

# SUSTAINABILITY OF A WATER AND SANITATION PROJECT IN KAMPALA SLUMS: INSIGHTS FROM A PROBLEM-ORIENTED POLITICAL ECONOMY ANALYSIS

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## Résumé

Dès l'adoption des Objectifs du Millénaire pour le développement (OMD), l'accès à l'eau et l'assainissement sont deux des questions importantes sur l'agenda du développement international. Néanmoins, les taux de réussite des projets d'eau et d'assainissement restent faibles, surtout en termes de durabilité. Le présent article vise à contribuer à une meilleure compréhension des performances de durabilité. En combinant des données primaires et secondaires, l'article donne un aperçu d'une analyse de la politique de l'économie (PEA) axée sur les problèmes de la durabilité de la composante de l'eau et de l'assainissement du Projet intégré de gestion environnementale de Kampala (KIEMP). Bien que la PEA soit relativement exceptionnelle dans le secteur de l'eau et de l'assainissement, et surtout appliquée au moment de la prise de décision initiale concernant l'investissement, nous soutenons que la PEA est aussi appropriée pour exposer les facteurs qui agissent sur la durabilité des résultats. Nos résultats à nous mettent en évidence qu'un an après la fin du projet, 40% des robinets sont hors service et les installations sanitaires sont sujettes à de nombreux défauts, alors qu'il y a une diminution de la volonté et/ou de la capacité de payer des frais d'utilisation. De l'emploi de la PEA, il ressort que la manière dont le projet a été conçu pour faire face aux facteurs contextuels, tels que la dynamique des populations, la stabilité des institutions politiques et les incitations des parties prenantes, se révèle cruciale. De plus, l'analyse dévoile pourquoi la participation des parties locales en elle-même n'est pas un élément suffisant pour des résultats durables. Nos résultats appellent à l'attention accrue pour la durabilité dans la conception, le suivi et l'évaluation des projets d'eau et d'assainissement.

## 1. INTRODUCTION

Rapid population growth, migration flows and the growing importance of cities as economic centres have in many urban areas fuelled the formation and growth of slums.<sup>1</sup> In 2012, the estimated number of urban slum dwellers in developing regions was 863 million, accounting for 32.7% of the urban population.<sup>2</sup> Contemporary policy discourse tends to focus on in-situ upgrading of slum areas as a way of providing the urban poor with citizenship rights and basic infrastructure and services, including water and sanitation.<sup>3</sup> Efforts to increase (and monitor) access to improved water and sanitation (WATSAN) have mainly focused on new projects to increase physical availability rather

<sup>1</sup> UNFPA, "State of the World Population 2007: Unleashing the Potential of Urban Growth", New York, UNFPA, 2007.

<sup>2</sup> UN-HABITAT, "State of the World's Cities 2012/2013: Prosperity of Cities", Nairobi, UN-HABITAT, 2013.

<sup>3</sup> TURLEY, R. et al., "Slum Upgrading Strategies Involving Physical Environment and Infrastructure Interventions and Their Effects on Health and Socio-Economic Outcomes (Review)", *Cochrane Database Systematic Review*, 2013.

than on sustaining existing services.<sup>4</sup> This preference for hardware over operation and maintenance (O&M) explains to some extent the low success rates of water and sanitation projects, particularly in terms of sustainability.<sup>5</sup> The World Bank's Independent Evaluation Office (OED) has, for instance, demonstrated that less than half of the World Bank's WATSAN projects were likely to be sustainable, referring to the "ability to provide services over the foreseeable future".<sup>6</sup>

While the importance of sustainability in project design and evaluation is increasingly acknowledged, sustainability criteria often receive less attention than other evaluation criteria such as effectiveness, efficiency, impact. This is partly due to the fact that sustainability is generally assessed ex-post when projects are completed and budgets spent.<sup>7</sup> Additionally, as discussed in Blanchet and Girois (2013) and Schreier et al. (2008) there also remain definitional issues with different authors and agencies using different definitions of sustainability.<sup>8</sup> This lack of consensus on the meaning of this multidimensional concept and how to make it operational has also inhibited data collection and analysis on what exactly facilitates and/or hinders sustainability.<sup>9</sup>

Our article aims to contribute to closing the gap by analysing in more depth the sustainability of the WATSAN component of the Kampala Integrated Environmental Planning and Management Project (KIEMP). Drawing upon Ostrom et al. (2002), we define sustainability as 'the longevity<sup>10</sup> of benefits provided to a pre-defined target population by a development project'.<sup>11</sup>

<sup>4</sup> KWIRINGIRA, J., ATEKYEREZA, P., NIWAGABA, C., GÜNTHER, I., "Descending the Sanitation Ladder in Urban Uganda: Evidence from Kampala Slums", *BMC Public Health*, Vol. 14, 2014, p. 624-634.

<sup>5</sup> MCCONVILLE, J.R., MIHELICIC, J.R., "Adapting Life-Cycle Thinking Tools to Evaluate Project Sustainability in International Water and Sanitation Development Work", *Environmental Engineering Science*, Vol. 24, No. 7, 2007, p. 937-948; SOHAIL, M., CAVILL, S., COTTON, A., "Sustainable Operation and Maintenance of Urban Infrastructure: Myth or Reality?", *Journal of Urban Planning and Development*, Vol. 131, No. 1, 2005, p.39-49.

<sup>6</sup> WORLD BANK, "Efficient, Sustainable Service for All? An OED Review of the World Bank's Assistance to Water Supply and Sanitation", Washington, 2003, p. 2.

<sup>7</sup> SCHEIRER, M.A., HARTLING, G., HAGERMAN, D., "Defining sustainability outcomes of health programmes: illustrations from an online survey", *Evaluation and Program Planning*, Vol. 31, 2008, p. 335-346.

<sup>8</sup> BLANCHET, K., GIROIS, S., "Selection of sustainability indicators for health services in challenging environments: balancing scientific approach with political engagement", *Evaluation and Program Planning*, Vol. 38, 2013, p. 28-32; SCHEIRER, M.A. et al., *op. cit.*

<sup>9</sup> CHELIMSKY, E., "Public-Interest Values and Program Sustainability: Some Implications for Evaluation Practice", *American Journal of Evaluation*, Vol. 35, No. 4, 2014, p. 527-547; KATUKIZA, A. et al., "Selection of Sustainable Sanitation Technologies for Urban Slums—a Case of Bwaise III in Kampala, Uganda", *Science of the total environment*, Vol. 409, No. 1, 2010, 52-62; MCCONVILLE, J.R., MIHELICIC, J.R., *op. cit.*

<sup>10</sup> Notions such as 'longevity' or 'foreseeable future' are not made operational in definitions of 'sustainability' nor in KIEMP project documents.

<sup>11</sup> OSTROM, E. et al., "Aid, incentives and sustainable development: an institutional analysis

We mainly focus on physical, functional and financial<sup>12</sup> dimensions, referring more specifically to i) the ability to keep project benefits in the same physical condition as at project completion (physical)<sup>13</sup> ii) the continued fulfilment of the initial purposes of the project benefits, expressed in terms of level of use, coverage and accessibility for the targeted population (functional)<sup>14</sup> and iii) the ability to cover incurred costs even after phasing out of initial partners (financial).<sup>15</sup>

Echoing the growing acknowledgement that failure to achieve desired human development outcomes is not simply a matter of physical availability but may also have root causes in institutions, political choices, power, poverty and inequality,<sup>16</sup> we turn to political economy analysis (PEA) in which these factors feature centrally.<sup>17</sup> As discussed in Harris et al. (2011), political economy analysis (PEA) is essentially dealing with the “*interaction of political and economic processes in a society: the distribution of power and wealth between different groups and individuals and the processes that create, sustain and transform these relationships*”.<sup>18</sup>

Over time, PEA has become increasingly popular using a multitude of frameworks<sup>19</sup> and applications to different sectors and levels (country, sector, specific issues). While PEA is still relatively exceptional in the water and sanitation sector<sup>20</sup> and predominantly focused on initial investment decisions, our study shows that it is equally valuable to apply PEA to explore which factors affect project sustainability.

