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Urban Management Studies

Reassessing Stakeholders' Involvement in Environmental Sanitation Planning and Provision: A Comparative Analysis of Three Contemporary Approaches in East Africa.

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Statement of Authenticity of Material

This thesis contains no material which has been accepted for the award of any other degree or diploma in any institution and to the best of my knowledge and belief, the research contains no material previously published or written by another person, except where due reference has been made in the text of the thesis.

Maria Cecília de Carvalho Rodrigues
Berlin, February 5th 2012

To Maria José de Carvalho, in memoriam, who
thought me with her example to have faith in life.

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There are times in life where the question of knowing if one can think differently than one thinks, and perceive differently than one sees, is absolutely necessary if one is to go on looking and reflecting at all.

Michel Foucault

ABSTRACT

Current figures regarding the lack of environmental sanitation services in developing countries pose a great challenge to governments, the private sector, planners and local communities and worsen health and environmental living conditions of millions of people. Local governments have demonstrated limited capacity to cope with the rapid population growth in urban settings and provide impoverished informal and unplanned settlements with infrastructure and basic services such as sanitation. The shift of focus towards attributing more responsibilities to the private sector during the 1990s also showed to have limited capacity to reach the urban poor. In this context, innovative approaches to sanitation have emerged highlighting the need for stakeholders' participation, especially beneficiaries, in order to provide more appropriate solutions to contexts and users' needs and to guarantee more effective allocation of scarce resources, thus more sustainable sanitation systems. Nevertheless, theory shows little evidence to support participatory approaches in practices in urban settings and little research has been conducted to address the kinds of participation in different planning stages. This research investigates and evaluates three pro-poor participatory contemporary approaches to urban sanitation validated in East-Africa, based on secondary data and interviews conducted with key informants of each project. An analytical framework was elaborated to support the answering of the research questions of how participation is applied to the approaches and to what extent the modes of participation adopted by the projects contribute to the achievement of the claims for participation found in the literature. The analysis aggregates three parameters, namely the assessment of project activities through nine generic planning stages, the assessment of stakeholders based on their interest and influence and the assessment of modes of participation regarding the planning stages. This research recognizes the application of different modes of participation in planning stages and discusses their strengths and weaknesses to find that there is a predominance of consultative modes to involve the community throughout the process. Furthermore, this study is concluded with recommendations to the academia and the praxis with basis on the findings of this research.

Key words: environmental sanitation – planning and provision – stakeholder participation - developing countries – East Africa.

ABSTRACT: GERMAN

Aktuelle Zahlen über die mangelnde Sanitärversorgung in Entwicklungsländern belegen eine große Herausforderung im Bereich des Gesundheits- und Umweltschutzes für Regierungen, den privaten Sektor, Planer und Kommunen. Lokale Regierungen haben begrenzte Kapazitäten, um den raschen Bevölkerungswachstum in den Städten zu bewältigen, und bieten verarmten, informellen und ungeplanten Siedlungen nur unzureichende Infrastruktur und Basisdienste wie Sanitärversorgung. Die Verschiebung des Fokus in Richtung des privaten Sektors in den 1990er Jahren, zeigte auch dessen begrenzte Kapazität, die Versorgung der verarmten Stadtbevölkerung zu gewährleisten. In diesem Zusammenhang sind innovative Ansätze zu sanitären Einrichtungen entstanden. Die Notwendigkeit der Partizipation, insbesondere der Begünstigten, um geeignete Lösungen für Kontexte und Benutzer bereitzustellen, und somit eine effizientere Allokation knapper Ressourcen, also auch nachhaltigen Sanitärversorgung zu garantieren, wurde aufgezeigt. Dennoch zeigt die Theorie kaum empirische Daten zu partizipativen Ansätzen in der Praxis. Bislang wurden wenige Studien durchgeführt, um die Formen der Beteiligung in den verschiedenen Planungsphasen zu adressieren. Diese Forschung untersucht und bewertet drei anerkannte partizipative Ansätze zur städtischen Abwasserentsorgung die in Ost-Afrika zur Anwendung gebracht werden. Die Ergebnisse basieren auf Sekundärdaten und Interviews mit wichtigen Informanten, die für jedes Projekt durchgeführt wurden. Die Analyse verbindet drei Parameter; die Beurteilung der Projektaktivitäten durch neun generische Planungsphase, die Beurteilung der Betroffenen in Bezug auf ihre Interessen, und der Einfluss und die Beurteilung von Modi der Partizipation in Bezug auf die Planung. Diese Forschung erkennt die Anwendung der verschiedenen Modi der Partizipation in der Planung und diskutiert ihre Stärken und Schwächen. Sie konstatiert dass eine Dominanz der beratenden Modi, die Gemeinschaft während des gesamten Prozesses zu beteiligen, vorherrscht. Darüber hinaus wird diese Studie mit Empfehlungen an die Wissenschaft und die Praxis, auf Basis auf der Ergebnissen dieser Forschung, abgeschlossen.

Schlüsselbegriffe: Sanitärversorgung - Umwelthygiene - Planung und Bereitstellung - Stakeholder-Beteiligung - Entwicklungsländer - Ostafrika

ABSTRACT: PORTUGUESE

A falta de serviços de saneamento ambiental em países em desenvolvimento representam um grande desafio para os governos, o setor privado, planejadores e as comunidades locais, e pioram as condições ambientais e de saúde da vida de milhões de pessoas. Governos locais tem demonstrado limitada capacidade de lidar com o rápido crescimento populacional em áreas urbanas empobrecidas e fornecer infra-estrutura e serviços básicos, como saneamento a assentamentos informais. A mudança em direção à atribuição de mais responsabilidades para o setor privado na década de 1990 também mostrou ter capacidade limitada de atender a população urbana pobre. Neste contexto, abordagens inovadoras de saneamento surgiram destacando a necessidade de participação das partes interessadas (stakeholders), especialmente os beneficiários, com a finalidade de proporcionar soluções mais adequadas aos contextos e necessidades dos usuários e garantir a alocação mais eficiente dos escassos recursos e, portanto, promovendo sistemas de saneamento mais sustentáveis. No entanto, a teoria mostra pouca evidência para apoiar abordagens participativas nas práticas adotadas nos centros urbanos e poucas pesquisas têm sido realizadas para tratar os modos de participação nas diferentes fases de planejamento. Esta pesquisa investiga e avalia três abordagens participativas contemporâneas para saneamento urbano com base em dados secundários e entrevistas com informantes de cada projeto. A análise agrupa três parâmetros, notadamente a avaliação das atividades do projeto por meio de nove fases genéricas de planejamento, a avaliação dos atores envolvidos com base em seu interesse e influência e a avaliação dos modos de participação em cada fase do planejamento. Um quadro analítico foi elaborado para responder às questões da pesquisa sobre como a participação é aplicada nas abordagens e em que medida os meios de participação adotados pelos projetos contribuem para a realização das demandas por participação encontradas na literatura. Esta pesquisa reconhece a aplicação de diferentes modos de participação nos estágios de planejamento e discute seus pontos fortes e fracos para encontrar que há um predomínio de modos consultivos para envolver a comunidade durante o processo. Ademais, este estudo é concluído com recomendações para a academia e para a prática com base nos resultados desta pesquisa.

Palavras-chave: saneamento ambiental - planejamento - participação das partes interessadas (stakeholders) - países em desenvolvimento - África Oriental

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LIST OF ACCRONYMS AND ABREVIATIONS

AusAID	Australian Agency for International Development
AWSB	Athi Water Services Board
BOTs	Build, Operate, Transfer Schemes
BPD	Building Partnerships for Development in Water and Sanitation
CBO	Community-based Organizations
CCI	Centre for Community Initiatives
CCN	City Council of Nairobi
CHF	Swiss Franc
CLUES	Community-Led Urban Environmental Sanitation
COHRE	Centre on Housing Rights and Evictions,
DEZA	Swiss Agency for Development and Cooperation
DFID	Department for International Development
DUWASA	Dodoma Urban Water Supply and Sewerage Authority
Eawag	Swiss Federal Institute of Aquatic Science and Technology
ES	Environmental Sanitation
GIS	Geographic Information System
HCES	Household-Centred Environmental Sanitation
HIV	Human Immunodeficiency Virus
IEW	Institute of Environment and Water
IRC	International Water and Sanitation Centre
IWA	International Water Association
JMP	Joint Monitoring Programme
LAC	Latin American Countries
KEMRI	Kenya Medical Research Institute
KESP	Kampala Environmental Sanitation Project
KPA	Knowledge, Practice and Attitude
NCCR	National Centre of Competence in Research
NCWSC	Nairobi City Water and Sewerage Company
NEMA	National Environment Management Authority
NETSSAF	Network for the development of Sustainable Approach
NGO	Non-Governmental Organization
MAMADO	Maji Na Maendeleo Dodoma
MDGs	Millennium Development Goals
MFIs	Micro Finance Institutions

MoPHs	Ministry of Public Health and Sanitation
O&M	Operation and Maintenance
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
PAM	Partnership Actions for Mitigating Syndromes
PDSM	Product Development and Social Marketing of Sanitation and Urban Waste Management Systems
PSC	Project Steering Committee
R&D	Research and Development
RRA	Rapid Rural Appraisal
SACCOs	Savings and Credit Cooperative Organizations
SANDEC	Department of Water Supply and Sanitation in Developing Countries
SECO	State Secretariat for Economic Affairs
SM	Social Marketing
SSIPPs	Small-Scale Independent Private Providers
SSP	Stronger Services Providers, Better Services for All
SSWARS	Sustainable Sanitation and Water Renewal Systems
SuSanA	Sustainable Sanitation Alliance
SWM	Solid Waste Management
TZ	United Republic of Tanzania
UK	United Kingdom
UN	United Nations
UNDG	United Nations Development Group
UNFPA	United Nations Population Fund
UN-HABITAT	United Nations Human Settlements Programme
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WASPA	Water Services Providers Association
WASREB	Water Services Regulatory Board
WHO	World Health Organization
WSSCC	Water Supply and Sanitation Collaborative Council
WSUP	Water & Sanitation for the Urban Poor

1. INTRODUCTION

In 2008 there were approximately 2.6 billion people worldwide lacking access to adequate sanitation and by 2015 this figure may have reached around 2.7 billion if this trend continues (UN 2010). These figures make it hard not to begin with the statistics. Apart from Northern Africa, where there have been some advances, the evaluation of current progress demonstrates that the Millennium Development Goals'[1] target of halving the proportion of the population without access to basic sanitation by 2015 will be missed and at actual rates it is unlikely to be reached before 2049 (UN 2010; WHO/UNICEF JMP 2010).

Despite the progress achieved in the last decade, rural areas remain largely deprived of sanitation facilities. Even so, investments and improvements in urban areas have largely failed to reach the poor, especially in poor countries, where the rapid urbanization resulted in the expansion of informal and unplanned settlements that lack basic services and infrastructure. A combination of issues adds complexity to this scenario such as unclear allocation of responsibilities concerning service provision in slums and slum-like areas, insufficient resources both from domestic allocations and development assistance, lack of capacity and small interest to deal with those urban formations from local governments and utilities.

The seriousness of the lack of adequate sanitation services and its externalities in developing countries has been in the research and development agenda since the late 1960's. During the 1990s, the focus of international policies for the sector was on the delegation of tasks to the private sector and on the decentralization of the planning and decision making to lower levels of government, which showed to be insufficient to address the needs of impoverished areas. The shortfalls in the sanitation sector, both in planning and provision, raised the need for change in approaches concerning ideas, policies and practices in the field of environmental sanitation.

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[1] Millennium Development Goals (MDGs) are the "world's time-bound and quantified targets for addressing extreme poverty in its many dimensions — income poverty, hunger, disease, lack of adequate shelter, and exclusion — while promoting gender equality, education, and environmental sustainability" (UN Millennium Project 2005, p.1).

1.1 Research Background

In 2000, experts of the Environmental Sanitation Working Group of the Water Supply and Sanitation Collaborative Council - WSSCC - met in Bellagio, Italy, with the objective of developing an improved approach to environmental sanitation, building on lessons learned in the past. The premise consensually accepted by the group was that "people and their quality of life should be put at the centre of the design and implementation of any environmental sanitation system" (Sandec and WSSCC 2000a). The outcome of the expert consultation was the establishment of The Bellagio Principles, a considerable step forward from conventional approaches. Recurrent critics to the prevailing currents of thought in planning approaches, conventionally top-down and supply driven, contributed to the shift in focus towards more participative processes.

The inclusion in planning processes of different stakeholders, namely households, civil society entities and service providers, is an attempt widely advocated both in contemporary literature on the topic and by development agencies that envisage better sanitation provision and more appropriated according to people needs. A number of reasons justify the need for more participatory approaches, varying in a spectrum from sense of ownership of processes and facilities constructed, legitimacy of people's concerns, and good governance, to efficiency, sustainability, accountability and the principle of subsidiarity according to different viewpoints and sector focus. Nevertheless, little evidence has been provided to support these assertions for urban and peri-urban areas (McConville 2010; Lüthi and Kraemer 2012). "While there is an underlying sense that participation is important for sanitation, it is not yet clear that participation is achieving the desired results or being implemented as envisioned in the field" (McConville 2010, p.81).

1.2 Research Rationale

Based on these questions, this research seeks to analyze and compare the features of stakeholders' involvement in three pro-poor contemporary approaches for planning and delivering environmental sanitation in urban areas in East-African cities. The aim is to assess the strengths and limitations of the projects regarding participation and verify to what extent the conducted processes lead to the achievement of the claims for participation presented in the literature review on the topic. For that, this analysis will perform a study mainly based on the appraisal of secondary data and interviews with key informants from the projects. Although the findings of this study cannot be generalized, by reviewing three projects it is intended to better understand current practices in the field and also identify room for improvement. Moreover, it is expected to contribute to the body of literature on stakeholders' participation in urban sanitation planning and implementation.

1.3 Study Overview

This thesis comprises seven chapters organized as depicted on Figure 1.

Chapter 2	Chapters 3 and 4	Chapter 5	Chapters 6 and 7
Literature Review	Scope of Study and Research Methods	Analysis	Interpretation
Urban Environmental Sanitation + Sanitation Planning	Research Questions + Introduction of Cases + Analytical Framework	Analytical Framework — Cases A, B and C	Discussion + Conclusions and Recommendations
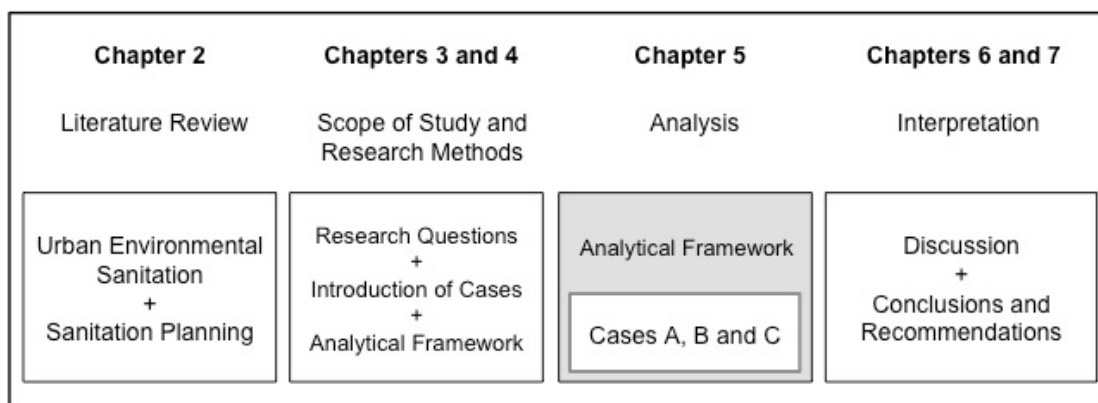
Figure 1: Overview of the study. Source: by the author.

Following this introduction, *chapter two* is divided in two sections and presents a review of literature on environmental sanitation in developing countries that provide the reader with the main concepts of the sector. The first part presents the current thoughts, facts and figures related to sanitation in the developing world. The second part will deal with issues concerned to planning and provision of urban sanitation services. The chapter also addresses the challenges of the sector and the complexities in planning and delivering sanitation in urban contexts.

The scope of the study is delineated in *chapter three*, which also presents the research problem in more detail and describes the objectives of this work, leading to the formulation of the research questions. It introduces the three projects analyzed and localizes them in the context where they were implemented.

The research methods applied in this study are discussed in *chapter four*. It presents the selection criteria for the chosen case studies and the methodology employed for the data collection. The chapter elaborates on the analytical framework on which the analysis of the results is based. Moreover, the chapter points out the limitations of this study and poses the ethical considerations related to this research.

Chapter five presents the main research results. It is divided into three sections that better accommodate the main aspects explored in the study of the cases based on guiding questions regarding the assessment of planning stages, stakeholder analysis and modes of participation in planning stages.

The results found are discussed in c*hapter six* and final considerations and recommendations derived from the analysis both in academic and practical terms will be presented in *chapter seven*.

