/07/2013). This tariff has been set based on a household survey requested by NWSC that revealed that a majority of the residents (67%) were willing to pay 25 UGX or less for 20 liters of water (NWSC and WSP, s.d.). Slum residents are, however, mostly found in a financial position that does not allow them to pay for the private connection cost and forces them to purchase water at public kiosks at a price that is regularly several times the domestic tariff<sup>18</sup> (see section 7.2; Katukiza et al., 2010; NWSC and WSP, s.d.). Even though most residents have mentioned that the price of the pre-paid meter is very low, the number of users – at least during the daytime – was relatively low. Two potential explanations for this observation have been given by an employee of CIDI:

*“As much as we know it is not expensive, the slum people might still not be able to afford. And since they have the other natural source where they can just get free water, they opt for that”* (interview R.M., 17/07/2013)

*“The water there was very cheap, but the challenge was that sometimes they could not get access to the tokens. Then when they [water standpipes] broke down, there was nobody to turn to them.”* (interview R.M., 17/07/2013).

Thus, the tariff may either be still unaffordable compared to the available alternatives, even though all natural sources in Kampala are polluted and do not really provide an alternative. Besides, the tokens may not be available so that people continue buying water from households or water vendors that have a private connection.

A third reason why people may continue using the alternative water supply is that the people without tokens can call upon the service of the caretaker of the pre-paid water meter. Although NWSC’s intention was exactly to “*kick out this middle men*” (interview D.T., 03/07/2013), the caretakers have turned into informal middle men. They know that “*when they vend water, they get some profit from it*”(interview A.B., 28/06/2013). Experience has

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<sup>18</sup> The domestic tariff at the time of the household survey was 13 UGX for 20 liters (NWSC and WSP, s.d.).

indeed demonstrated that informal sector entrepreneurs look for profitable services such as water vending and try to avoid unprofitable informal sectors such as sewerage and sanitation (Otiso, 2003). One of these informal middle men, communicated that water at his pre-paid meter costs 100 UGX per jerry can, which is five times the pro-poor tariff. Hence, if NWSC wants to avoid the world-wide phenomenon that the urban poor pay more than those with private connections (Kulabako et al., 2010) they will have to increase their commitment to make tokens accessible and sensitize people about the pro-poor tariff.

#### 7.5.6 Informal and social institutions

In section 7.2 the practice of the flying toilets has already been mentioned. It was to some extent socially accepted to use these polyethylene bags. However, the project through the use of CBOs has managed to change the social acceptability of this practice. Moreover, the residents are eager to preserve the benefits that result from the installation of the drains. They do no longer accept people that are spoiling this infrastructure by emptying their toilets into the drains, by open defecation in the drain or by dumping of garbage (Baltissen, 2012).

Nonetheless, norms and behaviours are not the same for the entire community and the ‘community’ as such is far from a homogeneous entity (Williams, 2004). The mixed socio-cultural profiles of the communities has been explained by a former project intern:

*“What I noticed when I was still in the project is that those three areas are a bit different. When you look at Kisenyi II, the majority of the people there, they call them Somalis. There are so many of them in Kisenyi II. They have a totally different lifestyle when you compare them to the people in Bwaise III. Bwaise is a collection of everything and everyone. You will find there people of different backgrounds; not only educational, but also cultural. [...] Katwe is largely people from Central Uganda, the Baganda. Of course, they also have their different ways of doing things and their different ways of understanding.”*

(interview H.N., 05/07/2013)

The Somalis have been described by one of the informants as “*very dirty people*” (interview M.A., 03/07/2013) who were mostly present in Kisenyi II and regularly asked the CBOs if they could also use the facilities (Baltissen, 2012). Besides these so-called Somalis,

the *Karamojong*<sup>19</sup> constitute another ethnic group in Kisenyi II that may not be benefitting fully from the facilities. “*They [Karamojong] are just like on transit. They are the people whom you can even not call a meeting with [...] They are very very difficult to handle*” (interview, M.A., 03/07/2013). In the period that the KIEMP project was still in place, the CBO Rise and Win “*made a proposal specifically for those two groups*” (interview, M.A., 03/07/2013). However, since the end of the project, no such activities have been organised due to the lack of funding and support. Thus, it is doubtful at least that these two groups will continue to access the facilities, rendering them functionally unsustainable.