In line with Harris et al. (2011) we opt to apply the adapted version of the problem-driven governance and political economy analysis framework

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of international development cooperation”, *Sida Studies in Evaluation*, Stockholm, SIDA, 2002, p. 8.

<sup>12</sup> Sometimes referred to as economic dimension of sustainability.

<sup>13</sup> KHWAJA, A.I., “Is Increasing Community Participation Always a Good Thing?”, *Journal of the European Economic Association*, Vol. 2, No. 2-3, 2004, p. 427-436.

<sup>14</sup> KHWAJA, A.I., *op. cit.*; DEMPSEY, N., Bramley, G., Power, S., Brown, C., “The social dimension of sustainable development: Defining urban social sustainability.”, *Sustainable Development*, Vol. 19, No. 5, 2011, p. 289-300.

<sup>15</sup> MCCONVILLE, J.R., MIHELICIC, J.R., *op. cit.*; MUGISHA, S., BORISOVA, T., “Balancing Coverage and Financial Sustainability in Pro-Poor Water Service Initiatives: A Case of a Uganda Project”, *The Engineering Economist*, Vol. 55, No. 4, 2010, p. 305-327.

<sup>16</sup> HARRIS, D., KOOY, M., JONES, L., “Analysing the Governance and Political Economy of Water and Sanitation Service Delivery”, *Working Paper*, London, ODI, 2011; WATKINS, K., “Human Development Report 2006-Beyond Scarcity: Power, Poverty and the Global Water Crisis”, *Human Development Reports*, UNDP, 2006.

<sup>17</sup> WSP, “The Political Economy of Sanitation: How Can We Increase Investment and Improve Service for the Poor? Operational Experiences from Case Studies in Brazil, India, Indonesia, and Senegal”, Nairobi, World Bank, 2011.

<sup>18</sup> HARRIS, D. et al., *op. cit.*, p. v.

<sup>19</sup> Well-known examples include DFID’s Drivers of Change (DoC) approach and Ostrom’s Institutional Analysis and Development Framework (IAD).

<sup>20</sup> HARRIS, D. et al., *op. cit.*

initially developed by Fritz et al. (2009).<sup>21</sup> This PEA framework essentially consists of three steps, i.e. problem identification, diagnostic framework and action framework. The first step involves the identification of the problem(s) to be addressed (i.e. lack of sustainability), while the second step exposes the linkages between core components of PEA, namely structural features, institutions and actors, and the earlier identified problem(s). This exposition of underlying factors of influence then feeds into the formulation of an action framework which sets out operational implications and feasible options and entry points to bring about change.<sup>22</sup> Given the limited relevance of an action framework for the (finalised) project under study, we mainly focus on the first two steps. The applied problem-driven PEA differs from other, often more normative, government assessments in that it tends to be more diagnostic using observed realities as an entry point.<sup>23</sup> This is exactly what our PEA does as it starts from the observed limited sustainability of the water and sanitation components of the KIEMP project, a multi-sectoral project financed by Belgian development cooperation (BTC) and co-managed with the local Government of Kampala.

More details about the project and data collection are provided in sections 2 and 3 respectively. Sections 4 and 5 focus on the PEA application and present findings alongside the two key features of problem-oriented PEA, i.e. problem identification (section 4) and diagnosis (section 5). The article concludes with a discussion and synthesis of the main findings and selected policy implications.

## 2. THE KAMPALA INTEGRATED ENVIRONMENTAL PLANNING AND MANAGEMENT PROJECT

The KIEMP project is an urban upgrading project which was implemented from 2006 until 2012 to improve the quality of life in three Kampala slum areas, namely Katwe I, Kisenyi II, and Bwaise III.<sup>24</sup> Using a total budget of approximately € 6.6 million, each of these parishes were provided with a different mix of infrastructure components (sanitation facilities, water taps, drains and roads) and 'software' components, such as social mobilisation and

<sup>21</sup> FRITZ, V., KAISER, K., LEVY, B., "Problem-Driven Governance and Political Economy Analysis: Good Practice Framework", Washington, World Bank, 2009.

<sup>22</sup> HARRIS, D. et al., *op cit.*; WSP, *op. cit.*

<sup>23</sup> HARRIS, D. et al., *op. cit.*

<sup>24</sup> In the remainder of the article, Katwe, Kisenyi and Bwaise will be used to refer to Katwe I, Kisenyi II and Bwaise III respectively.

behavioural change communication.<sup>25</sup> Each of the 35 sanitation facilities<sup>26</sup> (9 in Katwe, 12 in Kisenyi, 14 in Bwaise) are composed of four pit latrines, two bathrooms, one urinal and a water tap constructed on land donated by community members, while each of the 33 water facilities (14 in Katwe, 19 in Bwaise) consists of public water standpipes with a pre-paid technology which were managed by the National Water and Sewerage Cooperation (NWSC) in line with their pro-poor strategy.

The KIEMP project is an interesting case because some of its key features, more specifically its strong stakeholder participation and the unforeseen institutional reform of the local implementing partner. Stakeholder participation and institutional stability have repeatedly been recognised in the academic literature as important drivers of sustainability.<sup>27</sup> First, proponents of stakeholder participation have argued that it stimulates the continuity of development efforts through improved effectiveness, efficiency, feasibility, local ownership, financial sustainability and empowerment.<sup>28</sup> However, simplistic assumptions regarding its efficacy, practicality, effect on sustainability and desirability in general have increasingly been problematized in the literature.<sup>29</sup> Second, institutional stability has also regularly been linked to sustainability, referring more specifically to ‘institutionalization’ or ‘routinization’ which denote continuation of activities within an organization.<sup>30</sup> In the project under

<sup>25</sup> ADRIAENS, I., “Improving Access to Sanitation in Kampala Slums - the Case of KIEMP” in East Africa Practitioners’ workshop on pro-poor urban sanitation and hygiene (Kigali: IRC International Water and Sanitation Centre, 2011); BALTISSSEN, G., “From a Slum to a Little Bit Slum: Capitalization Study of the Kampala Integrated Environmental Planning and Management Project (KIEMP), Uganda”, *KIEMP capitalization study*, 2012.

<sup>26</sup> Construction was done by a private contractor at an average cost of 7.500€ per facility. ADRIAENS, I., *op. cit.*

<sup>27</sup> CHELIMSKY, E., *op. cit.*

<sup>28</sup> CIDA, “Assessing Sustainability”, *What We’re Learning About*, Vol. 2, 2002; GULYANI, S., CONNORS, G., “Urban Upgrading in Africa: A Summary of Rapid Assessments in Ten Countries”, Washington DC, World Bank, 2002; IMPARATO, I., RUSTER, J., “Slum Upgrading and Participation: Lessons from Latin America” in WORLD BANK, *Directions in Development Series*, 2003; KHWAJA, A.I., *op. cit.*; LANGFORD, M., QUITZOW, L., ROAF, V., “Human Rights and Slum-Upgrading: General Introduction and Compilation of Case Studies”, Geneva, COHRE, 2005; LYONS, M., SMUTS, C., STEPHENS, A., “Participation, Empowerment and Sustainability: (How) Do the Links Work?”, *Urban studies*, Vol. 38, No. 8, 2001, p. 1233-1251; SCHÜBELER, P., *Participation and Partnership in Urban Infrastructure Management*, Washington, World Bank, 1996, p. 101.