2. LITERATURE REVIEW

This chapter will present the main features of environmental sanitation as a field of study as well as the related key concepts and definitions. The first section will discuss the main challenges of the sanitation sector with emphasis on environmental sanitation in urban areas in developing regions of the world, whereas the second section will be dedicated to the planning within environmental sanitation. It is intended to provide an overview of urban sanitation planning, its shortfalls and limitations and the responses aroused by the sanitation community.

2.1 Urban Environmental Sanitation in Developing Countries

Water supply and sanitation are usually regarded as related issues that cannot be dissociated. Even though, sanitation has been playing a minor role, with lower prestige, lower resource allocation and relative less interest from the international community. In many countries, from the 'water and sanitation' budget, less than 5% is allotted to sanitation, while water supply absorbs the greater amount (UNDG 2010). The concern about drinking water provision was reiterated in 2000 by the United Nations Millennium Declaration, which attests the commitment of halving the proportion of people without access to affordable and safe drinking water. The document set in motion the Millennium Development Goals (MDGs), the international development framework for action, in which water supply and sanitation are addressed in goal 7 - target C.

Although fresh water concerns were part of the MDGs since its origin, sanitation was included much later, in 2002, and it was not without dispute (Black and Fawcett 2008; Peal et al. 2010). Even so, there is the recognition that improvements in sanitation can directly interfere with the progress of the other seven development goals, i.e. eradicate extreme poverty, ensure universal education, eliminate gender disparity, reduce of under-five mortality rate, improve maternal health and reduce diseases.

The Bonn Charter for Safe Drinking Water was launched in 2004 and together with the *Third Edition WHO Guidelines* constitutes the international guidance on water quality. Four years

later, a set of guiding principles for urban sanitation was draft in the World Water Congress in Vienna, 2008. *The Vienna Charter on Urban Sanitation* is a reference document for the sector that gathers ideas from three communities of practitioners: service providers and technicians, sanitation and development sector and adjacent interests, which includes health, urban planners, urban poverty, education and human rights specialists (IWA 2008).

The Charter reiterates the definition of Environmental Sanitation (ES) adopted by The Water Supply and Sanitation Collaborative Council and the Bellagio Principles as "interventions to reduce peoples' exposure to disease by providing a clean environment in which to live, with measures to break the cycle of disease" (SANDEC and WSSCC 2000, p. 2). The interventions include hygienic management of human and animal excreta, wastewater, rainwater drainage and waste management. ES can be considered a holistic concept that poses water and waste within one integrated infrastructure and service delivery framework, considering both behaviors and facilities. In this sense, the objective of sanitation systems[2] is to protect and promote human health by providing a clean environment and breaking the cycle of disease (SuSanA[3] undated a).

Besides the basic objective of sanitation systems, a group of experts designed a set of guiding principles named Bellagio Principles. The four principles are intended to be the foundation for the planning and implementation of environmental sanitation services towards the objective of 'universal access to safe environmental sanitation, within a framework of water and environmental security and respect for the economic value of wastes' (SANDEC and WSSCC 2000). They are as follows:

> 1. Human dignity, quality of life and environmental security should be at the centre of the new approach, which should be responsive and accountable to needs and demands in the local setting.

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[2] The expression 'sanitation system' comprises the users of the system, the toilet infrastructure, the collection, transport, treatment, and management of end products (human excreta, solid waste, grey water, storm water and industrial wastewater) (Bracken et al. 2005, cited in NETSSAF 2008)

[3] SuSanA - Sustainable Sanitation Alliance - is an informal network formed in 2007 and formed by 174 partner organizations (local and international NGOs, educational and research institutions, private sector and state owned institutions) that share a common vision on sustainable sanitation. The network works as a coordination platform, contributing to the policy dialogue on sustainable sanitation (SuSanA undated b).

2. In line with good governance principles, decision-making should involve participation of all stakeholders, especially the consumers and providers of services.

3. Waste should be considered a resource, and its management should be holistic and form part of integrated water resources, nutrient flows and waste management processes.

4. The domain in which environmental sanitation problems are resolved should be kept to the minimum practicable size (household, community, town, district, catchment, city) and wastes diluted as little as possible.

(ibid.)

According to Holden (2008, p. 3), the improvement of sanitation conditions requires a broader look at the entire environment in a holistic manner, "so that improvements in one area are not undermined by the neglect of another, and to prevent the problem from being transported elsewhere with the discharge of untreated sewage or indiscriminate tipping of solid waste". Also related, the concept of sustainable sanitation brings about the need of sanitation systems to be "economically viable, socially acceptable and technically and institutionally appropriate" (SuSanA undated a). The evaluation of all dimensions of sustainability rejects the idea of 'one-for-all sanitation solution' and indicates that local specificities should be taken into account when designing a sanitation system (ibid.). The concept considers a set of criteria that covers five aspects:

(i) health and hygiene, e.g. 'the risk of exposure to pathogens and hazardous substances';

(ii) environmental and natural resources, e.g. 'natural resources required for the construction, operation and maintenance of selected system';

(iii) technology and operation, e.g. 'the system's vulnerability towards floods, earthquakes';

(iv) financial and economic issues, e.g. 'the capacity of users to pay for the services';

(v) socio-cultural and institutional aspects, e.g. 'appropriateness of the system according to users preferences and perceptions, convenience and gender issues, amongst others (ibid.).

In terms of sanitation, the indicator currently used by the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) to measure the performance of the sector and evaluate the progress towards achieving the MDG's sanitation target is the *sanitation ladder*. It was developed in 2008 and is based on the definitions of improved and unimproved sanitation. The sanitation ladder consists of a four-rung ladder that ranges successively from open defecation to unimproved facilities, shared facilities and improved facilities (WHO/UNICEF JMP 2010). *Improved sanitation* is the one that hygienically separates

human waste from human contact, e.g. the use of flush or pour-flushed to piped sewer systems, septic tanks and pit latrines, ventilated improved pit latrine; pit latrine with slab and composting toilet. *Unimproved sanitation* comprises all other kinds, including shared facilities and open defecation (WHO 2008).

While the definitions of improved or unimproved sanitation adopted by the JMP refer to the hardware exclusively, the definition of *adequate sanitation* provided by Kader Asmal et al. (1996, cited in NETSSAF 2008) refers also to the ongoing operation and maintenance of a system of removing and managing human feces, solid waste and wastewater also in relation to its acceptability and affordability to the users. In this sense,

> The issue is not whether they have provision for sanitation but whether they have a quality of provision that is convenient for all household members (including women and children), affordable and eliminates their (and others') contact with human excreta and wastewater (which may also be contaminated with excreta) within the home and the wider neighborhood.
>
> (UN-HABITAT 2003, p.2)

Still, according to COHRE et al. (2008, p. 23) the *ladder* concept is in accordance with the human rights principle of 'progressive realization', which implies the obligation to act promptly, efficiently and effectively towards the 'full realization of all economic, social and cultural rights'. However, the concept is still under debate as discrepant coverage figures may be presented according to the source, mainly due to the use of different definitions, i.e. regarding the inclusion of shared toilets among the improved facilities. Also different statistical methods and data sources between JMP and countries in their respective reporting systems interfere in the results and may compromise comparability efforts (WHO 2008).

Regardless the reporting source, the coverage rate is far from ideal. The indiscriminate open defecation is a great threat to human health and an affront to human dignity. Open defecation and poor hygiene behavior are considered the root causes of several fecal-oral transmissions, including diarrheal diseases, stunting and undernourishment (UN 2010). It is acknowledged that the lack of sanitation facilities is the primary cause of water contamination and thus water-linked diseases. Children under the age of five accounts for almost 90 per cent of all deaths that occur from sanitation-related diarrhea, and women, more than men, suffer from the indignity of having no other option but to defecate in the open, at risk of assault and rape

(COHRE et al. 2008). Therefore, access to adequate sanitation services is a primary condition for health quality and plays an important role in reducing poverty, hunger, child mortality and gender inequality. Also, regarding the environment, inadequate sanitation is a major cause of surface pollution and groundwater contamination (UNDG 2010).

The acute appeal of the topic eventually led to the declaration of the year 2008 as the International Year of Sanitation by the UN General Assembly. It was an attempt to raise awareness and accelerate actions for the achievement of the sanitation MDG (UNDG 2010). If public health arguments had not been considered convincing enough, human dignity and environmental preservation support the undeniable consensus on the need to provide "water and sanitation for all, within a framework that balances the needs of people with those of the environment in order to support healthy life on earth" (SANDEC and WSSCC 2000b, p.5). Not less than 26 United Nations – organizations are involved in the sector in some way and compose the umbrella organization UN-Water, the inter-agency mechanism founded in 2003 to coordinate the UN system's initiatives (UN-Water undated)

The Sanitation Crisis

The MDG's target related to sustainable access to safe drinking water is making progress and is likely to succeed and be reached by 2015. Nevertheless, the current scenario already demonstrated that the MDG's target for sanitation is out of reach. While in developed regions of the world, virtually the entire population has access to improved facilities, this number drops by half in developing regions, i.e. South-East Asia and Sub-Saharan Africa[4], where very subtle progress could be observed in the last two decades. (WHO/UNICEF JMP 2010) (Figure 2). "These are environments occupied by the world's most disadvantaged people, including the most vulnerable children and women" (Black and Fawcett 2008, p.7).

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[4] The JMP uses the UN's classification, in which the world in divided into three regions: developed regions, developing regions and the Commonwealth of Independent States
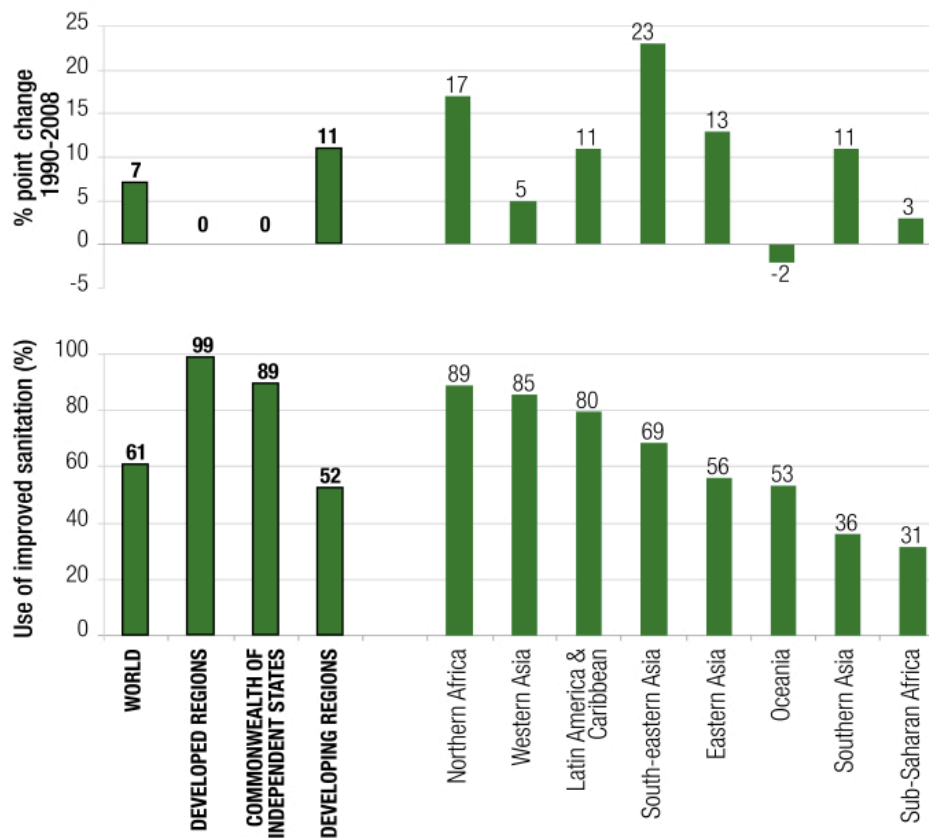
Figure 2: Regional use of improved sanitation facilities in 2008 and change occurred between 1990 and 2008. Source: WHO/UNICEF JMP 2010, p.6.

Out of the developing regions, Sub-Saharan Africa and Southern Asia are the ones facing the biggest challenge, with 69% and 64% of their population lacking access to sanitation, respectively (Figure 3). Yet, most of the improvement on sanitation so far is failing to reach the poor. Within Sub-Saharan Africa, 27 % of the population still practice open-air defecation, the bottom rung on the sanitation ladder, while the richest 20% of the population has almost five times more chances to use an improved facility than the poorest 20% (UN 2010 and UN 2011a).
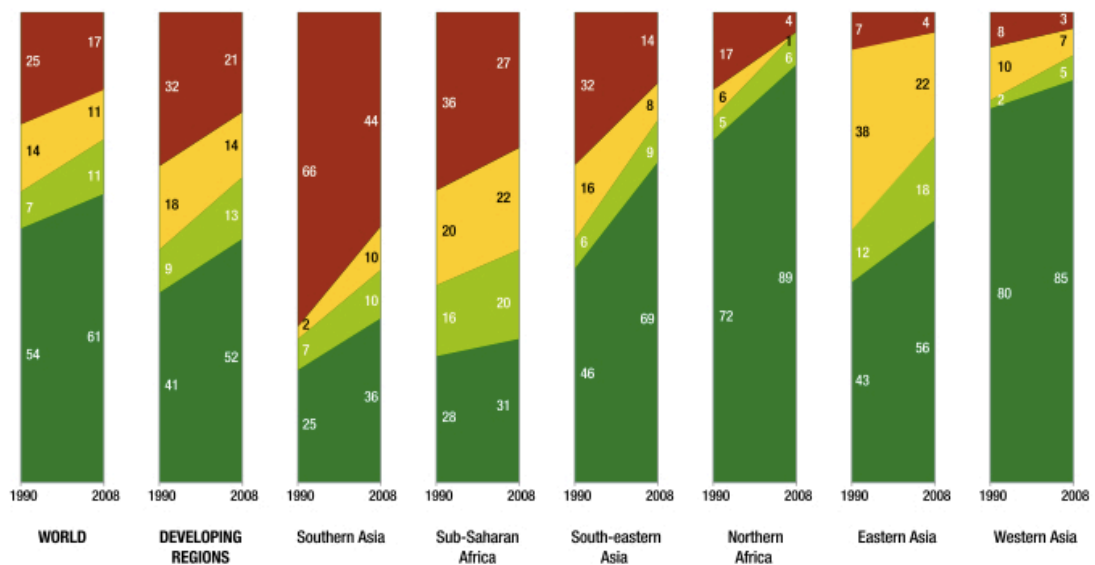
Figure 3: Proportion of the population using an improved (dark green), shared (light green) or unimproved sanitation facility (yellow) or practicing open defecation (red), by MDG region, in 1990 and 2008. Source: WHO/UNICEF JMP 2010, p.12.

Despite its proven capacity to attract international attention and mobilize financial and technical international cooperation, the efforts from the sector have not been sufficient to attain the growing challenge of urban and rural sanitation. The inclusion of sanitation within the extensive list of fundamental rights and its recognition as a human right alongside water clarifies the role of the countries in ensuring access to adequate sanitation, establishing standards that can be monitored and to which government leaders can be held to account. Nevertheless, while virtually all governments recognize that sanitation is a component of the right to an adequate standard of living, the majority has not yet expressed this in their national policies and legislation related to the sector (COHRE et al. 2008). According to the last report of UN-Water, amongst the surveyed countries, nearly all have sector-specific policies for drinking water, differently from the sanitation sector.

> "Despite these clear benefits for human development, many countries seem to allocate insufficient resources to meet the Millennium Development Goal (MDG) target for sanitation and drinking-water. When compared with other sectors, particularly the other major social sectors of education and health, sanitation and drinking water receive a relatively low priority for both official development assistance (ODA) and domestic allocations.
>
> (WHO 2010, p.2)

The Urban Context

The disparities between urban and rural areas are slowly decreasing but remain significant. The rural population continues to be disadvantaged since great part of the world's deficit is still found in these areas (UN 2011a). Nevertheless, during the past decades significant attention was turned to rural contexts. The improvements can be credited to innovative, cost-effective and community-based approaches to address and advocate water, sanitation and hygiene (WASH) issues, for instance the Community-Led Total Sanitation or Community Hygiene Clubs (UNDG 2010). Although these efforts have proved to be effective in rural areas in promoting 'zero open defecation' or creating 'open defecation free' communities, the mere transference of their methods and procedures to complex urban contexts poses some challenges.