With respect to other institutions, the gender roles should have received more attention, both during the project implementation as during my fieldwork. However, I observed that some toilet facilities have been partially appropriated by the landlord and his tenants (e.g. Figure 13) so that the separation between the stances for male and female users could no longer be ensured. Unfortunately, time constraints made it impossible to further investigate this observation.

## 7.6 **Actors and incentives**

Figure 20 gives an overview of the actors that are or were in one way or another involved in the water and sanitation components of the KIEMP project. Given the fact that the most important stakeholders<sup>20</sup> and their incentives have already been introduced in previous chapters, I will only make some small additional comments to link the incentives to the physical, functional and financial sustainability of the project’s benefits.

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<sup>19</sup> Karamojong is a nomad tribe that lives in the Northeast of Uganda, in an area called Karamoja (personal communication).

<sup>20</sup> The specific consultants that were hired to construct the infrastructure and the software components have not been contacted during the field visit due to time constraints.

**Figure 20** Stakeholders KIEMP project



Source: own summary of the stakeholders of the KIEMP project

First, consultations with the beneficiaries have revealed several factors that are encouraging the use of the implemented infrastructure. These factors include the fear for new cholera outbreaks, the acceptable technology, the increased awareness about other health benefits, the low tariff for pre-paid meters and the disgust from using dirty private-shared ordinary pit latrines (Mugisha and Borisova, 2010). On the other hand, the false believe that spring water is safe, the perceived excessive price for toilet use compared to free alternatives (e.g. open defecation or private-shared pit latrines), the difficulties to acquire tokens, the unfamiliarity with the innovative pre-paid meters, the perceived inaccessibility of the toilet due to appropriation of the landlords and the unreliability of the pre-paid water meters due to regular break downs (Mugisha and Borisova, 2010).

Second, the landlords that donated their land might have been motivated by their ‘good Samaritan’ incentive as well as by the economic stakes that this upgrading of their land could entail, i.e. increased rents and property values and avoided investment and negotiation costs. The fact that the project implementation can reduce the ability of the *mailo* landowner to vacate the land, does not seem to have played a decisive role in the consideration to donate land<sup>21</sup> (Mugisha and Borisova, 2010). The fieldwork has not revealed which incentives drive the landlords commitment to maintain the latrine, but the literature says that it may be beneficial for the maintenance to have the landlord staying within the same compound so that he or she is equally affected by its functionality (Kulabako et al., 2010). In addition, I have not been able to interview one of the landlords of the entirely privatized toilets to ask them about their incentives to privatize their facility.

Third, the caretakers (which are often also the landlord, especially in Bwaise III) of the public toilets have been provided a business opportunity that unfortunately only appears to provide sufficient income in business-oriented locations. The other caretakers that continue performing their role regardless of the fact that it does not make economic sense, can be seen as the real ‘community volunteers’ or – as they prefer to call themselves – ‘good Samaritans’. Even though it is a matter of perception, I believe that this spirit of voluntarism is in large part attributable to the participatory approach that has been adopted in the KIEMP project, as it made the project more effective in raising people’s awareness of the benefits of improved sanitation (Sohail et al., 2005). Nonetheless, the transient nature of the population and the insensitive political actions may in the long term raise the opportunity cost of being a caretaker. From the focus group discussion with the CBOs of Bwaise III it already became clear that these ‘good Samaritans’ are getting slightly discouraged by the many challenges encountered.

Fourth, a significant proportion of the caretakers of the pre-paid standpipes decided to provide protection for the meter which contradicts with the experience in Mozambique where people were thankful for the provided hand pump, but never showed any intention of sustaining it because of the high costs (Breslin, 2003). On the other hand, the emergence of ‘informal middle men’ as explained in previous sections, may indicate that the scarcity of

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<sup>21</sup> However, this factor might have influence the decision of landlords that eventually decided not to donate land.

formal employment has given the caretakers some sort of social legitimacy to extract profit out of the provision of basic necessities to their equally poor neighbours (Huchzermeyer, 2008).