<sup>29</sup> CLEAVER, F., “Institutions, Agency and the Limitations of Participatory Approaches to Development,” in COOKE, B., KOTHARI, U. (eds), *Participation: The New Tyranny?*, London, Zed Books, 2001, p. 36-55; CLEAVER, F., TONER, A., “The Evolution of Community Water Governance in Uchira, Tanzania: The Implications for Equality of Access, Sustainability and Effectiveness”, *Natural Resources Forum*, Vol. 30, No. 3, 2006, p. 207-218.

<sup>30</sup> PLUYE, P., POTVIN, L., DENIS, J.-L., “Making public health programs last: conceptualizing sustainability”, *Evaluation and Program Planning*, Vol. 27, 2004, p. 121-133; SCHEIRER, M. A., “Is sustainability possible? A review and commentary on empirical studies of program

study, the change in Kampala's local government could have posed a significant threat to the continuation of KIEMP related activities while stakeholder participation has been implemented through an array of formats (see *infra*), making this case ideal to explore the effects of both institutional instability and stakeholder participation on sustainability.

### 3. RESEARCH METHODOLOGY AND DATA COLLECTION

The analytical framework or object of this study is a problem-oriented political economy analysis of the sustainability of the water and sanitation components of the KIEMP project in Kampala, Uganda. The study adopts a case study approach which is generally preferred if 'how' and 'why' questions need to be answered when studying contemporary phenomena within a real-life context.<sup>31</sup>

Our study draws upon a combination of primary and secondary data. Academic and grey literature was reviewed, as well as internal project documents, while primary data were collected by the first author during field research in June-July 2013, which was one year after project completion. To gain insights from differently positioned actors, respondents were selected through purposive sampling to achieve a sufficiently large sample from each stakeholder group and parish. In particular, data were gathered from 65 individuals<sup>32</sup> who occupied diverse roles and responsibilities within the project (e.g. members of the former KIEMP management team, KCC(A) staff, caretakers of facilities, NWSC, beneficiaries, CBOs, community leaders). The qualitative data were collected either through semi-structured interviews (20 interviewees of which 2 participated in the focus group), focus group discussion<sup>33</sup> (13 participants) or informal conversations<sup>34</sup> (37 interviewees of which 3 participated in the focus group) conducted during field visits. Additional information regarding the physical condition of the water and sanitation facilities was collected through field observations of all remaining toilet facilities and 73% of the initially constructed water standpipes. Due to the fact that data were collected after project completion, the researcher depended primarily on vague maps and instructions from inhabitants to locate the facilities. Locating the water standpipes proved particularly difficult, because of their relatively small size and the fact that some standpipes had been removed and/or replaced from their

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sustainability", *American Journal of Evaluation*, Vol. 26, No. 3, 2005, p. 320-347.

<sup>31</sup> YIN, R.K., *Case study Research: Design and Methods*, 4<sup>th</sup> edition, California, Sage, 2009.

<sup>32</sup> Katwe: 16 informants (8 women, 8 men), Kisenyi: 6 informants (1 female, 5 males), Bwaise: 27 informants (14 females, 13 males), project-level: 16 informants (6 females, 10 males).

<sup>33</sup> The focus group was conducted in Bwaise III and consisted of 8 participants, including the chairman, a village health worker and members from 5 different CBOs.

<sup>34</sup> Informal conversations were mainly held with caretakers of facilities, as well as with slum inhabitants.

original location.

In order to increase construct validity, we have triangulated data from different data sources, different stakeholder groups, and repetitive field observations. However, the case study design particularly limits the possibility of generalizing the context-specific findings. Additionally, the complexity of the case and the absence of a valid counterfactual constitute a significant impediment to disentangling the causal relationship between the project design, institutional context and sustainability outcomes.

#### 4. PEA STEP 1: PROBLEM IDENTIFICATION

In line with problem-driven PEA, this section sets out with an identification of the sustainability problems before we delve into a more in-depth diagnosis in the next section. In doing this, we draw upon a combination of secondary and primary data collection.

Like most cities in developing countries, Kampala, faces an increasing need for WATSAN services due to rapid urbanisation.<sup>35</sup> Recent figures indicate that about 70% of Kampala's population lives in slum areas characterized by extreme poverty, insecure tenure, lack of services and infrastructure and an informal economy.<sup>36</sup>

Kampala slum dwellers predominantly rely on communal standpipes, water vendors and public wells for their water supply.<sup>37</sup> Access to safe drinking water remains, however, limited due to unreliable supply, limited access to piped water, high costs charged by caretakers and vendors, long distances and the unplanned nature of the slum areas.<sup>38</sup> Access to sanitation is another challenge for Kampala slum dwellers with the majority of them (70-90%) using shared latrines because of the low cost and water requirements, the unavailability of sewer lines, and the absence of other affordable excreta disposal options.<sup>39</sup> Furthermore, less than half of these latrines are clean enough to be used.<sup>40</sup> In the absence of accessible, clean and/or affordable excreta disposal facilities, slum dwellers have turned to alternatives, including open defecation

<sup>35</sup> LAMBRIGHT, G.M.S., "Opposition Politics and Urban Service Delivery in Kampala, Uganda", *Development Policy Review*, Vol. 32, No. S1, 2014, S39-S60.

<sup>36</sup> HEYMANS, C., EALES, K., FRANCEYS, R., "The Limits and Possibilities of Prepaid Water in Urban Africa: Lessons from the Field", Washington DC, World Bank, 2014; KWIRINGIRA, J. et al., *op. cit.* (4).

<sup>37</sup> HEYMANS, C. et al., *op. cit.*

<sup>38</sup> KATUKIZA, A.Y. et al., *op. cit.*

<sup>39</sup> ISUNJU, J.B. et al., "Financing of Sanitation Services in the Slums of Kampala and Dar Es Salaam", *Health*, Vol. 5, No. 4, 2013, p. 783-791; KATUKIZA, A.Y. et al., *op. cit.*; KULABAKO, R.N. et al., "Environmental Health Practices, Constraints and Possible Interventions in Peri-Urban Settlements in Developing Countries—a Review of Kampala, Uganda", *International Journal of Environmental Health Research*, Vol. 20, No. 4, 2010, p. 231-257; KWIRINGIRA, J. et al., *op. cit.* (4).

<sup>40</sup> GÜNTHER et al. (2012) described in KWIRINGIRA, J. et al., *op. cit.* (4).

and “flying toilets”, i.e. open defecation in polythene bags that are dumped into the surrounding environment.<sup>41</sup> Kwiringa et al. (2014) argue that inadequate emphasis on sustainable management (proper use, cleaning, maintenance) triggered an “*involuntary descent off the sanitation ladder in Kampala slums*” pointing towards the reversal of benefits that are usually associated with sanitation facilities.<sup>42</sup> Similarly, in the absence of sustainable water services, the return to unsafe water alternatives is an equally probable threat. Echoing these observations and drawing upon our own primary data, the next subsections discuss in more detail the physical, functional and financial sustainability of KIEMP sanitation and water facilities.

#### 4.1. Sustainability of sanitation facilities

First, during field observations it was found that four of the 35 initially built facilities (11%) were out of service, two of these were demolished during the project while another two required to be emptied for more than two weeks (see Table 1 for a summary of findings on sustainability of the KIEMP sanitation facilities). Second, the deterioration of walls and floors (82% of remaining facilities) and deficiencies in water-related components (91% of remaining facilities) were widespread problems in all three settlements, despite the considerable divergence in the extent to which local stakeholders have performed repairs and remedied defects. The most frequently mentioned sources of deficiency were stolen water taps, broken water pipes and disconnection from NWSC’s water network following failure to pay water bills. Third, the cleanliness of the facilities varied widely. Unhealthy conditions generally resulted from stagnant water, flies, traces of human faeces on floors and walls, and blocked or broken soak away pits which may result in contamination of surface soil.