Current statistics point out that it was in urban regions where most progress occurred, as 64% out of the 1.3 billion people who have now gained improved access are urban dwellers (WHO/UNICEF JMP 2010). According to the latest UN Report (2011a), an urban dweller is 1.7 times more likely to have access to an improved facility. Also regarding the investments, some authors underline that urban areas have been highly subsidized (Rosemarin et al. 2008). Still, though generally better served than rural areas, urban areas struggle to keep pace with their high population growth (Figure 4).
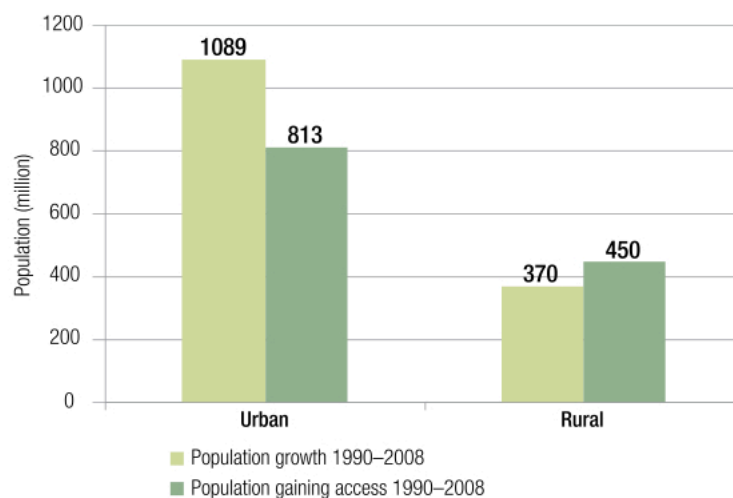
Figure 4: Worldwide urban and rural population gaining access to improved sanitation compared to population growth, 1990-2008. Source: WHO/UNICEF JMP 2010, p.16.

It is possible to say that urban growth is one of the most pressing challenges of the XXI century. The figures can be very alarming when considering that the 48 least developed countries in the world are the ones that grow faster, at a rate of 2,5% per year, and their population is expected to have doubled by 2050 (UN, DESA 2011b, p. XV). "The majority of this growth is expected to occur in low and middle-income countries and it is predicted that 95% of the urban population growth will take place in the developing world over the next two decades, and 80% of the world's urban population will be located there by 2030" (UNFPA, cited in Lüthi, McConville, & Kvarnström, 2009, p. 49).

Furthermore, in terms of sanitation provision, the urban service delivery gets more intricate due to the fact that poor urban residents live in slums[5] or in expanding peri-urban areas, most of the time neglected by governments, either by lack of capacity or interest. UN-HABITAT (2003) divides into three categories the shortfalls in the sector regarding the causes: (i) proximate causes: at community and household level, i.e. poverty and rapid population growth; (ii) contributory causes: at town or city level, i.e. weak local governments and poor management and performance of utilities; and (iii) underlying causes: national governments and economic circumstances, i.e. low internal investments and external support and high level of corruption.

Urban sanitation systems are frequently associated with infrastructure of the built environment that operates beyond the boundaries of the household and its immediate community, while individual household sanitation is generally associated with less densely populated rural areas (IWA 2005). Also, the improvement and investment made so far are largely employed in conventional sewer systems that are failing to reach the urban poor and is proven to be an unaffordable solution for the sanitary crisis in non-industrialized, low-income communities (Black and Fawcett 2008). Therefore, in many cases, in face of the current challenges, decentralized sanitation systems operated at the household level are still the option adopted in order to address the current deficit worldwide.

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[5] The UN Expert Group provides an 'operational definition' of *slums* as being areas that combines the following characteristics: insecure residential status, inadequate access to safe water, inadequate access to sanitation and other infrastructure, poor structural quality of housing and overcrowding (UN HABITAT 2002, p.22). Nevertheless, for the MDG monitoring purposes, the adopted definition excludes the secure tenure (http://www.mdgmonitor.org/footnotes.html).
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Also, there is a remarkable incidence of shared facilities or public latrines[6] in urban areas, adopted mainly in slums and other precarious settlement where there are space constraints (WHO/UNICEF JMP 2010). Although these kinds of facilities are not considered improved, they are one rung from it in the sanitation ladder. Nevertheless, it is important to notice that there is still need for a qualitative assessment of the conditions of the facilities reported to census and surveys, since the indicator considers neither the amount of people sharing a facility nor the operation and maintenance status of the facilities for example. Thus, the intra-urban inequalities and disparities in developing countries deserve a careful look.

Informal and Unplanned Urban and Peri-Urban Settlements

One of the main aspects of life in the cities is undoubtedly its attractiveness. Cities attract both rich and poor people looking for better income opportunities, better quality of life and a modern way of living, in a movement dating back to the industrial revolution. Besides, from the 1970's onward, changes in rural economies and the shift from subsistence to a monetary economy have also contributed as push factors. Thus, cities are growing and in 2008, a world that was predominantly rural had reached its milestone as the urban population surpassed the rural one. It is possible to say that most of the cities in the developing world were not prepared for the in-migration of new residents in addition to fast-growing population rates. The consequence was that the growth was not accompanied by expansion of the service provision network, which leads to billions of people living with very low standards in informal and unplanned areas in urban formations.

According to UN-HABITAT (2003b), in 2001, 31,6% of the world's urban population - 924 million people - lived in slums and this number is expected to double in the next three decades. The majority of slum dwellers were in developing regions, accounting for 43% of the urban population, while 6% were found in developed regions. Within the developing regions, Sub-Saharan Africa and South-central Asia have the highest percentage of their population living in slums (Figure 5). The outcomes of the rapidly expanding urbanization process in cities in Africa are "(…) continent-wide massive self-help urbanization dominated by uncontrolled informal and often illegal spatial developments and mushrooming numbers of

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[6] Shared facilities are sanitation facilities shared by two or more households, public or private.

poor urban dwellers without access to adequate housing or basic services like water, sanitation, electricity and roads" (UN-HABITAT 2008, p.7).
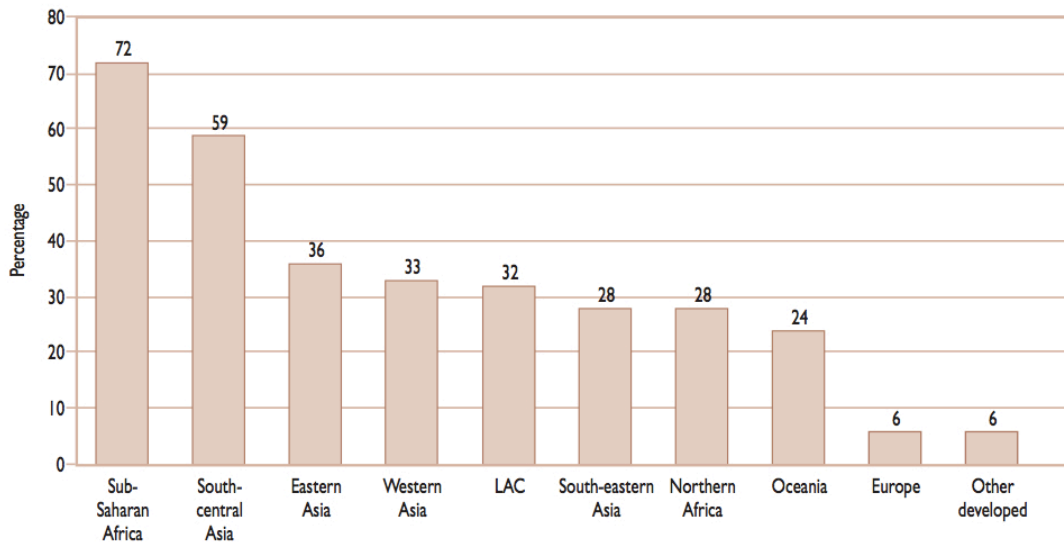
Figure 5 Percentage of slum population by region, 2001. Source UN-HABITAT 2003b, p. 14.

It is important to notice that not all informal settlements, here understood as the ones in which some aspect of the occupation of the land or its development for housing is illegal (Shiklomanov, cited in UN-HABITAT 2003a), are slums as well as not all unplanned settlements are informal as well as not all residents of informal settlements are poor. "However, a common factor is that they tend to be underserviced" (Lüthi et al. 2011b, p.21).

At a first glance the high urban density can be seen as a way to reduce unit costs for improved provision (UN-HABITAT 2003a), nevertheless the informal condition and lack of land tenure of worldwide slums poses a major dilemma in terms of planning and provision of basic services. The allocation of responsibilities is not clear and as result these areas remain unserved. The conventional sanitation suppliers, public, private or individuals, find significant constrains in performing their tasks, "requiring a high degree of co-operation amongst residents and between residents and government institutions" (Holden 2008, p.2).

In many cases critical elements of the sanitation chain are not provided at all; for instance, emptying and treatment services, and proper disposal or use of human feces are lacking. As a result wastes are often discharged directly into neighboring environments, open drains or other water bodies, leading to increasing squalor, disease risks and environmental degradation.

(IRC et al. 2011, p.4)

From the private sector point of view, there is low interest in investing in slum or slum-like areas due to the uncertainty of cost recovery and regular payment for services, despite the acknowledged demand, willingness and certain ability to pay for improved provision in the urban contexts (UN-HABITAT 2003a, p.2). Also, in many cases, official water and sanitation providers and local governments are not legally required to expand the provision to these areas and may even be legally forbidden from operating in such settlements. Also many of the formal preconditions necessary for them to operate may not be present, such as formal addresses, tenure status and legal documents that allow them to become eligible to the service (ibid, p.104). Still, other factors inherent to this kind of settlements contribute to the lack of delivery of sanitation, such as the distance between informal settlements and existing networks; the irregular urban layout, the cost of construction in narrow, hilly and disaster-prone areas (ibid).

The lack of land tenure is a significant constraint on improving provision in many illegal settlements not only from the private sector perspective, but also from the viewpoint of residents and land owners, who avoid investing in their assets due to eviction risk. For the state, investing in infrastructure and public facilities in informal areas is seen as a first step towards the recognition, legitimization and consolidation process of slums. In order to avoid that, improvements are prevented, since they are seen as attractiveness factors for newcomers. In this context, the community autonomous solutions turn out to be the way out regarding sanitation provision in poor informal areas, even if it can 'place further burdens on communities that are already struggling to address their multiple needs' (ibid, p.187).

Stakeholders and Scale

The environmental sanitation sector comprises a wide roll of actors and stakeholders. According to Bryson (2003) in public and non-profit management theory and practice, the

term 'stakeholder' assumed a prominent place during the 1990s. "The term refers to persons, groups or organizations that must somehow be taken into account by leaders, managers and front-line staff" (ibid, p.3). The predominant definition is the one adopted in the business management literature: "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, cited in Bryson 2003, p. 04). Despite variations in the definition, the Bryson's literature review concurs with the need for stakeholder support to create and sustain winning coalitions, policies, plans and programs. When key stakeholders are not satisfied at least minimally, public policies, organizations, communities or even countries and civilizations tend to fail (ibid, p.5).

The interconnected nature of the sanitation problems that comprise health concerns, environmental protection, infrastructure planning and hygiene education, amongst others, with their respective actors, interests and responsibilities at stake, poses a difficult coordination task to the environmental sanitation field. Even so, it allows opportunities like innovative partnerships and alternative funding arrangements. In this sense, the importance of identifying strategic stakeholders is a key element in any change effort. A careful analysis of stakeholders can provide valuable information, ensure long-term viability of policies and promote stakeholders' satisfaction according to their own satisfaction criteria (Bryson 2003, p.11). The stakeholders vary in each context in terms of influence, interest, power, resources, and capacities but in general the following actors are the ones who have to be considered in environmental sanitation planning and programming:

National and Regional Governments: Responsible for regulations and its enforcement, with acknowledged complexity of interfaces between several governmental agencies and ministries, like environment, resources, urban development and planning amongst others.

Local Governments: Lowest level of government composed by mayors, councilors, policy-makers and related municipal departments, which acquired greater role and responsibilities through decentralization reforms.

Utilities: Large-scale operators, state-owned, private or shared enterprises responsible for services provision, also known as suppliers.

Local Service Providers: Small-scale providers, official or informal, individual or groups, in many cases acting in their own neighborhood, providing the supply of sanitation products and services.

Community: The collective of individuals, organized or not in favor their own interests, beneficiaries of policies and services.

Households: Smallest social unit, are the occupants of a house unit, can be a family or a group of individuals, many times responsible for the direct provision of services in disenfranchised communities. Also seen as costumers, consumers or service recipients.

Head of Household: The owner or tenant of a housing unit also associated to the role of main provider of economical assets, or 'family provider'.

Community-based Organizations (CBOs): Grassroots organizations formed by community members to articulate and defend their interests that also may act as service providers. Community leaders, community champions and resourceful persons play important role in articulating local people.

Non-governmental Organizations: Non-for-profit organization, based out or not in the community, working usually as a link between donor agencies and community

International Organization: Technical cooperation agencies, international NGOs and UN entities. Implementing agencies, not necessarily source of funding, many times playing a role of trainers, facilitators and advocators.

Universities and Research Institutes: Partner institutions concerned with testing new technologies and approaches, preparing skilled and specialized technicians and developing the body of knowledge of the sector.

Donor Agencies: National or supranational development banks, charity and philanthropy institution, funders of interventions through loans or grants.

In addition to stakeholders, the concept of urban domains defined by the International Water Association Task Force on sanitation planning and design is broadly used within the sanitation field (IWA 2005, p.15). The recurrent applied terminology is used to delineate the spheres of action and decision-making in the cities. Nevertheless, urban sanitation systems are expected to work in all domains of the city, "at the household level providing a toilet, in the

neighborhood providing a clean environment and at the city level managing the overall resource and waste economy" (IWA 2005, p.5). As well as the stakeholders, the domains vary according to social and political norms and structures (Figure 6), but the general concept considers:

- *Household* to describe the personal sphere within which households (families, individuals, small units etc) take investment and behavioral decisions; (UN-HABITAT 2003)
- *Neighborhood / ward / peri-domestic / district* to describe a continuum of 'areas' within the city at which level households either act jointly, are jointly represented by the political process or can be organized for planning purposes;
- *The City* to describe the level at which services are centrally planned and organized, and financial decisions are taken; and
- *Beyond the city* to describe the sphere in which policy and practice is set which impacts onto decisions made at the city level.

(IWA 2005, p.15)
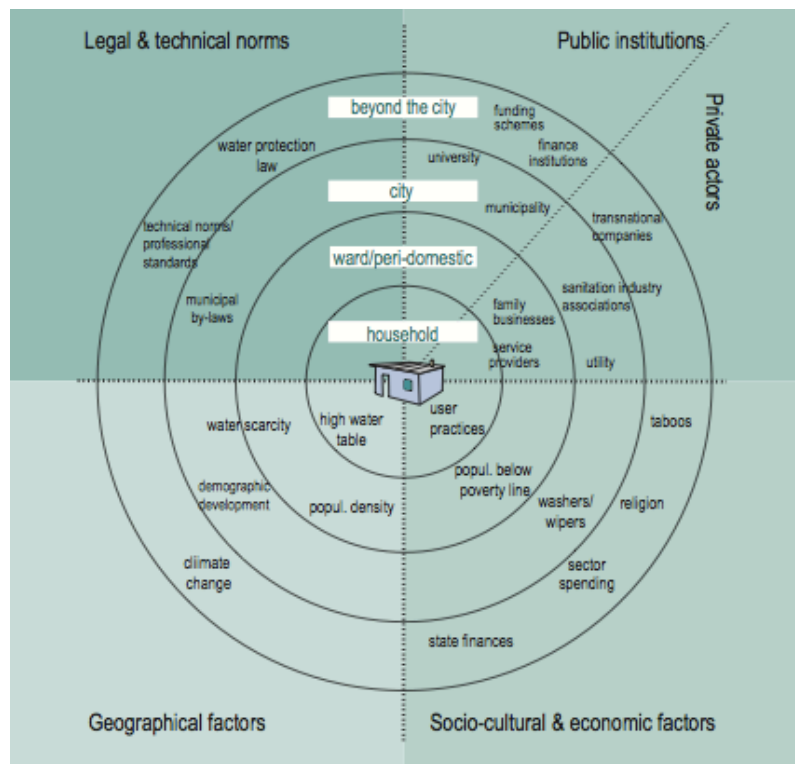
Figure 6: Multi-level map for identifying institutional, organizational and context factors. Source: Lüthi 2011b, p. 72

2.2 Environmental Sanitation Planning in Developing Countries

Urban households in the developed world have their houses connected to sewage systems that carry the produced wastewater to treatment plants for subsequent discharge. They pay fees for the services that have to observe quality standards set by strict laws (Oosterveer and Spaargaren 2010). However, this reality is still far from the horizon for most urban dwellers in developing countries, where services are often absent or inadequate and local authorities and utilities lack the capacity to plan[7] and deliver sanitation services. Some cities may have sewage systems dating from the colonial era and the provision is still restrict to central and rich areas (ibid.).

Brief Insights into the Recent History of Sanitation Planning and Provision in Developing Countries

It is possible to say that the development of sanitation systems in poor or developing countries have continuously been under the influence of an international development agenda. Inspired by the sanitary reforms in the industrialized cities during the 19th Century, "by the second half of the 20th Century, indoor piped water and water closets had become widely accepted goals of development, espoused by governments of a wide range of political persuasions and in diverse social and physical settings" (UN-HABITAT 2003a, p.159). Nevertheless, in the context of developing countries, "urban authorities have been far less successful in implementing large infrastructural systems than in OECD countries as they face a number of pertinent and persistent problems, in particular the lack of adequate material and human resources but also specific ecological, institutional, political and cultural challenges" (Oosterveer und Spaargaren 2010, p.13).