Fifth, *“the temptation to be driven by financial terms”* (interview D.T., 03/07/2013) has for a long period guided the behaviour of NWSC. Only in 2002, the NWSC decided to develop a special program for the poor in which *“the primary interest is not to make money, but [to] deliver a social service”* (interview D.T., 03/07/2013). Besides the fact that the pre-paid meter eliminates the middle man, it also removes the threat of non-payment which was a major concern for the NWSC in informal settlements (Mugisha and Borisova, 2010). Nonetheless, the elimination of the middle man may not have been without consequences as a resident of Kisenyi II told that she had been encouraged by a ‘water meter reader’ to reconnect her private water connection and stop using the pre-paid meters. The sanitation engineer at NWSC was unaware of these practices, but mentioned that the *“some of this staff depend on collecting revenue and being in the field, because their target is to get money, whereas our target is to sort of increase access, an affordable access”* (interview J.O., 16/07/2013). The second threat to sustainability is the fact that little progress has been made in solving the lack of spare parts. One reason might be that these pro-poor meters are mainly funded by donor-countries (e.g. Germany and Belgium), so that neither the donor nor NWSC feels accountable for ensuring the sustainability of the meters.

Sixth, assuming that those with political power are willing to cooperate is often a false assumption, because those with the political power to lead the upgrading project frequently have most to lose from including local stakeholders in the decision-making process (Langford et al., 2005). Since KCCA is governing the city, it has evicted several areas in Kampala (Kirega-Gava, 2012; A new way for Kampala’s KCCA?, 2012) which indicates its ambivalent attitude towards irregular settlements. Nonetheless, the project has been entirely handed over to KCCA (except for the water component) which means that KCCA is responsible for following-up on the project benefits. These follow-up are important, because the project depends mainly on voluntary workers that may *“need someone from outside to follow up”* (interview M.A., 03/07/2013) as part of the carrot and stick approach to ensure sustainability.

Seventh, even the political situation at the national level as affected the sustainability of the project’s benefits. The opposition’s Democratic Party has dominated the local government

structures since president Museveni reinstated competitive party politics. Therefore, president Museveni has tried to make '*devil deals*' with important interest groups in the city (e.g. boda-boda drivers) to support them in their struggle against unfavourable local policies (Goodfellow and Titeca, 2012). The announcement made by president Museveni during election campaigns in 2010, stating that public toilets should be for free, is in fact not so different from the devil deals described in Goodfellow and Titeca (2012). It was an attempt of the president to gain the vote of the urban poor, but as a consequence the urban poor started to adopt new 'politics of survival', i.e. the refusal to pay any user fee. While the 'devils deals' described in Goodfellow and Titeca rendered the KCC dysfunctional, this announcement did the same with the local management systems of these public toilets. This illustrates that the provision of water and sanitation largely depends on the priority setting and the incentive structures of the powerful and is therefore far from a politically neutral activity (Varis and Somlyódy, 1997).