Not only were facilities in substandard physical condition, the accessibility of the facilities was also problematic. One of the main challenges in terms of accessibility was the personal appropriation of sanitation facilities. This practice started before the end of the project and continued after project finalization resulting in the complete privatization of four facilities and partial privatization of several other sanitation facilities. Furthermore, caretakers indicated that new community members and members with particular socio-cultural profiles rarely use the implemented services. These findings echo recent evidence from Kwiringira et al. (2014) who reported large gender variations in accessibility and use, with women being more constrained because of reasons of privacy, security and specific health concerns.<sup>43</sup> Unfortunately, none

<sup>41</sup> ADRIAENS, I., *op. cit.*

<sup>42</sup> KWIRINGIRA, J. et al., *op. cit.*, p. 1.

<sup>43</sup> KWIRINGIRA, J., ATEKYEREZA, P., NIWAGABA, C., GÜNTHER, I., “Gender variations in access, choice to use and cleaning of shared latrines; experiences from Kampala Slums,

of the caretakers was able or willing to provide us with monitoring sheets to examine the effective level of (disaggregated) use. Alternatively, we gathered data on daily revenues and the emptying frequency as proxies for the level of use. Based on these proxies it could be concluded that the level of use largely varies both within and between the parishes.

As regards financial management, communities were given time during the project to discuss the level of the pay-per-use fee which was eventually fixed at 200 UGX per visit. Caretakers were supposed to use this contribution to cover O&M costs, such as cleaning, repairs and toilet paper. However, the facility's location largely influenced the probability of financial sustainability. Those located near commercial zones, i.e. paved streets or markets, collect a considerable share of their revenues from traders and passers-by, while those located in residential zones encounter more difficulties because (larger) households cannot afford to pay per use. Many caretakers therefore agreed upon a monthly fee which ranges from merely 3.000 up to 6.000 UGX per household. Nonetheless, most caretakers still argued that the collected revenues are insufficient to cover O&M costs, especially when large repairs (e.g. replacement of iron roof) or emptying services need to be paid for.

**Table 1 Sustainability sanitation facilities**

	Katwe		Kisenyi		Bwaise		Total	
Constructed sanitation facilities	9		12		14		35	
Demolished	1	11%	1	8%	0	0%	2	6%
Remaining sanitation facilities	8		11		14		33	
Water-related defects	6	75%	11	100%	13	93%	30	91%
Wall and/or floor erosion	6	75%	10	91%	11	79%	27	82%
Roof damage	4	50%	5	45%	2	14%	11	33%
Full	1	13%	0	0%	1	7%	2	6%
Privatization	0	0%	2	18%	2	14%	4	12%
Daily revenue collection (UGX)	600-10.000		3.000-20.000		400-6.000			

*Source: Project documents and field observations.*

#### **4.2. Sustainability of water supply services**

As regards the sustainability of pre-paid water taps (standpipes with water meters), our findings indicate that around 58% of the visited standpipes were

still functional (see Table 2). According to our interviewees, the malfunctioning of the remaining standpipes was largely due to a breakdown of the meter system which could not be repaired due to a lack of spare parts. This is in line with findings of Heymans et al. (2014) who found that technical breakdowns accounted for half of the malfunctioning meters while meters that were more than three years old performed significantly worse with almost half of them being out of service.<sup>44</sup>

Although the attitude towards the KIEMP meters is overall very positive, people often turn to alternative water supplies such as private taps or protected natural springs. Many women and children were fetching water from these natural springs even though it is considered much less suitable for drinking without treatment.<sup>45</sup> With respect to accessibility, the meters are, in theory, accessible at any time by anyone who has a token. While a token can in principle be obtained upon registration in a NWSC office, in practice not everyone was aware of this procedure, or able to obtain a token because of time and transportation costs.

The financial sustainability seems less of a problem for water supply services. The main cost categories related to water supply services are investment costs, i.e. land acquisition and construction costs, and O&M costs.<sup>46</sup> The investment costs were entirely covered through donations (BTC, Government of Uganda, KCC/KCCA and local landlords) and do not have implications for financial sustainability. Operation and maintenance costs are recovered through a cross-subsidized pro-poor tariff. According to NWSC, the pre-paid system ensures cost-recovery and consequently eliminates the risk of financial unsustainability.<sup>47</sup>

At the time of the field visits, the pre-paid water tariff was 20 UGX for a 20-liter jerry can. This was considerably less than the prices charged by other vendors (200-500 UGX)<sup>48</sup> and KIEMP standpipes were therefore considered affordable by most of the beneficiaries. However, obtaining the token constitutes an additional financial barrier as it entails time and transportation costs.

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<sup>44</sup> HEYMANS, C. et al., *op. cit.*

<sup>45</sup> HARUNA, R., EJOBI, F., KABAGAMBE, E.K., "The Quality of Water from Protected Springs in Katwe and Kisenyi Parishes, Kampala City, Uganda", *African health sciences*, Vol. 5, No. 1, 2005, p. 14-20.

<sup>46</sup> ISUNJU, J.B. et al., *op. cit.*

<sup>47</sup> NWSC, AQUACONSULT, *Identification of Management Options for Improved Water and Sanitation Services of Informal Settlements in Kampala*, Kampala, 2003.

<sup>48</sup> HEYMANS, C. et al., *op. cit.*

**Table 2 Physical sustainability pre-paid water standpipes**

	Katwe		Bwaise		Total	
Constructed standpipes	14		19		33	
Standpipes demolished, relocated or untraceable	4	29%	5	26%	9	27%
Standpipes visited	10	71%	14	74%	24	73%
Functioning standpipes	5	50%	9	64%	14	58%
Non-functioning standpipes	5	50%	5	36%	10	42%
Standpipes provided with additional protection against misuse	2	20%	6	43%	8	33%

Source: Project documents and field observations

## 5. PEA STEP 2: DIAGNOSTIC FRAMEWORK

Academic and practitioners' literature mention a wide range of interconnected factors that influence the degree to which project benefits can be sustained.<sup>49</sup> Drawing upon a mixture of secondary data and our own primary data, the following sections subsequently discuss how the three clusters of drivers commonly considered within the PEA framework, i.e. structural factors, institutions, and actors and incentives, enabled and constrained the sustainability of the WATSAN facilities.

### 5.1. Structural factors

This section discusses the foundational elements of the context which often explain “*systemic constraints on what is possible in a given context*”<sup>50</sup> and are subdivided into geographic, demographic and socio-economic factors.

#### 5.1.1. Geographic and demographic factors

Kampala slums are characterized by a dynamic and transient population which can be explained by three structural factors. First, the capital functions as the country's industrial and commercial centre resulting in a much larger day-time compared to night-time population.<sup>51</sup> Second, land speculati-

<sup>49</sup> DEMPSEY, N. et al., *op. cit.*; GULYANI, S., CONNORS, G., *op. cit.*; ISUNJU, J.B. et al., *op. cit.*; MUGISHA, S., BORISOVA, T., *op. cit.*; SOHAIL, M. et al., *op. cit.*; VARIS, O., SOMLYÓDY, L., “Global Urbanization and Urban Water: Can Sustainability Be Afforded?”, *Water Science and Technology*, Vol. 35, No. 9, 1997, p. 21-32; WERLIN, H., “The Slum Upgrading Myth”, *Urban Studies*, Vol. 36, No. 9, 1999, p. 1523-1534.

<sup>50</sup> HARRIS, D. et al., *op. cit.*, p. 17.

<sup>51</sup> GIDDINGS, S.W., “The Land Market in Kampala, Uganda and Its Effect on Settlement Patterns”, *World Urban Forum IV*, International Housing Coalition, 2009.

on, commoditization of houses and basic services, and lack of accessible and affordable financing resulted in a scarcity of affordable land and housing for low and middle-income households.<sup>52</sup> Due to this competitive market, even small infrastructural upgrades in a selection of slum areas may transform these areas into “*islands of relative luxury*”<sup>53</sup> resulting in increasing living expenses, rental rates and property values.<sup>54</sup> Third, Kampala’s growth has spilled into adjacent townships and rural areas leading to the emergence of illegally built-up peri-urban areas which are often located in former wetlands prone to flooding.<sup>55</sup> While the first factors may be more relevant to explain the dynamic population flows in Katwe and Kisenyi, due to their close location to the city centre and the construction of roads as part of the KIEMP project, the latter factor is particularly relevant for Bwaise which is particularly prone to flooding.