Already in the 1980s, during the International Drinking Water Supply and Sanitation Decade, institutional rather than technical aspects started to be emphasized, with the inclusion in the international agenda of issues like community participation, gender awareness, environmental

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[7] This thesis makes use of a definition of planning that considers it as "a process of making choices among the options that appear open for the future and then securing their implementation" (Roberts 1974, cited in McConville 2010, Lüthi et al. 2009, 2011).

concerns, mainly directed towards water resource management and the market-led point of view. Until then, demand-side was not a major concern. During the 1990s, three distinct points mark the prevailing thought in water and sanitation in the international policy arena: (i) the development of integrated water resource management in the river basin level; (ii) the heavier reliance on private enterprises and market mechanisms, rather than the dependence on the public sector; and (iii) the devolution of responsibilities for water and sanitation management to the lowest appropriate level, rather than centralized decision-making processes (UN-HABITAT 2003a, p.158). In face of the widespread failure of the governments and public utilities in some countries, private sector solutions, supported by international agencies, attained enthusiasts (UN-HABITAT 2003a, Oosterveer and Spaargaren 2010).

The claim was that private companies, based on free market law, would be more efficient and able to respond to consumers' demands (Oosterveer and Spaargaren 2010). Even though these changes occurred in a number of countries, it "has rarely achieved the benefits anticipated", and in general, the results of the heavily subsidized programs benefited local elites and improved the provision for the wealthy (UN-HABITAT 2003a, p.158). To sum up, "the overall conclusion is that increasing private sector participation, at least as it has been promoted in recent years, is not going to resolve the problems of inadequate water and sanitation provision found in most urban centers in Africa, Asia and Latin America" (UN-HABITAT 2003a, p.159). Specifically in the African context, during the early 2000s, it became clear that the process of minimizing the state participation, stimulating good governance and delegating more tasks to markets and private sector failed to produce the expected results (Oosterveer and Spaargaren 2010).

The expectation of cost-recovery of service providers relegated poor and marginal areas to the responsibility of under-resourced community initiatives (Oosterveer and Spaargaren 2010). On-site low-cost sanitation technologies were the solution found by numerous impoverished neighborhoods and became "the reality for the vast majority of the developing world's urban population" (Lüthi, McConville and Kvarnström 2009, p. 50). Despite that, the focus of decision-makers is still on centralized systems, expensive and over-engineered solutions, without stakeholders' participation in order to improve the access to sanitation in these regions (ibid.).

Nevertheless, there is an appeal for more adaptable, diverse, flexible, accessible, sustainable sanitation systems with enough room for progressive improvements if they intend to address the heterogeneous urban realities. In this sense, a mixture of planning modes and technical systems appear to fit these demands to meet the needs of the diverse population (Hamdi und Goethert 1997; McConville 2010; Oosterveer and Spaargaren 2010). Recent literature on sanitation planning depict innovative efforts to extend provision in both rural and urban contexts through innovative approaches that are more concerned with the demand side, i.e. community involvement and the more adequate technologies (Lüthi, McConville and Kvarnström 2010).

Conventional and Alternative Approaches

Conventional approaches to sanitation are the ones that promote costly over-engineered large-scale solutions such as conventional water-borne sewerage. Also referred to as traditional approaches, they are usually supply-oriented; often externally funded and planned and highly subsidized. They are also known as 'top-down' approaches, characterized by vertical organizational flows, highly structured processes with written rules and procedures, narrow participation profiles and budgetary focus (Pyburn 1983, cited in McConville 2010).

Critical literature to this approach to sanitation provision shows that they have limited capacity to reach the poor; they stimulate dependency on subsidization and discourage ownership (Lüthi, McConville and Kvarnström 2010). The literature review performed by McConville (2010) reveals constraints related to large-scale sanitation provision, like low prioritization of sanitation, financial limitations, the lack of managerial capacity and insufficient institutional coordination (McConville 2010). From the perspective of water and sanitation agencies, the poor performance and weakness or even incapacity lead to "inadequate cost-recovery, operation and maintenance" (UN-HABITAT 2003a, p. 108). Most of the failure of public utilities reflects governance problems, which are likely to persist and endanger water and sanitation provision, 'regardless of whether more responsibilities are given to the private sector' (UN-HABITAT 2003a, p. 162).

The need to overcome these constraints and address recurring failure raised the call for alternatives methods to provide more appropriate technologies and improve the planning process, demanding the so-called 'bottom-up' approaches. Challenging the one-size-fits-all ruling idea, participatory approaches to sanitation based on community plans more likely to be implemented, maintained and sustained were developed, anticipating that solutions embedded in local criteria can improve the appropriateness of the answers. Also, by involving excluded actors, for instance microfinance institutions, small-scale service providers and local entrepreneurs, innovative approaches seek to improve the affordability of services, adapting payment requirements and modalities (Sijbesma, Diaz and Fonseca 2008). Significant differences of the two approaches are found in Table 1.

Table 1: Characteristics of conventional and innovative approaches for financing the sanitation sector in developing countries. Source: adapted from Sijbesma, Diaz and Fonseca 2008, pp.7-9.

Conventional Approaches	Innovative Approaches
Target on large-scale infrastructure development projects	Groups have information about various options
Top-down decision-making	Users and communities decide for themselves
Favor of large service providers which focus on existing users	Involvement of the local private sector and small service providers
Overlooked maintenance and the software costs	Finance schemes acknowledge the need to cover both software and hardware costs
Focus on community/household cost of projects and programmes, disregard of the costs of the whole supply chain	Main source of finance continue to be user fees, according to the capacity to pay
Political and managerial problems in service operation	Endeavor to extend the service to un-served inhabitants

Still, Oosterveer and Spaargaren (2010, p.15) avoid the "(essentially) false dichotomy dividing centralized, large-scale, high-tech solutions from decentralized, appropriate, small scale and low-cost technology solutions". Instead, the authors suggest a combination of the best elements of both systems to better adapt to the social systems for which they are designed: "cost, accessible and robust performance of decentralized systems while at the same time realizing the economies of scales and high urban density-capacity characterizing centralized systems" (ibid.).

Software and Hardware Issues

The term *software* is used within the sanitation sector to refer to "activities that focus on the hygiene or sanitation promotion activities, policy development, training, monitoring and evaluation; in short, everything that allows programs, projects or interventions to take place" (Peal, Evans und van der Voorden 2010, p.4). Also, the concept is applied to interventions that "empower social actors with knowledge, enable a change in behavior, create demand for services, facilitate the establishment of supply chains and improve the planning and implementation of hygiene and sanitation projects" (ibid.). The term was coined in opposition to *hardware*, that refers to "toilets, pipes, sewers, taps, soap and ancillaries such as pit-emptying equipment" (ibid), when the sector started to recognize that "(…) improving the global sanitation situation is not just a technical fix to be achieved through infrastructure development, but rather a process requiring learning, planning, and behavior change" (McConville 2008, p.20).

Besides the physical infrastructure, "it is important to keep in mind that it is a system that is also embedded within a number of social norms that dictate the perspectives and habits regarding sanitation" (McConville 2010, p.7) The need to ally the 'human component' to infrastructure recognizes sanitation also as social service, due to the existence of local cultural practices closely connected to the values of the community in which it is implemented. The need for investments in software programs embraces not only social and cultural aspects that acknowledge existing gender issues, differences between children, adults, disabled people and the elderly, but also the development of local capacity. Based on a research conducted in West-Africa, McConville (2010, p.47) stresses on the "need to reinforce behavior change, develop local capacities and establish long-tem financing mechanisms", what brings new features to the definition of sustainability, considering its capacity to sustain itself and endure, even after the initial stimulus have ended.

Efforts regarding software issues are also considered to have positive effects in governance improvements. Good governance is considered a key aspect of the development and implementation of any new approach, thus eventually improving access to environmental sanitation. "Good governance is understood to require a policy-making and administrative framework, which includes government itself, the private sector and civil society, involvement of all stakeholders in decision-making, full transparency and accountability"

(SANDEC and WSSCC 2000b, p.7). The injection of additional resources is likely to fail in benefiting poor groups and spur improvements in overall management if realized without improvements in governance (UN-HABITAT 2003a).

The complementary benefits of investments in software, as well as potential financing sources can be observed in Figure 7. Awareness raising, sanitation promotion campaigns and social marketing and demand creating[8] strategies can be highly beneficial to the uptake of sanitation facilities and to breakaway the cultural inertia which makes it difficult to change both technology and cultural perspectives (Larsen & Lienert, 2003; Kvarnström et al. 2006, cited in McConville 2010, p.7).

ELEMENT OF A SANITATION PROGRAMME	NATURE AND INCIDENCE OF BENEFITS	POTENTIAL RESOURCES FROM		
		Household/ community	Market-based resources (private and borrowing)	Public
ENABLING ENVIRONMENT	Largely public due to improved efficiency of public spending Helps to leverage household and market-based resources			Government funds (mainly national) and some international support
PROMOTING HYGIENE BEHAVIOURS	Public and private due to community-wide health benefits and improvements in health at the household level Helps to leverage uptake of sanitation		Some private resources from soap manufacturers and suppliers	Government funds (local) and NGO/ donor projects Local funds for health extension workers, promotion etc.
SANITATION MARKETING	Largely public due to increased demand, greater uptake and supply of more appropriate sanitation technologies		Some private resources from sanitary-service suppliers (i.e. for advertising, R&D, etc.)	Government funds (central and local) for enterprise development etc. Local funds for health extension workers, promotion etc.
COSTS OF PUBLIC INFRASTRUCTURE AND SERVICES	Locally public - health benefits to wider community, improved school attendance and attainment	User charges for public/community sanitation and for access to e.g, urban sewerage	Some private funds for investments in pay-to-use public facilities, etc.; market -based borrowing may be possible for public facilities (Build, Operate, Transfer schemes (BOTs) and concessions etc.)	Central/ local government funds for sewerage, school sanitation, hospitals, clinics etc.
COSTS OF PRIVATE INFRASTRUCTURE AND SERVICES	Blend of private benefits to households (improved health and convenience) and public health benefits from no open defecation	Household and community capital and operational costs	Borrowing from MFIs/housing finance organizations may be available	Central/local government funds may be available

Figure 7: Nature and incidence of benefits. Source:Evans, van der Voorden and Peal 2009, p.9.

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[8] The competing needs in impoverished settlements may require demand-raising activities since once low demand is found, further engagement in participatory process can be undermined.

Institutional capacity building is also dependent on software investments, as well as the coordination amongst involved parties from different domains: government, private agencies and residents and operation and maintenance trainings (Oosterveer and Spaargaren 2010, McConville 2010). Apart from on-site systems with nutrient recycling, i.e. urine-diversion dehydration toilets (UDDTs), the investments in software components tend to be more inexpensive than hardware provision, with proven capacity to mutually benefit the construction of facilities (Figure 8).

| | SOFTWARE
Hygiene behaviour change, sanitation marketing and enabling environment (Ongoing) | HARDWARE * | | |
		Household toilets (Capital Expenditure)	Sludge management facilities (Capital Expenditure)	Sludge management operations (Operational Expenditure)
ON-SITE SYSTEMS WITH NUTRIENT RECYCLING	**Medium-Very High** in most locations where re-use is not a cultural norm. Particularly high if urine-diversion is proposed.	**Very Low** (arborloo)-**High** (urine diverting/composting latrines): specialised slabs and raised superstructure may be required.	**Very Low** (arborloo)-**High** (special composting facilities and urine storage may be required).	**Low-Medium:** depending on location of re-use of products. Costs may be offset by income.
OTHER RURAL ON-SITE SYSTEMS	**Low-Medium:** Costs may be slightly lower than for systems with recycling but recent research suggests that high and sustained investment in ignition and support processes leads to greater sustainability.	**Low-Medium:** varies with design of latrine, water availability etc.	**Low-Medium:** increased costs where twin pits and larger pits are constructed.	**Low-Medium:** costs may be prohibitive if wrong technology choices are made. Opex costs may fall more heavily on least-able households.
URBAN ON-SITE SYSTEMS	**Low-Medium:** As for rural, better ignition and sustained support may result in greater sustainability. Some investment in enforcement may also be required.	**Medium-Very High:** varies with design of latrine, water availability and land prices.	**Medium-High:** suitable treatment and disposal options essential for an appropriate environmental and public-health outcome. Cost savings possible with low cost decentralized treatment.	**Medium-High:** varies with distance to treatment/disposal sites and technologies chosen. Costs of centralized tertiary treatment, if included, very high.
URBAN OFF-SITE SYSTEMS	**Low:** Costs may be relatively low and compliance not an issue if adequate services are provided.	**Low** (shallow sewers)-**High** (conventional sewers): in dense urban areas sewerage may be cheaper than on-site systems. Costs much higher for conventional sewerage than for shallow sewers.	**Medium-Very High:** cost savings possible with non-conventional designs (shallow sewers) and low cost decentralized treatment.	**Medium-Very High:** costs are higher when conventional rather than shallow sewerage networks are used. Energy costs very high if pumping required; costs of centralized tertiary treatment, if included, very high.

Figure 8: Relative hardware and software costs of different sanitation systems. Source: Evans, van der Voorden and Peal 2009, p.24.

Theoretical Basis for Stakeholders' Participation

"Environmental problems are typically complex, uncertain, multi-scale and affect multiple actors and agencies" (Reed 2008, p. 2418). This work borrows the definition of participation depicted by other authors and adopted by Reed (ibid., p.2418), as it is understood as a "process where individuals, groups and organization choose to take an active role in making decisions that affect them". It is possible to observe a wide range of different interpretations of participation, not only due to the context in which it is applied – for instance, in the developing world and the development field, this concept in embedded in action-oriented and site-specific approaches – but also due to ideological, social, political and methodological meanings attributed to the term (Lawrence 2006, cited in Reed 2008).

Reed (2008) conducted a comprehensive literature review about stakeholder participation in different geographical and disciplinary contexts, in which he recognized phases through which the concept evolved in past decades. In the late 1960s, the concept was concerned with awareness raising; during the 1970s, with the incorporation of local perspectives in data collection and planning; in the 1980s, with the recognition of local knowledge and since the 1990s the concept has mainstreamed due to its inclusion in the sustainable development agenda. From that on, the concept passed through a stark critique phase, that the author entitles as 'participation disillusionment', with subsequent development of a 'post-participation' approach drawn from best practices and lessons learnt. Furthermore, the author ibid., 2419) structures the body of literature participation in four typologies according to:

- Different degrees of participation on a continuum
- Nature of participation according to the direction of communication flows
- Theoretical bases, essentially distinguishing between normative and/or pragmatic
- Objectives for which participation is used

Regardless the distinct typologies, several arguments support the inclusion of participation into national and international policies. Reed (2008) categorizes these arguments into normative and pragmatic (Table 2).

Table 2: Categorization of claimed benefits of stakeholder participation based on the literature. Source: adapted from Reed 2008, p. 2420-2421.

Normative Claims	Pragmatic Claims
Inclusion of marginalized actors	Quality and durability of decisions
Promotion of active citizenship	Interventions and technologies better adapted to local socio-cultural and environmental contexts
Increasing public trust in decisions and civil society	Better capacity and likelihood to meet local needs and priorities
Co-generation of knowledge and increasing capacity of participants to use this knowledge	Better adoption and diffusion of solutions amongst target groups
Increasing the perception that decisions are holistic and fair	Higher quality of information inputs for research and decision-making
Social learning and development of creative solutions through reflective deliberation	Anticipation and amelioration of unexpected negative outcomes
	Transformation of adversarial relationship into ways for participants to work together
	Sense of ownership over the process and outcomes
	Long-term support and active implementation of decisions
	Reduction of implementing costs

Despite all the above-mentioned claims, Reed (2008) points out that the expectations are not always fulfilled, and there is still little evidence provided by research that can prove most of the arguments. For instance, by empowering politically underrepresented groups, participation processes may interfere with existing power structures, promoting unexpected and potentially negative interactions, such as reinforcing existing privileges since the expression of minorities' perceptions may be discouraged by group dynamics (Kothari 2001, Nelson and Wright 1995, cited in Reed 2008). Processes that are not well run, in which participants are consulted but little of their views is considered, develop frustration and mistrust (UN-HABITAT 2003a), what Reed (2008, p.2420) identifies as 'consultation fatigue'. In addition, the existence of non-negotiable positions or actors as well as lack of expertise of some stakeholder groups to influence technical decisions compose the body of critique to participatory approaches.