## 7.7 Summary Case study findings

**Table 6** Summary diagnostic framework public toilets

	<b>Structural determinants</b>	<b>Institutional determinants</b>	<b>Actors and incentives</b>
Physical sustainability public toilets	<ul style="list-style-type: none"> <li>High poverty levels cause stealing of infrastructure (e.g. taps) and cleaning material</li> <li>Limited availability of KCCA cesspool vehicles</li> <li>Transient nature of population:               <ul style="list-style-type: none"> <li>No permanent interest of users</li> <li>No permanent user committee</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Institutional transformation KCC to KCCA:               <ul style="list-style-type: none"> <li>Decreased capacity of KCCA divisions in short term due to lack personnel and centralization of power in headquarters</li> <li>Information gap due to inadequate handover</li> <li>Confusions and contradictions responsibilities even within KCCA</li> </ul> </li> <li>Lack of or decreasing capacity of local councils to enforce bylaws and monitor facilities</li> <li>Poor resource collection</li> <li>Lack of planning in settlements limits accessibility KCCA cesspool trucks</li> <li>Unclear responsibility with respect to (big) repairs</li> </ul>	<ul style="list-style-type: none"> <li>Political incentives compete with incentives for service delivery (e.g. announcement of president)</li> <li>Lack continuity of project staff</li> <li>KCCA shows little political will to empty KIEMP toilets, and certainly not for free</li> </ul>
	<ul style="list-style-type: none"> <li>Physically acceptable technology selection</li> <li>Economic development parishes brings new users to the parish that pay per visit</li> </ul>	<ul style="list-style-type: none"> <li>Land donations create sense of ownership</li> <li>Formalized terms of references for Local Councils</li> <li>Establishment of bylaws</li> <li>Training of O&amp;M skills during project</li> </ul>	<ul style="list-style-type: none"> <li>Several ‘good Samaritans’</li> <li>Relatively favourable (national) policy context</li> <li>Co-management model in line with Paris Declaration</li> </ul>
Functional sustainability public toilets	<ul style="list-style-type: none"> <li>Heterogeneous community</li> <li>Transient nature of population:               <ul style="list-style-type: none"> <li>Unawareness public nature facilities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Unaffordable user fee</li> <li>Market-driven displacement: increased cost of living for tenants due to increases in rent</li> <li>No accountability to beneficiaries creates suspicion</li> <li>Capacity of sensitizing CBOs too limited to keep transient population sensitized and mobilized without external support</li> </ul>	<ul style="list-style-type: none"> <li>No willingness to pay the agreed user fee</li> <li>Tendency to privatization of facilities by landlords</li> <li>Confusion concepts of community toilet versus public toilets</li> </ul>
	<p>Integrated nature of the project stimulates economic growth (commercialization) more income-generating opportunities</p>	<ul style="list-style-type: none"> <li>Level of user fee negotiated among beneficiaries</li> <li>Sensitization and behavioural change</li> <li>Complementing income generating activities (charcoal briquettes)</li> <li>CBOs understand heterogeneity of community and adapt their sensitization activities to local realities</li> </ul>	

**Table 7** Summary diagnostic framework pre-paid meters

	<b>Structural determinants</b>	<b>Institutional determinants</b>	<b>Actors and incentives</b>
Physical sustainability prepaid standpipes	<ul style="list-style-type: none"> <li>• Connected to same water distribution network, thus doesn't provide alternative to case of low pressure</li> <li>• No local producer of spare parts (in South Africa)</li> </ul>	<ul style="list-style-type: none"> <li>• Burdensome public procurement</li> <li>• Lack framework contract with producer spare parts</li> <li>• Lack community involvement in O&amp;M</li> </ul>	<ul style="list-style-type: none"> <li>• Lack incentives for good O&amp;M due to monopoly position with respect to water provision</li> </ul>
	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Local residents have been assigned caretaker roles to prevent misuse of the machines</li> </ul>	
Functional sustainability prepaid standpipes	<ul style="list-style-type: none"> <li>• Availability free water alternatives (e.g. protected springs)</li> <li>• Transient nature population: unawareness about prepaid meters and limited diffusion of tokens</li> <li>• Integrated nature KIEMP project, especially roads, raises property values and rents</li> </ul>	<ul style="list-style-type: none"> <li>• Market-driven displacement:                             <ul style="list-style-type: none"> <li>– Water meters remain on locations where the slum dwellers no longer live</li> <li>– New residents need to incur transportation costs to register for the token</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Caretakers standpipes become economic stakeholders, i.e. informal 'middle' men</li> <li>• Public meters possibly less socially accepted than private water taps</li> </ul>
	<ul style="list-style-type: none"> <li>• Can be transferred to other locations if necessary due to displacement of initial residents</li> </ul>	<ul style="list-style-type: none"> <li>• IEC strategy for sensitization conducted by NWSC</li> <li>• Low pro-poor tariff applicable for prepaid meters</li> <li>• Prepaid increases efficiency of cost-recovery for NWSC</li> <li>• Complementing income generating activities to limit displacement (charcoal briquettes)</li> </ul>	<ul style="list-style-type: none"> <li>• Tax on domestic water connection makes private tap water relatively more expensive</li> </ul>

## 7.8 Action framework

While the previous section tried to diagnose the sources of the different threats to sustainability, the action framework is supposed to translate these findings into project design and actions to better meet the needs of the urban poor (WSP, 2011). The proposed actions range from attempts to adjust strategies and operations within the existing space for change to attempts to expand the space for change (Fritz et al., 2009). In what follows, incremental and transformative measures are presented that can provide a way forward towards more sustainable urban upgrading.