Even though the underlying reasons for the observed population dynamics might differ amongst the three settlements under study, local residents argued that the transient population poses several challenges to the facilities’ sustainability. Firstly, the daily influx of non-residential users (e.g. traders) who might not have a long term interest in the area and have not participated in sensitization activities, may negatively affect the understanding of payment responsibilities and appropriate use of the facilities.<sup>56</sup> Secondly, the high turnover of slum residents makes it difficult and very expensive for local community-based organisations (CBOs) and the NWSC to continue fostering behavioural change and sensitization. As one of the interviewees highlighted:

*“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”.*<sup>57</sup>

Thirdly, market pressures lead to differential effects on the initial target population as illustrated in the quote below:

*“We improved land and they [landlords] are getting more value out of their properties, but the originally poor persons have to get out because they cannot afford these services anymore”.*<sup>58</sup>

<sup>52</sup> *Ibidem*.

<sup>53</sup> KOOL, M., VERBOOM, D., VAN DER LINDEN, J., “Squatter Settlement Improvement and Displacement: A Review of Concepts, Theory and Comparative Evidence”, *Habitat International*, Vol. 13, No. 3, 1989, p. 191.

<sup>54</sup> DURAND-LASSERVE, A., “Market-Driven Eviction Processes in Developing Country Cities: The Cases of Kigali in Rwanda and Phnom Penh in Cambodia”, *Global Urban Development*, Vol. 3, No. 1, 2007, p. 1-14.

<sup>55</sup> GIDDINGS, S.W., *op. cit.*; KATUKIZA, A.Y. et al., *op. cit.*

<sup>56</sup> WSP, *op. cit.*

<sup>57</sup> Interview, former KIEMP focal person M.A.

<sup>58</sup> Interview, former KIEMP project manager and engineer E.K.

Hence, the dynamic and transient nature of the population and consequent market driven displacement seems to constitute a serious threat to the sustainability of the facilities. The replacement of the initial residents, mostly tenants, by unsensitised or relatively higher-income groups who might have other technological preferences, may negatively affect the willingness to maintain, use and pay for the services provided by the project.

### **5.1.2. Socio-economic factors**

Within the setting of urban poverty, it is crucial that services are perceived to be affordable by the target users to avoid continued use of cheaper, unimproved alternatives. Most of our interviewees indicated that the pro-poor tariff for the water standpipes was affordable. Based on research and experience, NSWC claims that slum dwellers in Kampala slums mainly live hand-to-mouth which implies that they are regularly unable to save for their utility bills.<sup>59</sup> Using pre-paid water metres is then a strategy to eliminate the risk of defaults and cut-offs, something which is also supported by earlier research on the topic.<sup>60</sup>

While the level of the sanitation fee was set through a participatory process involving community members, residents generally considered the fee unaffordable. This perception was further fuelled by President Museveni's announcement that toilets are not affordable for the poor (see also *infra*). Nonetheless, as illustrated in the quote below, local stakeholders felt that the choice for ventilated improved pit (VIP) latrines matched their socio-economic profile relatively well. This is consistent with earlier findings from Kwiringira et al. (2014) and Katukiza et al. (2010) who found water-borne systems likely to be unsustainable due to unaffordability of operational costs, especially water bills.<sup>61</sup>

*“For the KIEMP, all are VIP latrines, no sewerage lined ones. From the experience we did not give them water borne [systems], 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”;*<sup>62</sup>

## **5.2. Institutions**

### **5.2.1. Political institutions**

Kampala's poor performance in terms of urban service delivery has been linked to corruption, low revenue collections, citizen's poor civic com-

<sup>59</sup> NSWC, AQUACONSULT, *op. cit.*

<sup>60</sup> MUGISHA, S., BORISOVA, T., *op. cit.*; HEYMANS, C. et al., *op. cit.*

<sup>61</sup> KATUKIZA, A.Y. et al., *op. cit.*; KWIRINGIRA, J. et al., *op. cit.* (4).

<sup>62</sup> Interview, community leader, B.

petence,<sup>63</sup> and Uganda's political landscape. Similar to many other African countries, the adoption of a decentralisation policy makes many urban governments struggle to fulfil their responsibility for local service provision, including water and sanitation.<sup>64</sup> The capital's high dependence on central government transfers, comprising almost 50% of its revenues, also creates space for political manipulation.<sup>65</sup> These challenges are further magnified due to the fact that, since the reinstatement of competitive party politics, Kampala's local government has been dominated by the opposition's Forum for Democratic Change (FDC). This situation of vertically divided authority has triggered actions from Uganda's central government, including the president, intended to weaken and subvert local government's authority often by assisting interest groups in their struggle against "unfavourable" local policies.<sup>66</sup> As demonstrated earlier in Appelblad and Nilsson, such political competition, and in particular, "political hand-outs" in service provision can seriously undermine the sustainability of sector reforms.<sup>67</sup>

In 2010, for instance, Museveni announced during his election campaign that it is "*unfortunate that the poor cannot access toilets because of charges ranging from sh200 to sh700*" and that free toilets need to be installed to stop the exploitation of the poor.<sup>68</sup> Similar to the examples of presidential interference with city politics concerning motorcycle taxi drivers and market vendors discussed by Goodfellow and Titeca, the above statement illustrates that in spite of political decentralisation, central government was disinclined to fully relinquish control over urban services and politics to sub-national officials. This is particularly the case when those services are highly visible to political constituencies because political interference could result in electoral gain.<sup>69</sup> In the case of KIEMP, the announcement triggered reluctance amongst users to pay for KIEMP toilets and eventually had a detrimental effect on the livelihood strategy of caretakers and the financial sustainability of the facilities.

Moreover, Uganda's political environment also influenced the sustainabi-

<sup>63</sup> KWIRINGIRA, J. et al., *op. cit.* (4).

<sup>64</sup> LAMBRIGHT, G.M.S., *op. cit.*; RESNICK, D., "Urban Governance and Service Delivery in African Cities: The Role of Politics and Policies", *Development Policy Review*, Vol. 32, No. S1, 2014, S3-S17.

<sup>65</sup> RESNICK, D., *op. cit.*

<sup>66</sup> APPELBLAD, J.F., NILSSON, D., "From "All for Some" to "Some for All"? A Historical Geography of Pro-Poor Water Provision in Kampala", *Journal of Eastern African Studies*, Vol. 7, No. 1, 2013, p. 40-57; GOODFELLOW, T., TITECA, K., "Presidential Intervention and the Changing 'Politics of Survival' in Kampala's Informal Economy", *Cities*, Vol. 29, No. 4, 2012, p. 264-270; LAMBRIGHT, G.M.S., *op. cit.*; RESNICK, D., *op. cit.*

<sup>67</sup> APPELBLAD, J.F., NILSSON, D., *op. cit.*

<sup>68</sup> MUKASA, H., MULONDO, M., "Kampala City to Get 300 Free Toilets", *New Vision*, 25 October 2010.

<sup>69</sup> GOODFELLOW, T., TITECA, K., *op. cit.*; RESNICK, D., *op. cit.*

lity of project benefits in a more direct way due to the transformation of the co-implementing institution from Kampala City Council (KCC) to Kampala Capital City Authority (KCCA) in March 2011. Since this institutional transformation the executive power is no longer vested in locally elected politicians but in an Executive Director who is directly appointed by and accountable to President Museveni.<sup>70</sup> In principle, the transformation could have resolved tensions between local and central government, encouraging central government officials to strengthen urban service delivery.<sup>71</sup> However, it is rather unlikely that KCCA's view on how to serve the 'public interest' would entirely align with the views held by KCC. Such a divergence in views may be severely destabilizing for public initiatives initiated under KCC, including the KIEMP project.<sup>72</sup> Furthermore Kampala 'voices' are losing out as elected representatives have no fiscal autonomy,<sup>73</sup> which may weaken accountability linkages.