Researches indicate that the success of participatory methods is more influenced by the facilitation of the process, communication with participants, clarity of goals and quality of planning, than by the selected method itself, supporting the author's emphasis on the need for views that consider participation as processes (Reed 2008). The revision of best practices enabled Reed (2008) to construct a theoretical model composed by eight key features:

> (i) Stakeholder participation needs to be underpinned by a philosophy that emphasizes empowerment, equity, trust and learning;
> (ii) Where relevant, stakeholder participation should be considered as early as possible and throughout the process;
> (iii) Relevant stakeholders need to be analyzed and represented systematically;
> (iv) Clear objectives for the participatory process need to be agreed among stakeholders at the outset;
> (v) Methods should be selected and tailored to the decision-making context, considering the objectives, type of participants and appropriate level of engagement;
> (vi) Highly skilled facilitation is essential;
> (vii) Local and scientific knowledge should be integrated; and
> (viii) Participation needs to be institutionalized.
>
> (ibid., 2422-2426)

Participatory Approaches in Environmental Sanitation Planning

The Vienna Charter endorses that the planning process in the environmental sanitation field must consider stakeholders' participation at every domain, mainly where it has been less developed, in order to achieve effective sanitation solutions (IWA 2008). Even emphasizing the role of service providers and governments with regards to the provision and the need of citywide integrated systems, the Charter affirms that household demands should be understood and considered associated with technical and financial aspects, with citizens and consumers called to participate in the planning, monitoring, delivery, management and operation of services in the local level (ibid.).

"Participatory approaches were developed in part, as response to top-down, science-led transfer of technology paradigm" (Reed 2008, p.2425). The change in the strategy of

development agencies was mainly motivated by shortfalls experienced in the past, in which projects faced rejection and resistance from the beneficiaries and also by some ethical considerations (Mosler 2006). According to Hamdi and Goethert (1997), the failings of orthodox planning model[9] across all sectors propelled a shift in the development paradigm, in which bottom-up perspectives gained space to advance and the role of the planner as an enabler, rather than a provider, became more evident. In addition, the lack of trust in official help compelled low-income communities to invent alternative ways of working and answering to their needs and aspirations *spontaneously*, by *improvising* and building *incrementally* (Hamdi and Goethert 1997).

Inclusive methods to sanitation provision were firstly used in rural areas, i.e. Rapid Rural Appraisal (RRA), during the 1970s and 1980s, with demonstrated results. The claims for the participation of stakeholders, especially communities and beneficiaries, in sanitation projects are mainly pragmatic and match to the broader literature on the topic:

- Achievement of site-specific, more appropriate and sustainable solutions
- Concern with cultural beliefs and practices regarding sanitation habits
- Capacity development for operation and maintenance
- Gain of ownership of processes and results
- Greater efficiency and effectiveness through community contributions
- Gain of social capital and empowerment of communities

It is recognized amongst grassroots activists, academics and practitioners that water and sanitation service provision that fails to include beneficiaries' concerns tends to deliver solutions usually ill suited to the needs of poor communities (UN-HABITAT 2003a, Hamdi and Goethert 1997 for planning in general). Several attempts to develop more demand-responsive approaches and to engage them in planning process were developed in the past decades. In this perspective, community groups and local residents are considered to be the ones in the best position to articulate their own needs (UN-HABITAT 2003a, Hamdi and Goethert 1997).

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[9] Orthodox planning models are highly dependent on "information, accuracy of data, surveys and site plans, as well as comprehensive understanding, political goodwill, economic stability and institutional capabilities", demands commonly in short supply in developing world (Hamdi and Goethert 1997, p.19).

Demand-responsive approach requires that consumers be involved in selecting, financing, implementing and managing water and sanitation services that meet their demands and be willing to pay. Community members make informed choices on: whether to participate in a project; technology and service level options based on willingness to pay; when and how their services are delivered; how funds are managed and accounted for; and how their services are operated and maintained. Government plays a facilitative role, sets clear national policies and strategies, encourages broad stakeholder consultation, and facilitates capacity building and learning. An enabling environment is created for the participation of a wide range of providers of goods, services and technical assistance to communities. An adequate flow of information is provided to the community, and procedures are adopted for facilitating decisions on collective action within the community.

(DEZA undated, p.21)

It is expected that participation in sanitation planning would attract more attention from citizens due to its proximity to day-to-day life and its wide roll of issues directly or indirectly connected to it, namely human dignity, privacy, health and economics. Still, the technical complexities of sanitation systems may hinder the participation of groups of users who lack technical, financial and information capacities. In the case of highly technical decision making, which inevitably occurs when dealing with urban sanitation, it is needed to add an extra stage to the process, with interventions to develop knowledge and confidence to meaningfully engage non-experts in the discussion (Lüthi and Kraemer 2012).

Though community groups are often targets of people-centered approaches, there are some initiatives that seek to include and strengthen small service providers and to find better ways to engage with utilities (WSUP 2010a). Still amongst demand-driven models, Murray (2009) defends a planning approach to reuse-oriented sanitation, which targets end-users of sanitation by-products. The author argues that the emphasis on sanitation users is misplaced due to the weak link to the subsequent treatment, disposal and the end uses of sanitation products, therefore, targeting and involving end-users is the effective way to respond to the shortcomings in sustainable urban sanitation planning and implementation.

Yet, "it has been noticed that there is often a paradox between the theoretical desire for bottom-up, locally developed solutions to local problems and the traditional top-down decision-making process that exists in many municipalities (Kvarnström and McConville 2007, cited in McConville 2010, p.43). It may be due to the two distinct rationalities that can be found in sanitation planning: the *down-stream*, related to the "generation and the primary collection of sanitation and solid waste", thus dominated by domestic rationalities and household practices and the *up-stream*, related to "secondary collection, treatment and disposal", thus dominated by system rationalities of technological and economic nature (Oosterveer and Spaargaren 2010, p.19). The meeting point between these two rationalities should be acknowledged, since their adjustment is crucial for more effective and sustainable infrastructure (ibid.)

In addition to the different rationalities between the actors and institutions, Mosler (2006) points out that the willingness of the stakeholder to participate depends on at least four factors: (i) a calculation of the costs and benefits that a person will derive from participation and that includes time for participating; (ii) person's capabilities and abilities to participate; (iii) the opinion on participation; and (iv) social pressure. No matter what the reasons may be, the recommendations found in the literature for more participatory models and approaches hardly match with sanitation planning practices (McConville 2010).

2.3 Summary of Findings
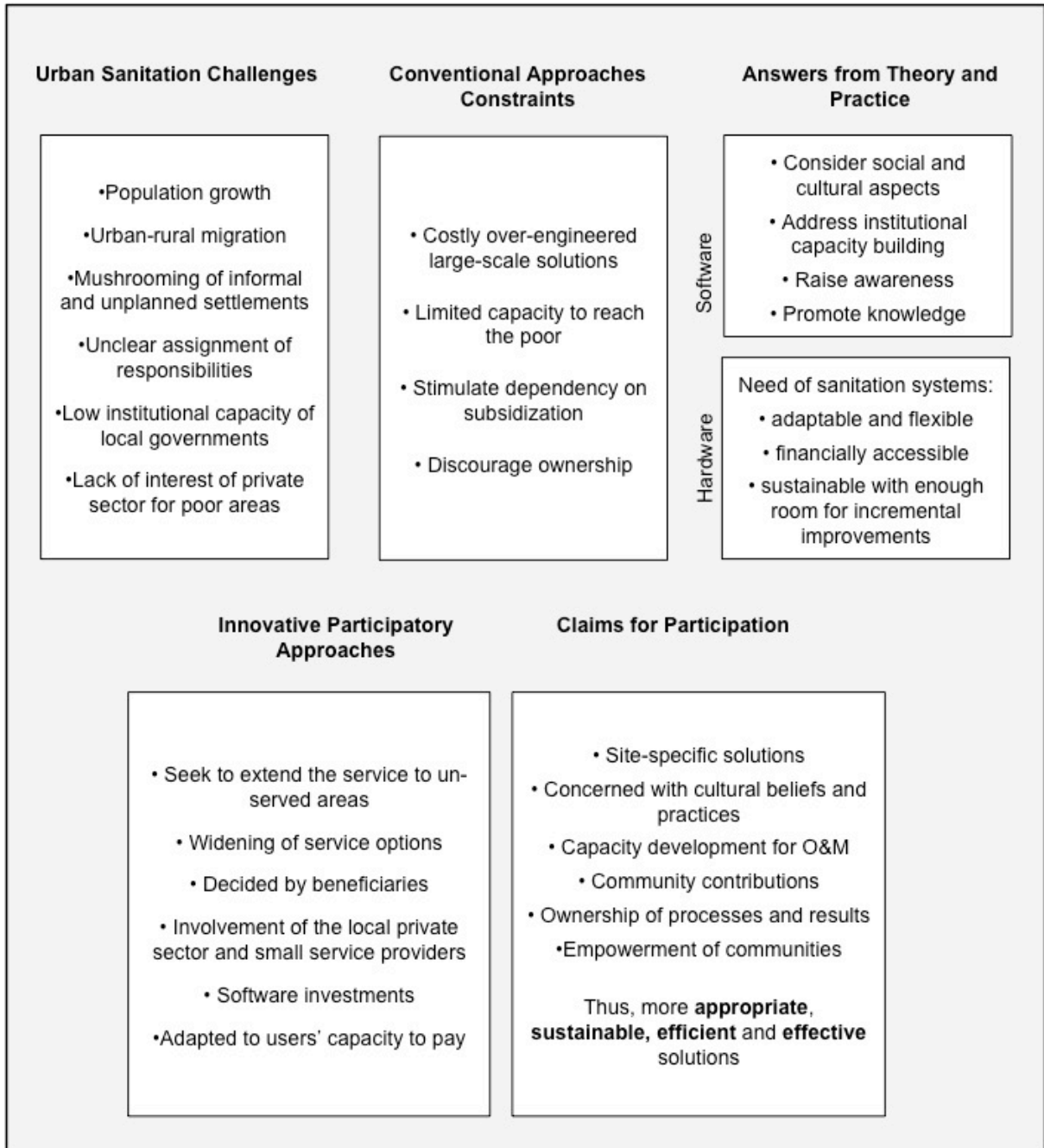
Figure 9: Summary of findings from the literature review. Source: by the author.

3. SCOPE OF STUDY

The previous chapter presented a wide view of environmental sanitation in developing countries and its challenges in reaching the urban poor. It also presented the current trend of applying more participatory methods in order to overcome the known shortcomings of conventional approaches to sanitation planning and provision. The present chapter will outline the borders of this study and will initiate the discussion of the research problem, from where the research questions emerge. This thesis has four main theoretical pillars, namely *Environmental Sanitation*, *Planning*, *Participation* and *Urban Development* and the main bound of this study is the intersection of them in the context of developing countries (Figure 10).
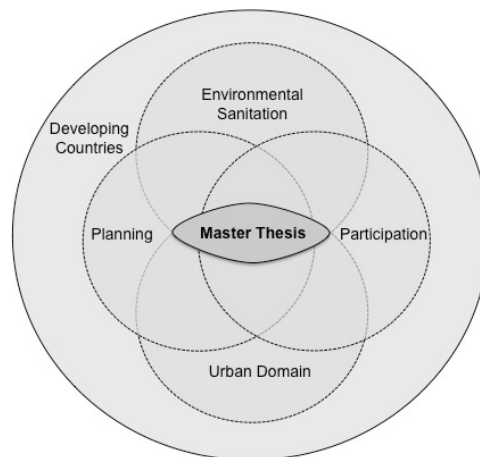
Figure 10: Scope of the master's thesis. Source: by the author.

This chapter will also introduce the three approaches used as case studies and situate them in the contexts where they were applied. The projects analyzed are promoted within the framework of international development and cooperation; they are implemented in low-income countries and managed by local partner NGOs or local offices, but the provision of funds is assured internationally, either by government cooperation agencies or international NGOs. Local and national governments also play a role in the projects, but they are not where the focus lies on. For this reason, this research does not cover aspects of public provision of sanitation goods and services. It also does not intend to evaluate international and technical cooperation, despite its relevance for sanitation in developing countries, especially regarding sector funding.

3.1 Research Problem

The review of the literature demonstrates several attempts to develop more inclusive approaches to environmental sanitation, in which the participation of stakeholders is assured in planning frameworks and guidelines. Nevertheless, the literature on the topic also points out that the sector is failing to evaluate the participation of stakeholders and therefore failing to provide empirical evidence to support the beneficial claims of participation.

McConville (2010) has shown that in practice, the degree of participation is lower than prescribed by the different methodologies used in participatory approaches. Supported by several authors, Reed (2008, p. 2421) affirms,

> "Despite the rhetoric and the concerns that have been expressed, there have been few attempts to investigate the validity of many claims that have been made for stakeholder participation. The few attempts that have been made tended to focus on evaluating the process rather than outcomes. This may be partly due to the challenge of selecting appropriate evaluation criteria and data collection methods".

Yet, there is little research on what kind of participation is required or expected in order to attain the desired goals and in what stage of the planning process it should occur (Nance and Ortolano 2007). Therefore, this thesis recognizes as a research problem the lack of evidence to support participatory approaches on the grounds of practice, especially with regards to stakeholders' participation in the distinct stages of the planning process (Figure 11).
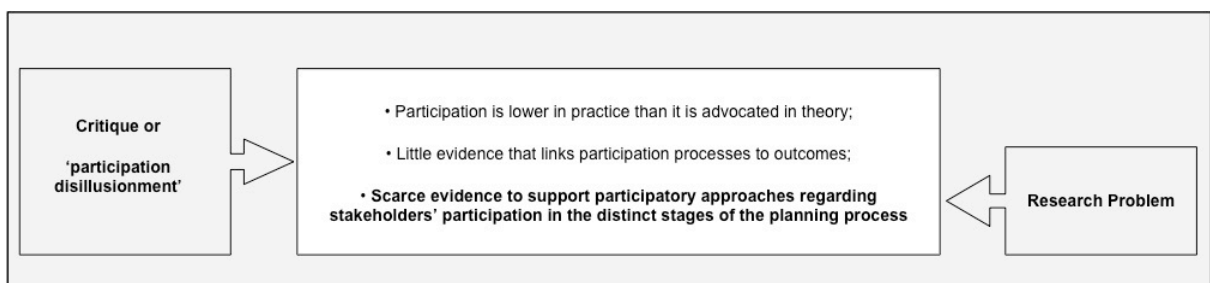
Figure 11: Synthesis of the research problem. Source: by the author.

There is scope for a research that can perform better evaluation of participation in projects and programs and validate the claims for participation as well as recognize the strengths and weakness of participatory approaches to sanitation in face of the 'participation

disillusionment'. It is expected that the results of investigations with this purpose contribute to improve the efficiency and effectiveness of the planning models. "There is a need to replicate and compare participation process in different socio-cultural and bio-physical contexts, and to compare participatory process applied using different approaches and methods in similar contexts" (Reed 2008, pp. 2426-2427).

3.2 Research Objectives and Research Questions

The objective of this master thesis, set about the delineated problem, is to investigate if the modes of participation applied in the field contribute to the realization of the claims for participatory process in environmental planning and provision. The research will explore approaches to environmental sanitation that have a strong component of stakeholders' involvement and analyze the strength and limitations of the modes. For this, the study will consider three different cases in East Africa, where the methodologies had been validated. This research will focus on aspects related to the sanitation software, therefore issues related to hardware provision though mentioned, will not be considered as crucial aspects of the evaluation. By doing so, it is intended to answer the following questions:

(i) How participation is applied to the projects?

(ii) To what extent do the modes of participation adopted by the projects contribute to the achievement of the claims for participation found in the literature?

To conduct the analytical process the following guiding questions were formulated:

1. How are planning and provision arranged?
    a) In relation to planning stages.

2. Who are the stakeholders considered and involved?
    a) In relation to interest and influence over projects outcomes.

3. How are the stakeholders involved?
    a) In relation to the project stages.
    b) In relation to the modes of involvement.

3.3 Introducing Three Contemporary Approaches to Urban Environmental Sanitation

There are many planning methodologies, framework guidelines and practices that deal with sanitation either in rural or urban areas, or both (Peal, Evans and van der Voorden 2010). Even so, a comprehensive study is out of the scope of this analysis, which intends to focus on a detailed evaluation of perspectives and procedures with regards to stakeholders' participation in planning approaches to urban environmental sanitation. In order to provide the answers to the research questions, three cases were chosen in which the investigation could be applied. The cases are illustrative of different modes of stakeholders' inclusion and are suitable to the set of criteria presented later in this study. Furthermore, they are the ones believed to share enough amounts of commonalities at the same time that they present significant differences in their *modus operandi,* what makes them valuable for this research. This section presents these three approaches, hereafter referred to by their acronyms.

The cases were implemented in three East-African cities. East-African cities are known for the absence of large-scale sanitation systems, with high predominance of decentralized technologies for sanitation and solid waste management. Despite the growing pressure on authorities to solve this pressing issue, the countries and cities face stark limitations regarding locally available material, human and financial resources in combination with a high dependency on international donor funds (Oosterveer and Spaargaren 2010). Since the 1980s, civil society organizations – NGOs and CBOs – became involved in developing and managing sanitation infrastructures, since governments throughout Africa "retreated in many areas of social service delivery" (Bratton 1989, cited in Oosterveer and Spaargaren 2010, p.23).