### 7.8.1 Facing the physical sustainability threats

1. The time, effort and expenses incurred to mobilize the community within the KIEMP has clearly been beneficial for the physical sustainability (e.g. relatively rare vandalism of facilities) and constitutes an example for future projects. However, more bylaws or more awareness of existing bylaws that relate to the O&M of the pre-paid water meters and the toilet facilities should be created in order to complement the bylaws regarding the drains, solid waste management and garbage pickups that are already in place. However, the contribution of this bylaws to the physical sustainability will largely depend on the capacity of the local councils to enforce them which has proven to be extremely challenging in the three parishes. Regular capacity-building activities targeted to local councils and committees are therefore needed.
2. Behavioural change communication is also crucial in the creation of incentives that are beneficial for the physical sustainability of the project benefits and should start before the construction of the infrastructure. Moreover, to secure the long term benefits of improved sanitation it should be recognized that maintaining the cleanliness of shared toilets is just as crucial as the personal, domestic and environmental hygiene which receives most of the attention nowadays (Tumwebaze et al., 2014). Increasing the sensitization activities related to cleanliness should trigger the willingness of the users to contribute to adequate toilet management.
3. KIEMP has also proven that involvement of local organizations, in particular CBOs, is necessary, but not sufficient to guarantee the sensitization of the transient population. If the CBOs are to continue their activities, they require more permanent financial and

technical support, because the capacity-building has not resulted in their sustained empowerment. The Water and Sanitation Forum proposed by the KCCA is therefore a step in the right direction. Nonetheless, the required registration procedures may need to be relaxed to ensure the access to this support network for the CBOs that are composed by low-income members.

4. More cooperation and political commitment of local government and administrations is crucial to fulfil their role as facilitators of urban development (Langford et al., 2005). First, KCCA needs to further enable communities to contribute to urban management on a regular and institutionalized basis. Moreover, they have to consider partnerships with the emptying companies of the private sector to increase the quality of their service delivery. Second, there is still need for the NWSC to invest in asset maintenance and service delivery (Kulabako et al., 2010). In particular, they are urged to speed up the search for a solution for the lack of spare parts before scaling up the project to other parishes in Kampala<sup>22</sup>.

#### 7.8.2 Facing the functional sustainability threats

The inability and unwillingness to pay for the provided services and the displacement that results from the increases in the rents seriously hampers the functional sustainability of the urban upgrading project. In order to deal more effectively with these threats, several actions can be taken:

1. The emergence of ‘informal middle men’ who are compromising the access to safe water at the pro-poor tariff should be tackled. One potential way is to assist these entrepreneurs to invest into other business (Huchzermeyer, 2008). Another potential solution is for NWSC to recruit these caretakers as vendors for the selling points that NWSC is gradually implementing in these informal settlements.
2. Communities should through a participatory process adjust the user fees of the toilets based on their experiences of the last five years. They should be guided by technical staff

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<sup>22</sup> According to one of the engineers at NWSC, Germany has recently decided to invest 200.000 EUR in pre-paid water meters (interview D.T., 03/07/2013). It is highly advisable that BTC and NWSC clearly communicate the experiences of the KIEMP project with this donor.

to ensure that they are better adapted to the affordability of the beneficiaries so that the larger customer base can ensure the affordability of the emptying services and the repairs.