The change in the co-management and implementing partner did indeed lead to practical challenges. Even though attempts were made to ensure the institutional anchoring of the project in the new institutions,<sup>74</sup> the institutional transformation influenced the sustainability in different ways. First, the dismissal of staff and the lengthy process of filling vacancies undoubtedly watered down the results of capacity building activities and hindered the transfer of project-specific knowledge, particularly regarding roles and responsibilities:

*"There was not really proper handover within the new system [...]. That is why, when you need information, you need to go after an individual not after an institution".<sup>75</sup>*

Second, the few remaining staff found themselves in vulnerable positions due to changed power relations. They faced many obstacles when trying to defend the interests of a KCC project (e.g. free emptying services) against staff who were mainly committed to new KCCA projects and regulations.

*"Last year I could come here and talk to my bosses [KCC]. I said that the KIEMP toilet was filled up and they would provide cesspool vehicle free of charge. But nowadays, things have changed. [...] Right now, I cannot convince those people when I am alone".<sup>76</sup>*

<sup>70</sup> LAMBRIGHT, G.M.S., *op. cit.*

<sup>71</sup> RESNICK, D., *op. cit.*

<sup>72</sup> CHELIMSKY, E., *op. cit.*

<sup>73</sup> GORE, C.D., MUWANGA, N.K., "Decentralization Is Dead, Long Live Decentralization! Capital City Reform and Political Rights in Kampala, Uganda", *International Journal of Urban and Regional Research*, Vol. 38, No. 6, 2014, p. 2201-2216.

<sup>74</sup> BTC UGANDA, KCCA, "Final Report Kampala Integrated Environmental Planning and Management Project", 2013.

<sup>75</sup> Interview former KIEMP project manager E.K.

<sup>76</sup> Interview village health worker S.R.

In sum, the political context and the instability of the local institutional partner led to a reduced willingness to comply with formerly agreed arrangements, including the payment of user fees and the provision of free emptying services. As will be discussed in further detail below, this affected the financial and physical sustainability in the short run while also putting functional sustainability into perspective.

### 5.2.2. *Local stakeholder involvement*

The KIEMP project has been profiled as exceptional and unique due to the wide range of formats through which local stakeholder participation was ensured. The diverse, sometimes unintended, effects of this participatory approach on sustainability are discussed below.

First, local caretakers of sanitation facilities were selected through participatory processes involving local councils and committees, and KIEMP focal people. While this promotes participation, Cleaver and Toner argue that it could also place the burden of securing effective service delivery on the poor and marginalized.<sup>77</sup> Indeed, caretakers and local governing bodies clearly struggle to secure effective service delivery as they are facing problems such as vandalism and privatization.

Second, CBOs were contracted to engage in social mobilization and behavioural change communication. The project provided financial support, study trips and trainings to strengthen these CBO capacities. While academic literature has mainly documented a positive effect of CBO involvement on sustainability,<sup>78</sup> its potential might not have been fully exploited due to a number of reasons. First, CBOs had not been involved from the start<sup>79</sup> which hampered the development of a sense of local ownership amongst residents, which is thought to be crucial for the sustainability of project benefits.<sup>80</sup> Second, the CBOs involved largely depended on the funds provided by the project. Once the project was completed, such project funds were no longer available, which currently constrains the CBO's capacity to mobilize and sensitize the rapidly shifting community members. The performance of the CBOs has consequently declined significantly.<sup>81</sup> This observation is in line with Lyons et al. who argued that community participation is not static nor can empowerment effects automatically be assumed to be sustainable.<sup>82</sup>

Third, participatory processes involving the project team, the parish focal people and landlords, resulted in land agreements in which the latter agreed

<sup>77</sup> CLEAVER, F., TONER, A., *op. cit.*

<sup>78</sup> VARIS, O., SOMLYÓDY, L., *op. cit.*

<sup>79</sup> ADRIAENS, I., *op. cit.*

<sup>80</sup> Interview, CIDI staff R.M.

<sup>81</sup> Interview, CBO staff S.R.

<sup>82</sup> LYONS, M. et al., *op. cit.*

to donate land for 20 years with the aim of developing public utilities.<sup>83</sup> Assuming that land donations increase the sense of community ownership, such project features might indeed improve project sustainability. However, the observed privatization of 12% of the KIEMP sanitation facilities by landlords indicates that it simultaneously risks underestimating problems of structural inequalities, service fragmentation and elite capture.<sup>84</sup> Furthermore, when donating landlords pass away or decide to sell the land, future access depends on the willingness of new landlords, which may strongly affect sustainability. Along the same lines, Heymans et al.<sup>85</sup> argued that Kampala's prepaid meters are not free from 'capture' either as some landlords no longer comply with agreements signed with NWSC. Although none of the interviewees during our own field research mentioned restricted access to KIEMP water meters imposed by landlords, privatization could, as in the case of KIEMP sanitation facilities, pose a major threat to sustainability. Finally, partial appropriation of toilet stances also blurred the division between male and female toilet stances, which might become a cause of systematic exclusion of particular groups (e.g. women, children who already face more accessibility barriers).<sup>86</sup>

### 5.3. Actors and incentives

This section specifically spells out their incentives and positions – in terms of influence and interest – which furthers our analysis of observed sustainability outcomes. Table 3 provides a summative overview of responsibilities of the most important stakeholders who were already introduced in previous sections.

As discussed in Gulyani and Connors, complex project settings require a clear allocation of roles and responsibilities so as to avoid different stakeholders to compete against each other rather than complementing each other.<sup>87</sup> Even though the KIEMP project team prepared the transition of ownership and management responsibilities reasonably well, for instance by building capacity of caretakers and other local stakeholders in management (e.g. monitoring, sensitization) and institutionalizing responsibilities in various formats (e.g. MoUs with donating landlords), some institutional delineations became quite blurred. It must be noted, however, that the sustainability of project benefits also depends on the incentives to adhere to existing institutional arrangements which specify those responsibilities, and the capacity to enforce them.

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<sup>83</sup> ADRIAENS, I., *op. cit.*

<sup>84</sup> CLEAVER, F., *op. cit.*;

<sup>85</sup> HEYMANS, C. et al., *op. cit.*

<sup>86</sup> KWIRINGIRA, J. et al., *op.cit. (43)*.