Household-Centred Environmental Sanitation (HCES)

The HCES approach, conceptualized in 2000, was first published in 2005 as Household-Centred Environmental Sanitation – Implementing the Bellagio Principles in Urban Environmental Sanitation: Provisional Guideline for Decision Makers, targeting public officials, decision-makers and sector specialists (Eawag 2005). The guideline is a conceptual toolkit developed by researchers and practitioners at the Swiss Federal Institute of Aquatic

Research (Eawag), more precisely at Sandec, the Department of Water Supply and Sanitation in Developing Countries. The planning guideline incorporates the Bellagio Principles and in this sense it is particularly concerned with issues of human dignity, local participation, holistic sanitation systems and dealing with sanitation problems as close to its source as possible (McConville 2010).

HCES is a multi-stakeholder approach developed on the basis of collaborative and communicative planning that seeks to involve as much actors as possible, placing the household and the neighborhood in the center of the planning and implementation process. Specifically designed for urban unplanned and underserviced areas, the ten steps range from the *request for assistance* until the *implementation* (Figure 12). Considerations about the *enabling environment* also comprise the guideline (Lüthi et al. 2011b). The stakeholders' participation in the process is assured through systematic workshops and eventually other consultation tools, like group discussions and surveys. The ten-step process was validated from 2006 to 2008 in seven urban and peri-urban areas in Africa, Asia and Latin America under the coordination of Sandec with a strong role played by local partners. The validation process was funded by different arrangements according to local settings. The testing was accompanied by a complete documentation that presents and analyzes the experiences (Lüthi et al. 2009)[10].
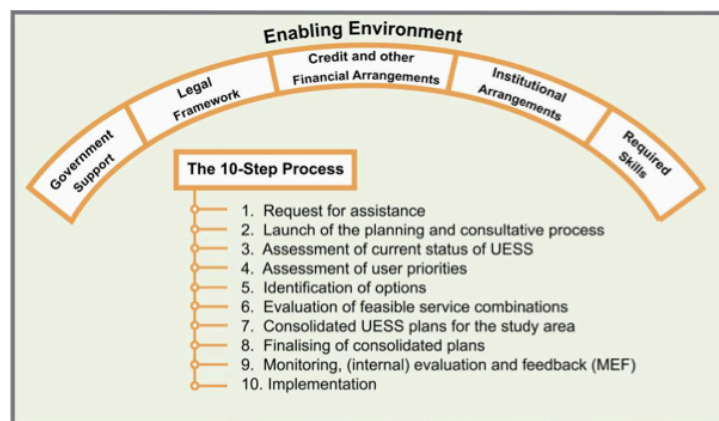
Figure 12: HCES planning steps and enabling environment. Source: Lüthi et al. 2009, p.11.

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[10] In 2011, Eawag-Sandec, WSSCC and UN-HABITAT published the Community-Led Urban Environmental Sanitation Planning: CLUES - Complete Guidelines for Decision-Makers with 30 Tools. The document is an updated version of the HCES approach, developed and built upon the piloting and evaluation of previous experiences on the ground; nonetheless, the main features and principles are retained in a more accessible format (Lüthi et al. 2011a). The latest version has not yet been tested.

This research will examine the HCES' project implemented in Dodoma, United Republic of Tanzania, within the validation process of the guidelines. The implementation took place at the Chang'ombe settlement and was funded by a grant of approximately US$ 60,000 from Swiss organizations (ibid.). The project was managed by MAMADO, a local NGO with whom Sandec had previously worked. The implementing process of the HCES steps started in October 2007 and the plan was concluded the in January 2009. The planning was expected to last nine months and Sandec's role was that of methodological and technical backstopping, providing advice on the planning process and technical inputs when required (Eawag 2005). The plan was not totally implemented. Two additional projects, one for micro-financing the construction of household latrines and the other based on social marketing for sanitation were realized after the planning phase was concluded. The project was officially terminated in June 2011, after a final Evaluation Mission was realized in May of the same year (Lüthi 2011).

Product Development and Social Marketing of Sanitation and Urban Waste Management Systems (PDSM[11])

Sustainable Sanitation and Water Renewal Systems (SSWARS) is a Ugandan NGO that operates since 2005 promoting people-centered and pro-poor approaches to water supply and sanitation. SSWARS specializes in developing social marketing approaches for urban sanitation. The approach attempts to meet consumer needs and that includes privacy, financing, land availability and appropriate technology through social marketing, thus creating demand, providing low-cost technology options and innovations in financing schemes (Jonga, Brenda and Kyeyune 2011). The PDSM approach, by applying social marketing principles can be seen on the side of 'sanitation as a business' and can be classified as 'market-based'. These sorts of approaches are concerned with the financial sustainability of interventions, strengthening of the role of private sector and empowering local communities to make informed choices (Groeber et al. 2011).

Projects in this model recognize the purchasing power of poor households and work towards the moving upwards of sanitation investments within their spending priorities (ibid.) through

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[11] This program does not have an official acronym; therefore for simplification reasons this work will refer to it as Product Development and Social Marketing, PDSM.

raising awareness and creating demand for sanitation products. The social marketing approach is based on four pillars, also known as 'marketing mix' or 'Four Ps', namely product, price, place and promotion (Outlaw, Jenkins and Scott 2007; Devine and Kullmann 2011). Outlaw, Jenkins and Scott (2007) include policy and politics dimension as a principle of sanitation marketing[12]. On the whole, this approach recognizes that "supply chains, distribution centers, and small-scale sanitation entrepreneurs are necessary to ensure sustainable access to improved sanitation facilities and service" (Devine and Kullmann 2011, p. 5)

> To support awareness raising activities, social marketing has proven to be a successful tool – because marketing is about creating and satisfying people's needs and wants. The heart of the marketing task is to determine what consumers want and offer it to them in an attractive and accessible way, aiming to encourage the commercial selling of products that match individuals' preferences. Social marketing uses marketing techniques such as advertising through mass media, demonstrations, special offers, word of mouth etc. to serve social objectives.
>
> (Müllegger, Lechner and EcoSan Club 2008, p.8)

The four-year project entitled 'Product Development and Social Marketing of Sanitation and Urban Waste Management Systems' was studied with special focus on the fourth phase[13], implemented between April 2009 and March 2010, with the financial support of the international NGO WaterAid Uganda, in three parishes located in Kawempe Division, Kampala District: Bwaise II, Mulago III and Kyebando. The approach includes community mobilization activities, construction of latrines, the use of drama shows for sensitizing and creating demand for sanitation, solid waste management and the incorporation of income generation strategies. The focus have slightly changed along the process, generating different outcomes such as the construction of a *Sanitation Center*, a *Recycling Center* and the installation of Savings and Credit Cooperative Organizations (SACCOs). It is possible to say for the year of this study (2009-2010) that the project is a continuation of the previously

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[12] The term *Sanitation Marketing* can be often found in the literature. According to Devine and Kullmann (2011, pp.3-5), there is no consensus on the definition that can mean "strengthening supply by building capacity of the local private sector" or "using commercial marketing techniques to motivate households to build toilets". The authors adopt the working definition: "Sanitation marketing is the application of the best social and commercial marketing practices to change behavior and to scale up the demand and supply for improved sanitation, particularly among the poor".

[13] The fourth phase is referred to specifically as Kampala Environmental Sanitation Project (KESP); however, this study will make use of the program name.

implemented projects and also that it combines software and hardware provision. Participation is assured through meetings with the projects' beneficiaries, needs assessment and other consultation tools and capacity building activities. Special attention is placed on local leaders, who have a pivotal role in mobilizing the community.

Stronger Services Providers, Better Services for All (SSP[14])

The *Stronger Services Providers, Better Services for All* approach was developed and implemented by *Water & Sanitation for the Urban Poor (WSUP),* addressing inadequate access to water and sanitation services for the urban poor and the attainment of the MDG' target relating to water and sanitation. WSUP is a non-for profit public-private enterprise that was established in 2005 and is based in London. The tri-sector partnership comprises the private sector, civil society and academia and operates with grant investments from the UK Department for International Development (DFID), the Bill & Melinda Gates Foundation, the United States Agency for International Development (USAID) and the Australian Agency for International Development (AusAID). The organization currently works in six countries, Bangladesh, Ghana, Kenya, Madagascar, Mozambique and Zambia.

The multi-stakeholder approach seeks to improve living conditions of the urban poor by focusing on building institutional capacity of local service providers to deliver sustainable water and sanitation services at a representative scale. It is argued that contemporary interventions fail to take a mainstreamed, core-business approach and have tended to be implemented on a small-scale, project-by-project basis, failing to promote links to service providers (WSUP 2010a). Thus, this project also stands between 'market-based' approaches that consider 'sanitation as a business' with focus on the supply-side. Here, sanitation is seen as an 'opportunity for good business', in which the urban poor is seen as a 'new market' for new products and services that in turn would respond to their needs and demands (Heierli, Hartmann and Walther 2004). Heierli, Hartmann and Walther (2004) defend the involvement of the supply side in order to "deliver creative and innovative solutions that provide better services for all customers, including the poor". In the SSP approach, the international NGO works mainly as an enabler, creating markets and favorable conditions for the utility to invest

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[14] Since the project does not have an official acronym, SSP was chosen for simplification purposes.

in neglected areas, thereby improving the management performance and benefiting the demand-side.

This study will analyze the implementation of the approach in Kambi Muru, one village of Kibera, a worldwide known slum located in Nairobi, capital of Kenya. AusAID funded the project and at the present time it is in its final phase. It started in June 2010 and was expected to last 13 months, but the duration was extended for an additional six months. The project has six goals as it covers a wide range of aspects of sanitation, with two principles, capacity building and infrastructure delivery. WSUP works mainly through partnerships, in which the international NGO and its local offices develop the strategy and contract technical and social consultants for the implementation. Special focus is placed on the public-owned utility and stakeholders' participation is achieved mostly through consultations, surveys, workshops and capacity building activities.

4. RESEARCH METHODS

This research performs knowledge-development evaluation supported by a desk-based secondary analysis of qualitative data. The several, diverse and many times overlapping typologies of evaluation make hard the task of framing this study into one of them. The solution found was the combination of features derived from the perspectives regarding purposes and methods, such as formative, implementation, program, theory-based and policy-making.

According to Mark and Henry (2006, p.318), evaluative evidences are important to the extent they can: "(1) support or undermine claims about the importance of a social problem; or (2) validate or fail to validate a potential remedy for a problem". This chapter will present the methodology used in this study to conduct the research process. For that, it introduces the criteria for the case selection and data collection. Furthermore, it discusses the framework employed in analyzing the three cases. The Figure 13 illustrates the research process.

Figure 13: Summary of the research process. Source: by the author.

4.1 Methodology

The nature of this investigation reflected both in the research questions and in the guiding questions demanded a qualitative approach. Many scholars have overcome the debate of 'qualitative *versus* quantitative' research, recognizing their merits, limits, applicability and often their complementarities. Nevertheless, in the context of development, during the last twenty years, mainly researches under a neoclassical economics framework have been conducted. According to Bevan (2009, p.468, based on Kanbur and Schaffer 2006), the knowledge produced "derives from a positivist and 'quantitative' stance whose claim to scientific rigor rests on its use of mathematical models to produce 'ideas' and statistical procedure and techniques (…)". In addition, the understandings and explanations produced by this line of thinking have been hardly translated into effective policies and practices by donors and local governments in developing countries (ibid.). The author points out that qualitative research only recently became institutionalized in academic and policy-related fields.

According to Patton (1987, p.19), the study of cases is useful for qualitative analysis "(i) where one needs to understand some particular problem or situation in great depth; ii) where rich cases can be identified, in terms of what can be learnt; and (iii) when the evaluation aims to capture individual differences or unique variations from one program setting to another". For this reasons, the study of cases matches the aims of this investigation. This study is based on secondary literature and count on the use of 'theoretically-derived[15]' criteria in order to perform the analysis. Though this research is essentially qualitative, quantitative methods were occasionally used in order to illustrate the results of this analysis.

According to Blackstock et al. (2007, cited in Reed 2008, p.2421), "the evaluation of participatory process should itself be participatory, with stakeholders selecting and applying the evaluation criteria". Nevertheless, the authors accept that the most usual way of doing so is without deep stakeholders' engagement, on the basis of criteria derived from theory and analysis of cases (Chase et al. 2004, cited in Reed 2008). That is how this research was designed. Key stakeholders of each project were selected for a 'passive consultation', in

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[15] Though this work may borrow some features from the 'theory-based' evaluation approach, it does not apply it entirely in its conception. Hence, the use of the term 'theoretically-derived' criteria does not imply the adoption of the 'theory-based' methodological approach.

which they supported the identification of other actors and provided information for the analysis. Thus, the approach used to characterize and classify the stakeholders is a 'top-down' analytical categorization, in which 'stakeholders are classified by researchers based on their observations of the system in question and embedded in some theoretical perspective on how a system works' (Hare and Pahl-Wostl 2002, cited in Reed 2008).

Case Selection

The selection of the cases to be studied relied on a set of different criteria that would allow the understanding of stakeholders' participation in environmental sanitation projects. The criteria were chosen according to 'criterion sampling' as defined by Patton (1987) and tested for different potential cases. The three chosen cases, previously presented in section 3.3 of this work, met all of them. The first criterion regarded the planning approach, which has to (i) be operationalized in urban contexts in developing countries; (ii) operate with participatory features and (iii) attempt to address the complexities of urban service delivery issues. The second criterion refers to the localities where they were implemented. They were expected to share similarities in terms of general settings and figures, namely the (i) stage of development; (ii) urban development arrangements and (iii) sanitation deficit. The third criterion refers to the availability of data, both within academic literature and through access to informants involved in the projects.

Table 3: Contextual Information about the Projects. Source: by the author.

Approaches	Location	Country Slum population (%)	Country Urban Sanitation Deficit (%)	Project Proponent	Strategy	Target Group
HCES	Dodoma, United Republic of Tanzania	65,00 (2007)	41,90	Sandec	Communicative Planning	Local community
PDSM	Kampala, Uganda	63,40 (2007)	34,10	SSWARS	Social Marketing	Local community
SSP	Nairobi, Kenya	54,80 (2007)	26,90	WSUP	Sanitation as a business	Local service providers / local community

Contextual Information about the Projects. Source: by the author (continuation).

Approaches	Implementation Site	Beneficiaries	Duration	Investments (Proposal)	Donor
HCES	Unplanned settlement	35,000	Planning: 20 m SM Campaign: 13m Microfinance: 12m	U$60,000	SECO
PDSM	Slum Parishes	3,560	4 one-year phases	U$51.884,61	WaterAid Uganda
SSP	Slum Village	10,000	19 months	U$1,349,168	AusAID

Data Collection

Two methods were employed for the collection of data for analysis: document appraisal and semi-structured interviews with key informants of the selected cases. The first method consisted firstly in studying and reviewing official project documents such as evaluation and progress reports, bulletins, minutes of meetings, terms of reference and other internal documentation. Secondly it consisted in reviewing pertinent articles published in academic journals, sector-related databases and annals of conferences or symposiums of the practitioners. The gathering of information consisted in reviewing qualitative secondary data, which provided a comprehensive understanding of the approaches and proposals, leading to the elaboration of the guiding questionnaire for the next research stage.

Although there are many research guides and manuals addressing consistently and comprehensibly methods for performing fieldwork and collection of primary data, there is scarce literature that deals with the use of secondary sources in qualitative analysis. According to Heaton (2008) the reuse of qualitative data is not as well established in the social research field, as it is the secondary analysis of quantitative data, for instance. Still, the author highlights the growing interest in the methodology especially from the mid-1990s on, particularly in the UK, Europe and North America. Amongst the five main types of qualitative secondary analysis summarized by the author, this research performs an 'assorted analysis', in which "secondary analysis of quantitative data is combined with additional primary research and/or documentary analysis of relevant materials" (Heaton 2008, p.511). The possible uses of secondary studies, according to Corti and Thompson (2004, cited in Heaton 2008, p.509) are 'descriptive work; comparative research; re-study or follow-up study; reanalysis or secondary analysis; design and methodological advancement; verification and teaching and learning'.

Semi-structured interviews were conducted with key informants involved in the planning process of the projects with the support of a template of questions prepared throughout the analysis of planning documents, which facilitated the posterior handling of the data. Therefore, some general questions related to community participation and stakeholders' involvement were coincident while project-specific questions were specially made. One of the interviewees is based in Switzerland, where part of this research was carried out, what

permitted to conduct a face-to-face interview and the others were realized via *Skype,* software that allows voice and video calls through the internet. The interviews and personal communication with members of projects' staff played a double role in this study, contributing to elucidate unclear aspects that were not fully documented and to verify the information collected through the documentary interrogation. The transcripts are provided in Annex 1, Annex 2 and Annex 3.

Despite the difference in the projects' documentation, it is important to highlight that all key informants were willing to collaborate with this research, both by providing documents and offering time for the interviews and exchange of personal communication. Even so, the data collection process was concluded in December 2011 and material provided after that had to be excluded form this analysis.