3. Efforts should be made to increase the fallback position of the targeted population to face the market forces. The provision of income-generating activities, such as the charcoal briquettes in the KIEMP project will be a key element in achieving this and should therefore receive more attention in this upgrading context where the emphasis is all too often on purely physical achievements. In addition, the vulnerability to sudden increases in the rent can also be reduced through the provision of financial services or through the set up of flexible rent-collection programs that allow tenants to spread their payments (Otiso, 2003). In the KIEMP project, one of the twelve CBOs provided savings schemes. The success of this CBO that was operating in Katwe I indicates that it is important to engage these types of CBOs besides the CBOs that are conducting sensitization activities directly related to the implemented infrastructure.
4. While it does no longer provide a way forward for the KIEMP project, this case has shown that the trade-off between large coverage and integrated area-specific interventions is far from straightforward and should be considered more carefully. In particular, infrastructure that triggers economic growth (e.g. roads) may offset the achievements made in the provision of basic services (e.g. water and sanitation). While the integrated approach may indeed have a larger impact through the widening of income-generating opportunities, the chances are considerable that the overall impact of the poorest within this area will be negative due to the disruption costs of market-driven displacement. Incremental processes should be promoted in integrated upgrading projects to give the initial beneficiaries time to adapt and reinforce themselves against upcoming market pressures (Durand-Lasserve, 2007). However, the fact that the short-term donor funded interventions often aim to create model environments overnight, significantly limits the scope to adopt such an incremental approach (Langford et al., 2005).
5. The capacity of the local councils to enforce bylaws and land agreements should also be increased to avoid further privatization of the project infrastructure which poses a significant threat to the coverage of the project.

6. If urban upgrading is to improve the life of the poor instead of the area in itself, it needs to outmanoeuvre the interests of the lower middle-class households that see the upgraded slum area as their ideal opportunity to acquire home-ownership in a market where affordable housing for middle-income households is scarce (Huchzermeyer, 2008). Thus, while targeting resource allocation for service delivery exclusively at slum dwellers may seem attractive, it unleashes intense competition and slum dwellers are likely to end up at the losing end. Therefore, more efforts are needed to ensure the right to affordable housing for low-income as well as middle-income so that outside pressure on upgraded areas can be reduced (Kool et al., 1989). In Kampala, the KIEMP project could be seen as a pilot project that is viable for scaling up towards other parishes if the particular lessons learnt are taken into account.
  
7. When looked at more transformative ways forward, some form of tenure regularization seems a necessary step to ensure security of tenure. Alternatives to individual land ownership such as land sharing agreements, whereby land titles are held in trust, could help to counter the commodification of land (Durand-Lasserve, 2007; Langford et al., 2005). While the provision of collective rights as opposed to individual ownership rights also seem a valuable solution in the setting of Kampala, the complexity of the dual tenure system in Kampala does not allow me to give more specific recommendations within the scope of this dissertation.
  
8. Finally, the most transformative way forward might be to make slum dwellers aware of their housing rights to the extent that they demand upgrading interventions that are tuned to the tenants' position in the wider rental and housing market (Huchzermeyer, 2008). In order to achieve this level of awareness, more attention and effort will have to go to the establishment of truly participatory development processes.

## **8 Conclusions and policy recommendations**

In this concluding chapter, I try to answer the research questions that were proposed in the introductory chapter of this dissertation. The first research question related to the current physical condition of the public toilets and the prepaid water meters that were implemented under the KIEMP project. It can be summarized that the public toilets are plagued by many defects, especially the infrastructure components that depend on water supply. In spite of the fact that the toilets have to be emptied quite rarely, it is the main concern of the caretaker. Due to the struggles encountered to raise sufficient funds, especially for toilets in residential zones, caretakers have focused on cleaning, management and crisis repairs. Given the fact that repairs have been conducted at the time of the finalization of the project in order to handover the toilet infrastructure in an optimal state to the community, the current physical condition of the toilet facilities have worsened. Nonetheless, the toilets are physically still in a condition that is significantly better than the alternative sanitation options.

Regarding the pre-paid water meters, more than 40% of the meters were not functioning mainly due to a lack of spare parts. The lack of spare parts has already emerged during the project and it does not seem that the donor exit has exacerbated this problem.