<sup>87</sup> GULYANI, S., CONNORS, G., *op. cit.*; SOHAIL, M. et al., *op. cit.*

**Table 3 Actors and responsibilities**

Actor	Roles and responsibilities
KCC/KCCA	<ul style="list-style-type: none"> <li>- Project design</li> <li>- Co-implementation</li> <li>- Emptying services</li> <li>- Monitoring</li> </ul>
BTC	<ul style="list-style-type: none"> <li>- Project design</li> <li>- Co-implementation</li> </ul>
NWSC	<ul style="list-style-type: none"> <li>- O&amp;M water supply</li> <li>- Cross-subsidize pro-poor tariff</li> <li>- Sensitization</li> <li>- Supply/provide tokens</li> </ul>
Caretakers sanitation	<ul style="list-style-type: none"> <li>- O&amp;M sanitation facilities</li> <li>- Monitoring</li> </ul>
Beneficiaries	<ul style="list-style-type: none"> <li>- Financial contribution (user fee/water tariff)</li> <li>- Adequate use</li> </ul>
Local community leaders, councils and committees	<ul style="list-style-type: none"> <li>- Draft and enforce by-laws</li> <li>- Assign local caretakers</li> </ul>
CBOs	<ul style="list-style-type: none"> <li>- Behavioural Change Communication</li> <li>- Social mobilization</li> <li>- Sensitization</li> </ul>
NGO	<ul style="list-style-type: none"> <li>- Capacity building of caretakers and beneficiaries (e.g. monitoring) (limited period during project)</li> </ul>
Landowners	<ul style="list-style-type: none"> <li>- Donate land for public use (20 years)</li> </ul>
Focal Persons	<ul style="list-style-type: none"> <li>- Technical support</li> <li>- Transmit information between project management and local stakeholders</li> </ul>

*Source: Elaborated based on project documents*

Since the project's finalization, ownership was transferred to local institutions, including NWSC, KCCA and local communities. However, in the absence of project monitoring, accountability for results beyond project finalisation is generally weak, which constitutes a breeding ground for collec-

tive-action problems, such as the Samaritan dilemma. In bilateral projects donors can be considered Samaritans whose dominant strategy is to extend help while recipients have limited incentives to make an effort.<sup>88</sup> As highlighted in Ostrom et al., this problem of motivation also frequently occurs in the upkeep of donor-supported infrastructure and services as recipients do not see the point of investing in maintenance as long as there are donors willing to rehabilitate or build new infrastructure. To mitigate such a situation, the initial project design allowed for meaningful participation and joint management and ownership. In line with other donors' responses to the institutional transformation, BTC extended the project duration to create a sense of ownership amongst KCCA officials.<sup>89</sup> However, KCCA officials were mainly concerned with developing policies and projects which reflected new political priorities and objectives. Similarly, NWSC officials were focusing on improving coverage with the aim of reaching more than 4000 standpipes in low-income areas by 2016,<sup>90</sup> which indirectly reduces resources available for the maintenance of existing infrastructure. Moreover, historically, the main focus of NWSC has been on serving middle-and high income populations,<sup>91</sup> and incentives structures to serve the urban poor are generally weaker.<sup>92</sup>

Contestation of responsibilities amongst stakeholders has also led to authority conflicts in the KIEMP project. For instance, contestation of responsibilities and prices<sup>93</sup> of latrine emptying led to disagreements amongst stakeholders (see *supra*). Similarly, while responsibilities regarding repairs of sanitation facilities were laid out in memoranda of understandings, the adherence to these arrangements was hindered by a lack of accountability mechanisms to hold caretakers accountable, inefficient revenue collection and a lack of incentives to conduct repairs (except for "crisis repairs"). Moreover, the withdrawal of technical focal people at project completion increased the level of politicization. The following quotation from a former focal person illustrates her worries regarding the implications of this withdrawal:

*"Where there is a project a technical person must be assigned to help to support the project, because when you leave it to the leader it is politicized and then you find the project not achieving its objective".<sup>94</sup>*

As mentioned before, privatization and vandalism are also serious threats to sustainability. While Kwiringira et al. (2014) argued earlier that the pri-

<sup>88</sup> OSTROM, E. et al., *op. cit.*

<sup>89</sup> LAMBRIGHT, G.M.S., *op. cit.*

<sup>90</sup> HEYMANS, C. et al., *op. cit.*

<sup>91</sup> APPELBLAD, J.F., NILSSON, D., *op. cit.*

<sup>92</sup> BERG, S.V., MUGISHA, S., "Pro-Poor Water Service Strategies in Developing Countries: Promoting Justice in Uganda's Urban Project", *Water policy*, Vol. 12, No. 4, 2010, p. 589-601.

<sup>93</sup> While KCC and KCCA officially empty for 0UGX and 65.000UGX, stakeholders mentioned various prices paid for emptying services ranging up to 80.000UGX per trip.

<sup>94</sup> Interview, former technical focal person M.A.

vatization of sanitation facilities was a strategy used by landlords to ensure sustainability by protecting the facilities from 'offenders'<sup>95</sup>, it may as well be the result of the pre-existing unequal power distribution which limits accessibility for certain members of the target population. Moreover, privatization is likely to seriously challenge the formal authority of local councils in settling disputes related to violations of land agreements.<sup>96</sup>

The lack of spare parts further compounded the susceptibility to failure of the pre-paid water standpipes. Cumbersome public procurement processes as well as procedures imposed by the South African monopoly manufacturer hindered the timely purchase of spare parts. The latter was unwilling, for instance, to supply the relatively small amount of spare parts that NWSC needed to provide reliable water services. During our field research, NWSC mentioned that the establishment of a framework contract has been going on already for some years, but was likely to take some additional time before being finalized.

Residents' incentives also directly influence the level and adequacy of use as well as their willingness to pay for and engage in O&M activities. The most frequently mentioned constraints to widespread use of the prepaid water standpipes were (1) the availability of cheaper 'alternatives' despite their pro-poor tariff; (2) their relatively remote location (compared to private taps); (3) the cumbersome process to acquire a token; (4) fear of loss or breaking of the prepaid token and subsequent loss of money; (5) the unreliability of prepaid standpipes; and (6) the lack of knowledge and awareness about their existence and functioning as illustrated in the following quotation:

*"As much as we know it is not expensive, the slum people might still not be able to afford. Since they have the other natural source where they can just get free water, they opt for that".<sup>97</sup>*

The undersupply of tokens has also led to persisting intermediary problems as 'informal middlemen' emerged who use their token to sell water to fellow residents at higher prices than the official pro-poor tariff.<sup>98</sup> While the pre-paid system is often praised for ruling out the use of middlemen,<sup>99</sup> the (perceived) difficulties to obtain a token may lead to new instances of exploitation by middlemen. New residents who are likely to lack information about existing agreements, might be particularly vulnerable to this risk.

Similar constraints were mentioned regarding sanitation facilities, but the perceived excessive user fee remained the principal constraint to daily use of improved sanitation facilities. While literature suggests that financial

<sup>95</sup> KWIRINGIRA, J. et al., *op. cit.* (4).

<sup>96</sup> FOLEY, C., "A Guide to Property Law in Uganda", Nairobi, UN-HABITAT, 2007.

<sup>97</sup> Interview, NWSC staff R.M.

<sup>98</sup> HEYMANS, C. et al., *op. cit.*

<sup>99</sup> BERG, S.V., MUGISHA, S., *op. cit.*

and labour contributions promote sustainability through increased cost consciousness amongst beneficiaries,<sup>100</sup> a positive effect on sustainability may only be realised when beneficiaries are able and willing to contribute. Given the ‘public good’ nature of the facilities, it does, however, remain difficult to differentiate between free-riding behaviour and actual inability to contribute to the O&M of facilities:

*“You are looking at a community where people don’t want to spend a single shilling on going to a toilet, a public toilet [...] There can be various reasons, it might be poverty, it could be ignorance or they might just not be willing to do it.”*<sup>101</sup>

## 6. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Assessing the sustainability of the KIEMP project entails dealing with the ambivalence of ‘success’. One year after the project’s completion, the majority of the sanitation facilities were still in use, most likely due to appropriate technological choices and significant sensitization efforts. Nevertheless, the inability and growing reluctance – fuelled by an announcement from the president – to pay for the sanitation services has significantly compromised their financial sustainability. Consequently, the facilities were plagued by many small defects, cleaning and emptying challenges. Moreover, privatization trends indicate that local ownership is not necessarily in the interest of all as it may reinforce structural inequalities, service fragmentation and elite capture.

Regarding KIEMP water standpipes, it has been observed that more than 40% were out of service, mainly due to a lack of spare parts. The meters have remained accessible to users with a token and the pro-poor tariff renders the meter attractive to local residents. However, the availability of cheaper ‘alternatives’ and the fact that acquiring a token was perceived to be cumbersome were some of the factors that hindered widespread use.