4.2 Analytical Framework

The present section shows the means by each the data collected via documents and interviews was analyzed. The analytical and theoretical framework for this study is situated in the urban environmental sanitation domain and it borrows central elements from two theoretical perspectives, both from environmental sanitation planning and stakeholders' participation (Figure 14).
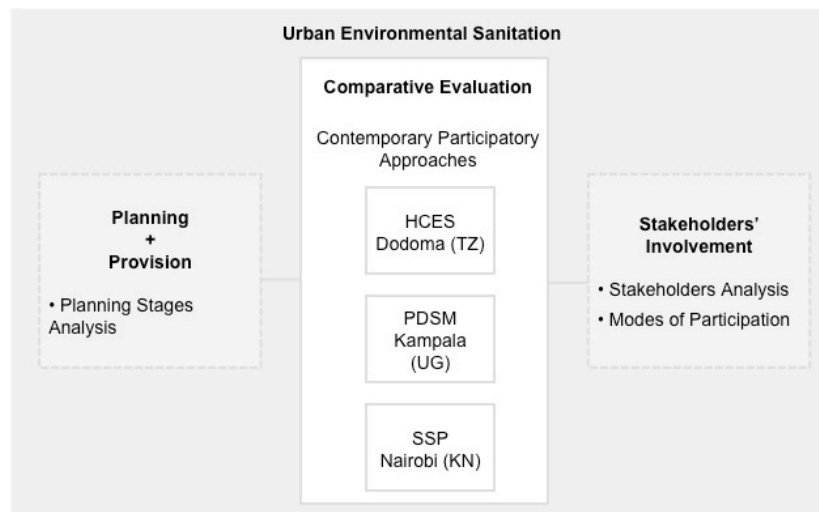
Figure 14: Analytical building blocks. Source: by the author.

The first building block is the analysis of the *planning stages*. McConville (2008) indentified key procedures that tend to appear repeatedly in most of the planning processes, which were concentrated under the category of 'generic planning steps'. The six steps – problem identification, define objectives, identify options, selection process, action plan for implementing and monitoring and evaluating – are theoretical simplifications that allow researchers to categorize the planning into smaller units, favoring detailed analysis. Still, it is recognized that a planning process is 'an interaction of action, reflection and modification of choices', not necessarily linear, that can occur interchangeably and simultaneously (McConville 2010, p.28). By reviewing different planning frameworks, the author (ibid.) concludes that the majority of them follow similar steps and that the differences between them 'lie in the emphasis and detail they place on each step and the level of stakeholder input indicated' (ibid, p.28).

McConville (ibid.) findings about levels of participation in each planning step reveal that users generally are not included in designing and selection steps, with a noticeable tendency for elevated expert control in these steps. That signalizes limited benefits of participation in the sense that users' needs may not be adequately addressed during the process and users may not be integrated in discussions regarding operation and maintenance, tasks that probably will be delegated to them in the case of on-site sanitation (Hamdi and Goethert 1997).

The assessment of the sanitation planning and provision procedures of the three approaches was conducted with the support of a matrix developed for this study purposes. The matrix, formed by nine *stages*, aggroup the six 'generic planning steps' developed by McConville and three additional stages based on Hamdi and Goethert (1997) (Figure 15). The added stages 'Ignition', 'Implementation' and 'Operation and Maintenance' are believed to bring implementation elements into the analysis, and may point towards the importance of participation in these stages.

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Planning stages used as analytical categories

1. Ignition
2. Problem identification
3. Definition of objectives
4. Development of alternatives
5. Selection process
6. Action planning
7. Implementation
8. Operation and Maintenance
9. Monitoring and Evaluation

</div>

Figure 15: Planning stages used as categories. Source: by the author based on McConville 2010 and Hamdi and Goethert 1997.

The second building block consists in *analyzing the stakeholders* and their *modes of participation* in the projects. Firstly, key actors for each approach were identified during the data collection process in order to perform a stakeholder analysis[16]. A descriptive analysis is

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[16] Stakeholder analysis is defined by Reed et al. (2009, p.1933) "as a process that i) defines aspects of a social and natural phenomenon affected by a decision or action; ii) indentifies individuals, groups and organizations who are affected by or can affect those parts of the phenomenon (…); and iii) prioritizes these individuals and groups for involvement in the decision-making process".

used to review roles, interests and influence of key stakeholders as well as interest-influence matrices are used to examine the power dynamics amongst the actors and classify them. According to Reed et al. (2009, p.1974), "stakeholder analysis asks who these interested parties are, who has the power to influence what happens, how these parties interact and, based on this information, how they might be able to work more effectively together". Secondly, five *post-hoc* analytical categories were employed in the analysis of the modes of involvement in the planning stages.

At least two influential studies seek to relate participation and phases of planning of projects. Hamdi and Goethert (1997) proposed a matrix in which the vertical axis represents the five levels of community participation and the horizontal axis represents five stages of projects and programs. More recently, McConville (2010) uses the same logic in order to assess participation in different generic planning steps and relies on the influential Arnstein's participation ladder to assess the levels of participation. However, there are two major limitations or non-desirable implications to the adoption of these participation categories in the present analysis.

First, the notion of 'level' implies hierarchy, which is not the focus of this work (Reed 2008). Rather than that, the notion of 'modes' appears to be more appropriate, in the sense that it can be helpful to assess in which condition stakeholders are involved in the process without assigning values to that at this point of the analysis. Second, because the notion of levels is used in a relational way between two actors, i.e. community and outsider. In other words, it does not allow assessments of how different stakeholders groups interact with power holders according to the role and responsibilities assigned in the project. In this sense, absolute categories, opposed to relative ones fit better a multi-stakeholders assessment, which is one of the features of this study.

Given the scarcity of instrumental categories to evaluate participation specifically in environmental sanitation as well as the inadequateness of the two analytical abovementioned approaches, this study demanded the design of its own analytical categories. For that, it required the examination of a broader literature that reports participation in other fields, such as general public participation and participatory research in rural settings. The categories define modes of participation based on the role of stakeholders and the information flow

between project proponents and other parties involved. The modes vary in objectives and the election of one may depend on the planning stage, the goal of the participation process and on the availability of resources like time and money.

Table 4: Categories for classifying participation modes. Source: by the author adapted from Ashby (1986), Biggs (1989) and Rowe and Frewer (2000).

Mode	Characteristics
Informative	Top-down communication, one-way information flows, in which the recipient has a passive role.
Contractual	Minimal involvement on the basis of a service or resources provision. Instrumental input, mainly during implementation
Consultative	Two-way information flow with small stakeholder's input mainly regarding opinions on value-laden issues, or less commonly, on technical aspects. Emphasis on diagnosis, collection of formal data, appreciation and evaluations of project. Stakeholder is reported/represented by others: social scientists, social workers, researchers, leaders or key informants.
Collaborative	Stakeholders collaborate closely and continuously with more intense two-way information flow during the entire process. Contributions are often useful during the design process, in which local and informal knowledge is incorporated in the plans and has real-time monitoring and accountability functions. Requires time and the establishment of mutual confidence, involvement and discussion.
Collegial	Characterized by continuous open dialogue. Emphasis is on capacity building activities to enhance self-esteem and social cohesion of stakeholders. Knowledge and skills of parties are seen as complementary and mutual dependent. Assessment is made independently, promoting the continuity of the bounds and the information flow.

The simple classification of participation modes does not intrinsically assign values to the activities. According to Farrington (1988), participation can be either functional or with empowerment aims, depending much more on the purpose than on the method itself. Similar evaluation can be made in normative or pragmatic terms, regarding the claims for the adoption of participation (Reed 2008) and based on the Habermasian perspective of communicative action (cited in Reed at al. 2009) in communicative or instrumental rationalities.

4.3 Limitations

The use of secondary resources to inform this research can be considered a limitation, as noticed by Heaton (2008), since analysts may have a distant relationship with the data as well as a short understanding of the context in question. In this sense, secondary analysts face "the problem of not 'having been there' at data collection, which means that they do not have the benefit of personal knowledge and experience of being involved in the fieldwork that produced the data" (ibid, p.511). Thus, it is fair to say that the results of this work could be different if the researcher could perform fieldwork in the selected cases but a comparative analysis of the three cases in different countries could not be collected and analyzed by single researcher within the time frame and scope of this work due to the complexity of subject issues and time and financial constraints. Still, according to Heaton (2008), this limitation can be overcome by consulting the researchers that collected the data, which was done for this work in several instances indeed.

The three projects have different ways of presenting the proposal and documenting and reporting the proceedings, with distinct degrees of detail, which made more complex the task of extracting relevant and comparable information for the analysis. The variations found can be attributed to the different financing sources, which have their own reporting and monitoring formats. It is worthy of notice that the occasional lack of documentation regarding the planning processes and also inconsistencies found in project documents could be considered a limitation of this work. Furthermore, this research recognizes that project practitioners informed and had some degree of control on great part of the available data and that some projects documentation may have been elaborated with purposes other than feeding the practices, like meeting accountability requirements to donor's agencies[17]. This may signalize a bias in the internal evaluation process of the studied NGOs. Nevertheless, the cases were still considered valuable for this study and the information gap and the issues of reliability of the sources was avoided with the use of interviews and personal communication with key informants who provided a great amount of information for this study.

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[17] According to Flick (2007, p.104) "documents are always produced by someone and for some audience, for some purpose and by using some communicative devices in order to create a certain format of information". Therefore, the researcher had to take the methods, aims and results of the documents investigated into consideration.

This study is localized in the applied sciences field and tries to capture fresh ideas on sanitation planning and provision in developing countries. Thus, the three cases presented have recently been completed or are in their final phase and therefore can indicate some of the most recent aspects of the field. However, it leaves the analysis of the sustainability aspects of the programs, their outcomes or other possible developments along the way undone. Though beneficial at the present moment and for the purpose of this study, such analysis should be considered as a work in progress, which findings therefore are highly recommended to be validated in the field once again in a longer interval between completion and *ex-post* evaluation.

The influence of the 'enabling environment' is recognized in the achievement of improved sanitation in impoverished areas of a city as well as the intricate issues involved, namely the social, cultural, legal, financial, institutional, political and environmental aspects that, alone or combined, can be strong enough to boost or undermine even the most well intentioned initiative. Since they are understood as complementary issues, additional information from external sources regarding these concerns was gathered and supplemented the analysis. Even so, a deep understanding of all contributing factors of the three cases was beyond the feasibility of this study.

Furthermore, despite the ambitions of this researcher to understand the world's afflictions and to contribute in a significant way, this study does not intend to provide generalizations about the subject matter. The findings here presented are case specific and if evidences demonstrated were to be further extrapolated, it would require additional research and testing.

4.4 Ethical Considerations

The interviews collected for this study were recorded and used with the license from the interviewees. The transcripts were submitted to the informants, who had the opportunity to examine the material, make eventual corrections and authorize the use of contents and its publication.

Part of this research was conducted during a six-week internship carried out at the *Swiss Federal Institute of Aquatic Science and Technology* (Eawag), in the research department for *Water and Sanitation in Developing Countries* (Sandec), where data referring to the HCES project could be gathered, a face-to-face interview with the key informant could be conducted and contacts with practitioners from the other projects were established. Also, research skills could be further developed in a fruitful learning environment that culminated in the presentation of this Master's Thesis proposal, followed by a discussion round with other researchers. Yet, it is important to elucidate that this proximity did not interfere with the analysis and results of this study, unless for the unrestricted access to internal documents about the HCES case. The expertise of Sandec staff and the knowledge exchanged during this period contributed to the enrichment of this work and did not influence either in the way the case was presented nor the final findings.

5. RESULTS

This chapter features the main outputs of the research process and the interpretation of the information found both in documents and discourses of key informants of the projects through the interviews. The data collected is presented in the light of the analytical framework elaborated in the previous chapter considering the most relevant aspects for answering the questions of (i) *how participation is applied to the approaches* and (ii) *to what extent the modes of participation adopted by the projects contribute to the achievement of the claims for participation found in the literature*. It is divided into three sections and seeks to provide answers for the guiding questions.

5.1 Assessment of Planning Stages

In order to understand how planning and provision are arranged, the first guiding question, this section assesses the objectives and the procedures of the three approaches (for introduction on the cases, please refer to section 3.3). Based on the activity plans, the results of this assessment are discussed with the support of a nine stages developed for this study purposes.

Household-Centred Environmental Sanitation (HCES), Dodoma

The HCES approach to urban environmental sanitation is to provide stakeholders at every level, but particularly at the household and neighborhood level, with the opportunity to participate in the planning, implementation and operation of better urban environmental sanitation services. The HCES guideline has an intrinsic linear and stepped nature that in some occasions coincides with the generic planning stages used for this analysis[18]. In total, twenty-two activities were examined and all the stages of planning were observed, as demonstrated by Figure 16.

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[18] The planning process advocated in the HCES guidelines was subject of the study by McConville (2010), in which nine different approaches both for urban and rural areas and their steps were arranged into the six generic planning steps proposed by the author. As the present study suggests the incorporation of three additional stages related to the implementation of the projects and analyzes the activities and local practices of each one rather than the recommendations provided by the framework, the analysis may differ.

The project 'Tanzania: Improving Sanitation in Dodoma through HCES' was implemented by Eawag/Sandec with the financial support of the Swiss State Secretariat for Economic Affairs (SECO), as part of the country program 'Improving Water Supply and Sanitation Services in Dodoma and Tabora', carried out between 2007 and 2009. A typical project cycle in the ten-step HCES process begins with the 'Request of Assistance'. Nevertheless, this step was not conducted in the Dodoma case. Instead, a one-year applied research project took place with the collaboration of Sandec and funded by the Swiss National Centre of Competence in Research North-South (NCCR North-South). After the signing of the contractual agreements, a fact-finding mission took place in June 2007, when the site, the local NGO MAMADO and the enabling environment were identified.
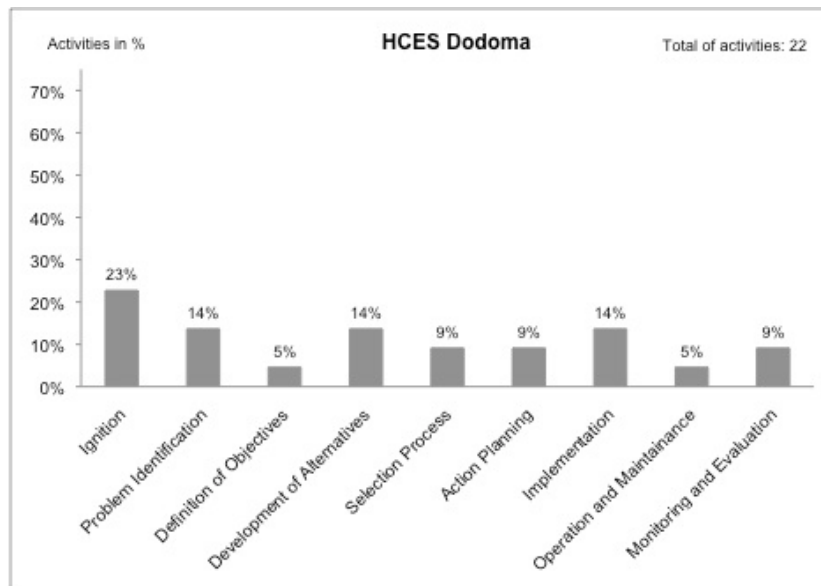
Figure 16: Planning Stages assessment for the HCES Dodoma project. Source by the author based on Frömelt, Lüthi and Tilley 2009.

During the 'Ignition' stage, two workshops were organized. The 'Community Workshop' was held with around 80 participants, with WASH sensitization and an introduction to HCES planning steps. In the occasion, the findings of community workshops and the expectations regarding the environmental sanitation approach were reaffirmed. The 'Launching Workshop' was an interdisciplinary expert workshop realized with 50 participants with the objective to formalize the planning process and to identify key stakeholders.

In the stage 'Problem Identification', two household surveys were conducted. Some issues had already been addressed during the community workshop and additional focus group discussions and interviews occurred. The association between people's concerns and findings from surveys highlighted the following issues: the construction of roads and water channels, solid waste dumping sites, expert support both technically and financially, reliable water supply, a new market and the restructuration of housing plans (Mgohamwende, Baraka und Tarimo 2007).

In the stage of 'Definition of objectives', the users' priorities workshop was realized through focus group discussions, where the participants were firstly informed about the assessment report resulted from the previous stages and then given the chance to prioritize their needs via a questionnaire. The problems were ranked as follows: roads, water supply, sanitation - poor condition of latrines -, drainage and wastewater. The following stage of 'Development of alternatives' relied on a workshop with experts to come up with a list of feasible sanitation systems that could then be presented to the community as potential options. Still grouped in the same stage, a supplementary workshop on micro-finance for sanitation was conducted, as a possible option for financing latrine construction at the household level.