The second research question related to the functional sustainability of the two infrastructure components. Regarding the KIEMP public toilets, the level of use is significantly compromised due to the inability and unwillingness to pay for the service. Moreover, the public toilets seem to benefit mainly the landlord and his tenants, even though it is not only made clear in a couple of cases by the construction of fences.

The pre-paid meters, on the other hand, are in theory still accessible to all users that have obtained a token. However, while these tokens were distributed during the KIEMP project, a significant proportion of the population currently living in these areas do not their own token. Obtaining them nowadays requires registration at the NWSC offices which may entail an additional barrier to their access. Without tokens, people can still fetch water from the pre-paid meter if they are able to pay for the additional fee that is levied by some of the caretakers of the pre-paid water meters, which wipes out the benefits of the pro-poor tariff that is applicable for the water from these meters.

Research question three relates to community-participation as determinant of the aforementioned sustainability outcomes. Community participation has taken centre stage in the KIEMP project as opposed to previous experiences in which the potential of low-income communities was often underestimated (Sohail et al., 2005). The commitment towards participatory development has been demonstrated through the engagement of local residents for the O&M of the toilet facilities, the donations of land by local landlords, the involvement of CBOs for bringing social mobilization and behavioural change activities to the community and the financial contributions for the provided services.

As had been expected from the literature review, this participatory approach has undoubtedly built organisational capacities of the community members and has increased the sense of ownership of the facilities (Imparato and Ruster, 2003; Khwaja, 2004; Nitti and Dahiya, 2004; Nour, 2011). Unfortunately, the concerns about who gets empowered and who gets to own the facilities that were already ventilated in the academic literature (Pandolfelli et al., 2007; Sahely et al., 2005; Werlin, 1999) have also manifested themselves in the form of (partial) appropriation of project benefits. Moreover, the empowerment of the CBOs does not seem sustainable as lack of permanent funding and support is rapidly affecting their activity level.

Regarding the financial contributions from the beneficiaries, this case tends to provide evidence that the urban poor are not willing to pay for sanitation services despite significant investment in sensitization activities. However, refusal to pay for the toilet may be fuelled by the inability to pay as well as by the belief – fuelled by an announcement by the president – that they are not supposed to pay.

The final research question refers to the impact of the broader institutional and political context on the physical and functional sustainability of the water and sanitation components. The first factor has been the complex tenure system and the scarcity of housing opportunities for both the low- and middle-income households of Kampala. As has been already identified in the literature, this increases the number of stakeholders that are interested in the upgraded area which – through market forces – results in increased rents (Huchzermeyer, 2008; Langford et al., 2005). The market-driven displacement of the poorest members of the community, mostly tenants has also taken place in the targeted parishes. However, this effect was observed most in Katwe I and Kisenyi II due to their advantageous location close to the



city centre and due to commercialization that followed the construction of the KIEMP roads and drains. Consequently, a large proportion of the targeted beneficiaries is no longer benefiting of the project. On the contrary, it is expected that they may have incurred significant disruption costs which is the main argument against slum clearance and relocation strategies.

The second institutional factor has been the subversion of the local government from KCC into KCCA. While Sohail et al. (2005) had already identified the overlap of responsibilities and the lack of coordination between different actors as some of the most prevalent constraints to sustainable O&M of urban infrastructure, it can be argued that the institutional shift has mainly exacerbated these constraints. Misunderstandings and lack of coordination is rampant with respect to the emptying, repairing and monitoring of the public toilets. Moreover, in the context of the KIEMP project it does not appear that the alteration of the power relations within the local government has been beneficial for the urban poor.

Even though an extensive list of recommendations has already been provided under the action framework of the political economy analysis, some of them deserve to be mentioned twice. First, roles and responsibilities with respect to the emptying, repairs and monitoring should be made clear and should be regularly communicated to the involved actors. Second, actions should be taken to ensure the availability of spare parts and decrease the vulnerability to the monopolist manufacturer, before further scaling-up of the pre-paid water system. Third, KCCA should provide support for the CBOs that performed well under the KIEMP or at least relax the requirements for participation in the Water and Sanitation Forum. Fourth, the capacity of the KCCA division offices should be reinforced so that they can take up their responsibilities.