PEA’s diagnostic framework was applied to examine the influence of a wide range of factors, including local stakeholder participation and institutional instability, on the sustainability of the project outcomes. Table 4 provides a summative account of enabling/hindering factors, while the three main findings of the diagnostic exercise are synthesized below.

<sup>100</sup> IMPARATO, I., RUSTER, J., *op. cit.*; JAGLIN, S., “The Right to Water Versus Cost Recovery: Participation, Urban Water Supply and the Poor in Sub-Saharan Africa”, *Environment and Urbanization*, Vol. 14, No. 1, 2002, p. 231-245.

<sup>101</sup> Interview, former project member H.N.

**Table 4 Summary Political Economy Analysis:  
Problem Identification and Diagnostic Framework**

		Sanitation	Water
Physical sustainability	Enabling	<ul style="list-style-type: none"> <li>• Technology (pit latrine)</li> <li>• Land donations (sense of ownership)</li> <li>• Training of caretakers</li> <li>• Establishment of by-laws</li> </ul>	<ul style="list-style-type: none"> <li>• Protection installed by residents to avoid misuse of standpipes</li> </ul>
	Hindering	<ul style="list-style-type: none"> <li>• Limited reach and availability of 'public' cesspool trucks</li> <li>• Lack of enforcement of roles, responsibilities and by-laws (e.g. repairs, emptying, vandalism, privatization)</li> <li>• Lack of monitoring by KCCA</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of spare parts               <ul style="list-style-type: none"> <li>◦ Monopoly of manufacturer</li> <li>◦ Burdensome public procurement</li> </ul> </li> <li>• Little community involvement in O&amp;M</li> <li>• Vandalism</li> </ul>
Functional sustainability	Enabling	<ul style="list-style-type: none"> <li>• Sensitization and behavioural change communication by local CBOs</li> </ul>	<ul style="list-style-type: none"> <li>• Sensitization by NWSC</li> <li>• Pro-poor tariff</li> <li>• Possibility to relocate standpipes</li> </ul>
	Hindering	<ul style="list-style-type: none"> <li>• Transient population, market-driven displacement</li> <li>• Privatization</li> <li>• Decreased capacity of and funds for CBOs</li> <li>• Willingness to pay (free 'alternatives', Museveni's announcement)</li> </ul>	<ul style="list-style-type: none"> <li>• Transient population, market-driven displacement</li> <li>• (Perceived) difficulties and costs to obtain tokens</li> <li>• Free 'alternatives'</li> <li>• Difficult sensitization of transient population</li> <li>• Low perceived reliability</li> </ul>
Financial sustainability	Enabling	<ul style="list-style-type: none"> <li>• User fee agreed through negotiations with beneficiaries</li> <li>• Technology (not water dependent)</li> </ul>	<ul style="list-style-type: none"> <li>• Cost recovery (pre-paid)</li> <li>• Cross-subsidized tariff</li> </ul>
	Hindering	<ul style="list-style-type: none"> <li>• Willingness to pay ('free alternatives', Museveni's announcement)</li> <li>• Affordability for local residents; low monthly fees</li> <li>• Expensive emptying services</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive maintenance (especially spare parts)</li> </ul>

*Source: Author's own elaboration*

First, political interference, both direct and indirect, has not been conducive to the sustainability of the water and sanitation facilities. The transformation of the local government and the transfer of executive power from locally elected politicians to a director who is directly appointed and accountable to the president triggered ‘authority conflicts’. These were riddled with deficient knowledge transfer and reluctance to commit to tasks and responsibilities that had been agreed upon within the project framework. Moreover, Museveni’s announcement regarding free public toilets has seriously reduced the capacity for revenue collection in KIEMP’s communal sanitation facilities, which indirectly hampered the financial sustainability of the project benefits.

Second, the transient nature of the population in slum areas poses a serious threat to the sustainability of water and sanitation facilities. The high population turnover in the settlements under study can be explained by factors inherent to these settlements, such as the low socio-economic status of dwellers, insecurity of tenure and vulnerability to floods. Given the scarcity of housing opportunities for both low and middle-income households in Kampala, the construction of roads as part of the KIEMP project, has further fuelled market pressure on the upgraded parishes. In the absence of sufficient ‘software’ project components to decrease the vulnerability of dwellers to market-driven displacement it can be reasonably assumed that a significant proportion of the initial target population, particularly tenants, no longer benefits from the services.<sup>102</sup> Furthermore, the continuing influx of new inhabitants requires a level of sensitisation and community mobilisation activities which might exceed the organisational and financial capacities of responsible CBOs.

Third, the lack of understanding and/or attention paid to the heterogeneity and power relations within targeted communities affected the sustainability of the facilities. Echoing proponents of participatory development who contend that local stakeholder participation is likely to contribute to community’s strengthened organisational capacity and sense of ownership,<sup>103</sup> community participation took centre stage in the KIEMP project. Key project features include land donations, the engagement of local caretakers in the O&M of sanitation facilities, the involvement of CBOs in the delivery of the software components, as well as the participation in cost recovery through user fees. However, our findings tend to support the idea that ‘communities’ are not necessarily homogeneous entities but rather sites of uneven negotiation and contestation of resource rights.<sup>104</sup> The heterogeneity amongst dwellers has largely been ignored, resulting in differential effects on dwellers depending on

<sup>102</sup> HUCHZERMEYER, M., “Slum Upgrading in Nairobi within the Housing and Basic Services Market a Housing Rights Concern,” *Journal of Asian and African Studies*, Vol. 43, No. 1, 2008, p. 19-39; LANGFORD, M. et al., *op. cit.*

<sup>103</sup> IMPARATO, I., RUSTER, J., *op. cit.*; KHWAJA, A.I., *op. cit.*

<sup>104</sup> CLEAVER, F., TONER, A., *op. cit.*; WILLIAMS, G., “Evaluating Participatory Development: Tyranny, Power and (Re) Politicisation”, *Third World Quarterly*, Vol. 25, No. 3, 2004, 557-578.

their tenancy status, their socio-economic characteristics and their physical capabilities. Power struggles are reflected in privatization practices which are likely to produce detrimental effects on accessibility and functional sustainability. Additionally, capacity building of CBOs, caretakers and other local stakeholders might not result in “sustainable empowerment” precisely due to the lack of continuous funding and support.<sup>105</sup>

The key findings of our study suggest a number of recommendations. First, strengthening the capacity of local stakeholders, such as local councils, CBOs and caretakers, is crucial to sustain the benefits of stakeholder participation. This may, for instance, include support in their search for more stable financial and technical backstopping so as to allow them to fulfil their assigned responsibilities beyond project completion. Second, an institutionally anchored accountability mechanism is critical to incentivize local institutional entities to actively monitor the accessibility and functioning of donated water and sanitation facilities. Third, a higher degree of flexibility including incremental implementation processes may be envisaged as to accommodate for changing environments. More specifically, this may involve the design of complementary income-generating activities and/or accessible financial services in order to reduce the potential negative impacts of market-driven displacement. Such flexibility and room for adaptation throughout the project also facilitates correction for variations in service accessibility and use which are diagnosed through project monitoring. In the specific case of the KIEMP project, it could involve the design of sanitation facilities which take into account specific needs of women and children.

At a more general policy level, our findings are relevant against the background of donors being increasingly confronted with sustainability challenges which seriously affect their (growing) investments in the water and sanitation sector. Ensuring allocative efficiency and long-term impact on the beneficiaries' quality of life requires donors to recognise that sustainability is the result of an interplay between institutional, structural and actor-specific factors which need to be taken into account in the design, monitoring and evaluation of water and sanitation projects. This study illustrates that problem-oriented PEA has the potential to assist donors in exposing the factors affecting the longevity of project benefits while triggering them to move beyond a purely technocratic approach to service delivery.

Antwerp, July 2016

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<sup>105</sup> LYONS, M. et al., *op. cit.*