Future studies on the sustainability of project funded urban upgrading are also very much needed to crosscheck the validity of the findings presented in this case. projects like the KIEMP project in Kampala are the means in the effort to achieve the long-term goals of development assistance (Ostrom et al., 2002). Their sustainability is therefore essential and requires more attention. Further, more research is needed on the impact of market-driven displacement as opposed to forced eviction on the life of slum dwellers.

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## **10 Appendix: List of informants**

Ineke Adriaens	Former BTC Uganda – KIEMP project team
Hannah Nayoga	Former BTC Uganda – KIEMP project team
Emmanuel Kizito	Former KIEMP project manager/engineer
Molly Akello	Former Technical Staff and Focal Person (Kisenyi II)
Rose Kato	BTC Uganda
Nebeyu Shone	BTC Uganda
Charles Tumwebaze	KCCA
James Semuwemba	KCCA – sanitation engineer
Jude Byansi Zziwa	KCCA – sanitation engineer
Semakula Axsam	KCCA – Operations health department
Dennis Taremwa	NWSC engineer
John Bosco Otema Adonga	NWSC engineer (M&O)
Harriet Mudondo	KCCA – Gender and community development
Rose Mwambazi	CIDI
Kule Yosia	SSA – UHSNET
Andrew Amara	Researcher on water supply in Kampala
<b>Katwe I</b>	
Bbuye Abdu	Focal Person
Lukumbir Kabi	Chairman
Allen Lutaaya	KCCA – Ward Administrator Katwe
Sselwada Robinson	KCCA - Leader of village health workers Makindye
Asadu Muwonge	Caretaker KIEMP toilet and water meter
Janet Kironde	Caretaker KIEMP toilet
Musisi Kakande	Caretaker KIEMP toilet
Ntongo Dorethy	Caretaker KIEMP toilet
Nanyondo Hariima	Caretaker KIEMP toilet (ringroad zone)
Tanywa Flavia	Caretaker water meter + Kwagalana women association
Sarah Kabi	Caretaker water meter
Bothia	Resident
Patrice Violah	Resident
Naluja Zalitha	Resident

Musoke Charles	Mechanic working in Katwe
Lukyamuzi Charles	Working in Katwe, not resident

### **Kisenyi II**

Haji Juma Bbosa	Focal Person
Hassifa	Community leader
Pasi Kali	Cleaning staff public toilet (PT 02-02C)
Tegen Isima	Director of studies St – Athanasius primary school
Namudu	Caretaker public toilet (Mbiro zone)
Bahati Shellinah	Rise and Win (CBO)

### **Bwaise III**

Maurice Merewoona	Focal Person
Mr. Soka	Chairman
Angee Jackline	KCCA Kawempe Division
Andrew Kiwanuka Mubiru	KCCA Personal Assistant Kawempe Division Mayor
Kizito Regina	Member of PHECOD
John Kisembo	Member of PHECOD and village health worker
Florence Semakula	Member of WOMEDO
Kimbugwe Muhammed	Member of PEDDA
Nakitoo Rithah	Member of PEDDA
Mukasa Zaidi	Member of Enviro serv-Uganda
Kigongo Joseph	Member of Enviro serv-Uganda
Damulira Sullaimani	Caretaker KIEMP toilet
Vikta Nankanja	Caretaker KIEMP toilet
Semanda Nalongo	Caretaker KIEMP toilet
Nanjase Nola	Caretaker KIEMP toilet
Nanyanzi Norah	Caretaker KIEMP toilet
Jalia Namudala	Caretaker KIEMP toilet (St. Francis zone)
Nakitende Bitamiisi	Caretaker (Plan International toilet)
Tomusange Hakim	Resident (user Plan International toilet)
Mugasha Abiaz	Resident
Nakabugo Kevin Nnaalongo	Resident
Kasuabuli Steven	Resident (Bokasa zone)

Nakalem Night Benardette	Resident (Bokasa zone)
Luyima Ismail	Resident
Aisha Beka Nalukwago	Resident
Nnaalongo Nakimera	Resident
Nakintu Hajarah	Resident (St. Francis zone)