The experts' workshop actually took place before the assessment of users' priorities and some issues emerged with the altering the order of the planning steps. In fact, the sanitation experts convened despite the fact that sanitation was not identified as a major concern as ranked by the population. Also, the results of the users' priorities workshop cannot be fully accessed since there are significant divergences in the reporting sources. Two questions related to that were addressed to the key-informant. About the different data, Lüthi (Annex 1) argued that some charts were elaborated by the local NGO and therefore were not correctly processed due to a major lack of technical skills. In the published chart (Lüthi et al. 2009b, p.75) the biggest concern appears to be wastewater, which was not a concern in the early stages of the process. About that, Lüthi (ibid.) expressed that activities such as workshops and sensitization activities tackled the importance of sanitation and hygiene education, thus increasing awareness that even if solid waste management was the more visible issue, for health reasons like mortality under five, sanitation was still the greatest problem.

In the 'Selection Process' stage, an additional community workshop was realized with street and local community leaders, women groups and community social environmental committees in order to present the sanitation solutions proposed by the experts. The presentation underlined the pros and cons of four different sanitation systems and related issues like the operation, maintenance and costs of the alternatives from collecting the excreta until its final disposal. Also in this workshop, a Project Committee composed by eight members was created. In convergence with the parallel Swiss project, three different types of improved sanitation facilities were constructed at selected demonstration sites, being the kind of toilet decided by the community and the sites decided by the Committee.

The 'Action Planning' stage took two months and the plan included strategies for social marketing of sanitation, options of improved sanitation technology, fecal sludge management, water service extension and drainage of low-lying areas. Suggestions for waste management and microfinance schemes are also described in the plan. The plans for the social marketing and microfinance components are presented in detail. The results of the planning process were presented to the community in a final workshop

In the 'Implementation' stage, a Sanitation Marketing Campaign was realized during the year of 2009, with the aim to raise awareness about sanitation and create demand for sanitation facilities at household level. The microfinance scheme was established for the upgrading or construction of any of three toilet options previously selected. It included the training of masons, the formation of the Project Steering Committee (PSC) and the elaboration of contracts. Despite the high demand of 89 applications in the first quarter, the initial pilot-phase credit was only available for twenty loans.

The 'Operation and Maintenance' had two fronts, one regarding the constructed facilities and other, the microfinance scheme. The management of public toilets was firstly discussed at a 'Users' Priorities Workshop', with the possibility of organizing a CBO and hiring a community member to manage the facility, but the project documentation does not indicate clearly the arrangements for that. The selected technologies were supposed to have a low maintenance cost, but failures in the construction may have elevated these costs. The

management of the micro-credit was done by MAMADO with the support and advice of a Project Steering Committee.

The 'Monitoring and Evaluation' actions were realized throughout the process via reports organized by the project officer, eventual missions and delegations from Sandec and SECO to Dodoma, external evaluation and the support of a Swiss student during the consolidation stage of the planning process. It is important to notice that it was of high interest of Sandec to keep records of every step, since the project integrated the seven-country validation process of the provisional guidelines for the HCES. The final results of the four chosen sites, Dodoma included, were then gathered in a publication in 2009, that documented and analyzed the main findings of the HCES planning process (Lüthi et al. 2009b).

Product Development and Social Marketing of Sanitation and Urban Waste Management Systems (PDSM), Kampala

The fourth phase of the project has four main objectives that cover (i) scaling-up sanitation marketing and sanitation products development, (ii) educating community members and promoting behavior change on waste disposal practices, (iii) supporting the community members in the establishment and operation of viable income generating opportunities from human excreta and bio waste and (iv) evaluating the performance of constructed latrines. With that, it is expected to improve the health and hygiene of the communities while improving their livelihoods and reducing the burden on Kampala City Council (SSWARS 2009/2010). For this phase of the project, thirteen activities relating to those four objectives and also to the monitoring and evaluation were examined (SSWARS 2009). The analysis shows that five out of the nine planning stages could not be identified and that the project has a clear focus on implementation, since most of the activities are concentrated in the 'Implementation' with some in the 'Development of alternatives', 'Operation and Maintenance' and 'Monitoring and Evaluation' (Figure 17).

During the 'Ignition' stage, meetings were arranged to mobilize the community. During the 'Definition of alternatives, two day trainings were planned to discuss latrine technologies and

their operation and maintenance requirements[19]. Also in this stage, community meetings were planned to promote and market sanitation products. The aim of these activities was to provide knowledge about the different options available, thus increasing the number of toilet constructions.
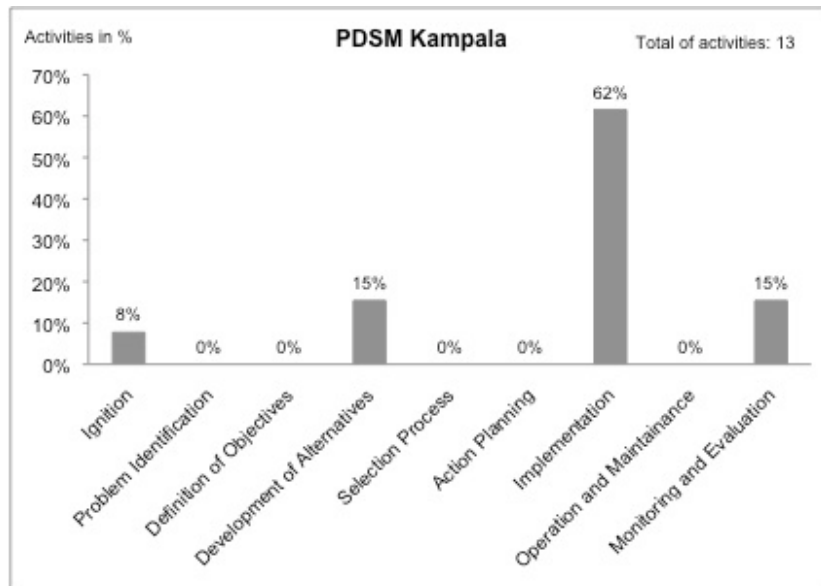
Figure 17: Planning Stages assessment for the KESP project.
Source by the author based on SSWARS 2009.

Most of the activities are concentrated in the 'Implementation' stage. In terms of hardware, the project focused on the construction of five different types of toilets, both for household and communitarian usage, besides two other types financed by SACCOs, the revolving funds managed by the community, and rainwater harvesting tanks. Regarding software and marketing strategies, marketing drives such as house-to-house visits, community meetings, sanitation-related drama staging, training of Community Health Assistants, sensitization activities and support of SACCOs were planned.

Although there was no activity exclusively related to the 'Operate and Maintenance' stage, training activities were supposed to address the issue. According to a key informant, structures for the operation and maintenance were established amongst landlords and tenants, in which one household is responsible for each stance of the toilets and users roster for the cleaning. Landlords organize and collect money for emptying of the pits (Niwagaba 2011,

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[19] Though planned, this activity is not mentioned in the *Progress Report on Quarter Three* (SWARRS 2010) and since not all reports were available, this information could not be juxtaposed.

personal communication). The 'Monitoring and Evaluation' stage is completed by quarterly reports addressed to the funding agency, WaterAid Uganda. Also, interviews with users and beneficiaries have been collected and are expected to be presented in the final report and the constructed facilities are checked to evaluate if the toilets are in use and properly maintained.

The absence of the above-mentioned planning stages, namely the ones regarding the problem identification, the definition of objectives, the selection process, the action planning and the operation and maintenance may suggest in a first glance that the project features certain top-down characteristics. However, the fact that the project is a continuity of some already implemented actions may indicate that these stages were realized in earlier steps of the process. Also, the focus on a marketing strategy, in which options are offered and the individuals are expected to choose and consume the product in the private domain may also have shaped the strategy of the project.

Stronger Service Providers, Better Services for All (SSP), Nairobi

The project *Stronger Service Providers, Better Services for All,* implemented by WSUP has as its main objective to provide "increased access to safe, affordable and financially viable water and sanitation services in informal settlements in Nairobi, through an innovative partnership between communities, local civil society, local private sector and service providers" (WSUP 2010b, p.1) The project proposal details six expected outcomes and respective activities covering the following issues: (i) access to sanitation, (ii) access to water supply, (iii) hygiene behavior, (iv) capacity in governance and effectiveness, (v) capacity of communities, civil society and service providers, and (vi) monitoring and evaluating project activities. Activities regarding gender equity were added later in the process. The analysis of 23 activities and a total of 140 sub-activities contained in the Activity Plan is displayed within the generic Planning Stages as illustrated by Figure 18.
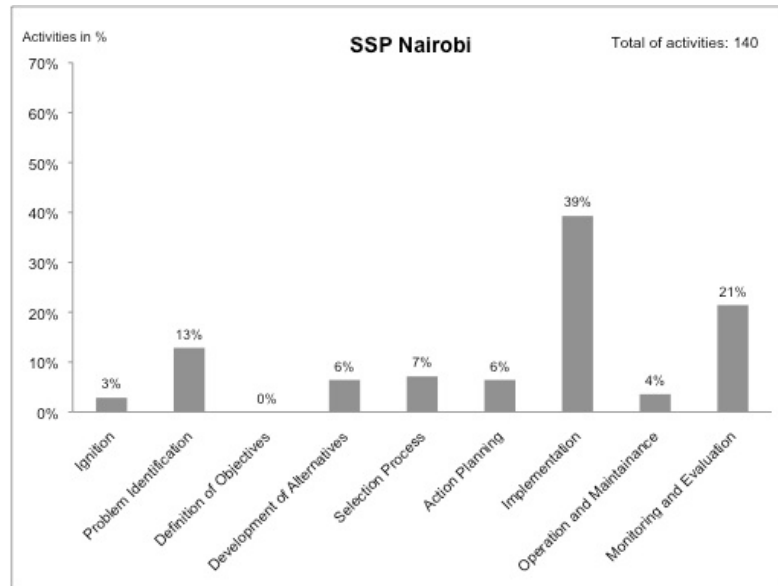
Figure 18: Planning Stages assessment for the SSP approach. Source by the author based on WSUP 2010b.

The activities realized in the 'Ignition' stage are the ones related to forums, meetings, capacity building workshops, awareness creation and the formation of the neighborhood committee. In order to conduct the 'Problem Identification', the activities involved preliminary stakeholders consultation, reconnaissance surveys, site identification, Training Needs Assessment for the enterprises, Knowledge, Practice and Attitude (KPA) survey, cadastral surveying, socio-economic mapping and Geographic Information System (GIS) plans, documentation of local existing sludge management practices, water distribution co-operatives, and existing solid waste management (SWM) enterprises and stakeholders, identification and mobilization of existing water vendors, development of project gender analysis tools, sludge management analysis, as well as water supply and sanitation systems funding.

Since the objectives of the project were clearly stated by the planning entity on the occasion of the project submission, the 'Definition of objectives' did not require any particular action to take place. In the 'Development of alternatives' stage the issues addressed were the development of technical designs for the community sanitation facilities, stakeholders and institutional mapping of CBOs and Small-Scale Independent Private Providers (SSIPPs) qualified to operate, management and maintenance of the facilities, identification of a local engineering design team for the development of a manual sludge removal system, international design support consultancy and further validation of the prototypes in a workshop, identification of sites for the construction of water kiosks, negotiation with the

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City Council of Nairobi (CCN) with regards to solid waste management in informal settlements and also activities related to the incorporation of women's and vulnerable groups' needs in the design of facilities.

The activities related to the 'Selection Process' stage aggroup the selection of sites to receive construction works, the obtainment of consent and support commitment by Nairobi City Water and Sewerage Company Limited (NCWSC) for the construction of water kiosks and the water storage tank, approval of plans and designs of the community sanitation facility by the city council and utility, the negotiation between the CCN and the National Environment Management Authority (NEMA) for the establishment of small bore drain connections and the validation of the draft of NCWSC Sludge Management Strategy.

In the 'Action planning' stage, the activities proposed were the WSUP Project Implementation Workshop, a sequence of participatory neighborhood resource mapping and infrastructure planning, elaboration of an Inception Report with the implementation plan; the circulation of the plans and preliminary designs, and elaboration of a final technical report and designs concerning the community sanitation facility. It was also expected the compilation and finalization of NCWSC Sludge Management Strategy, the design and approval of access road and drainage, the formulation of a gender strategy, the design and plans of the water tanks.

The 'Implementation' stage is where most of the activities are concentrated and they relate to all the six expected outcomes of the project. It includes the acquisition of sites, the actual construction of facilities: community sanitation facilities, water storage tank and water kiosks, the implementation of the hand-washing campaign, the establishment of small bore drain connections, trainings and capacity building activities, learning visits and the improvement of road access for sludge removal and gray water management.

There are few specific activities associated with the 'Operation and Maintenance' stage. The project has activities related to developing and providing trainings modules on management of WASH[20] enterprises and operational support and capacity building on management,

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[20] WASH – Water, Sanitation and Hygiene - enterprises are groups mainly formed by residents from Kambi Muru who work as water vendors, sludge exhausters and solid waste collectors.

operation and maintenance. According to information obtained from a key informant interview, the operation and maintenance of the facilities will be in charge of commercial operators contracted by the water company, and the neighborhood association is expected to manage it, which involves monitoring the use, affordability, security of the infrastructure and making sure that the facilities meet the expectations of the users. It is also expected that part of the revenues from the commercial exploration of the infrastructure go into financing the activities of the association (Annex 3).

The activities related to the 'Monitoring and Evaluation' stage are the second most prominent in the Activity Plan and are outcomes of the project itself. They include reports to AusAID, the donor agency for this project, monitoring, evaluating, learning, documentation and dissemination. They also refer to other outcomes such as the construction supervision of hardware elements, meetings of the Neighborhood Committee, evaluation sessions with the community and teleconferences with the headquarters. The project is currently happening and a most updated report was still to be released by the end of the data collection process.

Summary of Findings

• All the planning steps of the HCES project in Dodoma were evenly followed and documented. The analysis performed for the other two cases demonstrates that there is a stronger focus on 'Implementation' and 'Monitoring and Evaluating' (Figure 19).
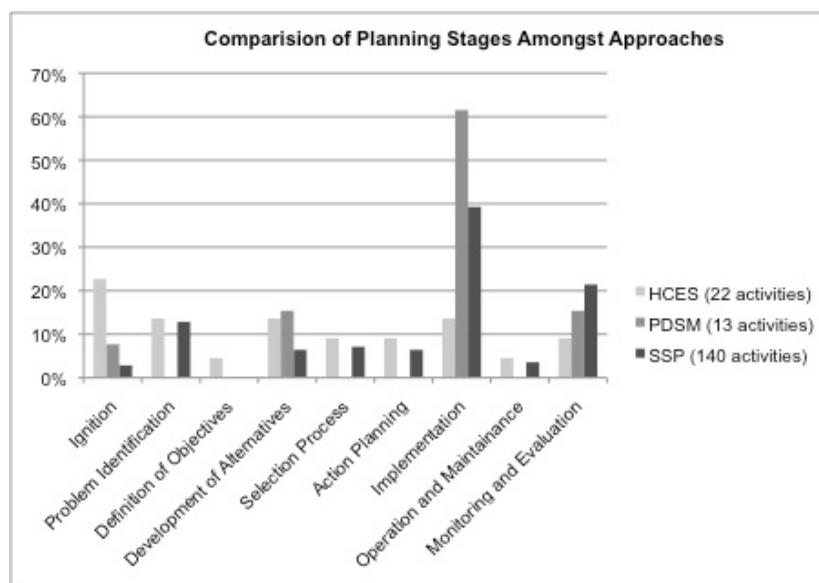
Figure 19: Comparison amongst the percentage of activities regarding the planning stages. Source by the author.

• The absence of activities related to the stage of 'Definition of objectives' in two of the three cases and the inversion of stages for the HCES and the difficult documentation of the results may suggest that the objectives of the projects were still decided mostly outside the household/community domain.

• Actions regarding 'Operation and Maintenance' are specially required when communal and shared toilets are provided, which is the main result of the analyzed cases, and although mentioned with certain frequency, few related activities have appeared in the documentation of the three projects. The Kenyan case showed to be more engaged in developing permanent strategies for performing these tasks involving the local community.

• The analysis of the HCES project in Dodoma rests its emphasis on the planning process rather than on the delivery of sanitation facilities, while the Kenyan project is the most concerned with infrastructure delivery and capacity building and the Ugandan place focus on awareness raising.

5.2 Stakeholder Analysis

This section assesses the actors involved in the three approaches and intends to answer the second guiding question of who are the considered and involved stakeholders. As part of the analysis, the actors are divided into civil society, state and private sector and organized according to the domain they represent. Following that, the key actors for each approach and their roles, interests and influence on the projects are identified (Annex 4, Annex 5 and Annex 6) and based on this assessment, they were categorized into *subjects, key players, crowd and contest setters*[21] with the support of interest and influence matrices.

Household-Centred Environmental Sanitation (HCES), Dodoma

The HCES guidelines have as a principal characteristic the involvement of a wide range of stakeholders to produce the environmental sanitation plans. The focus is on community participation, since users are understood to have a pivotal role as the main beneficiaries of the facilities. The stakeholders of the Dodoma case are represented in the Figure 20.
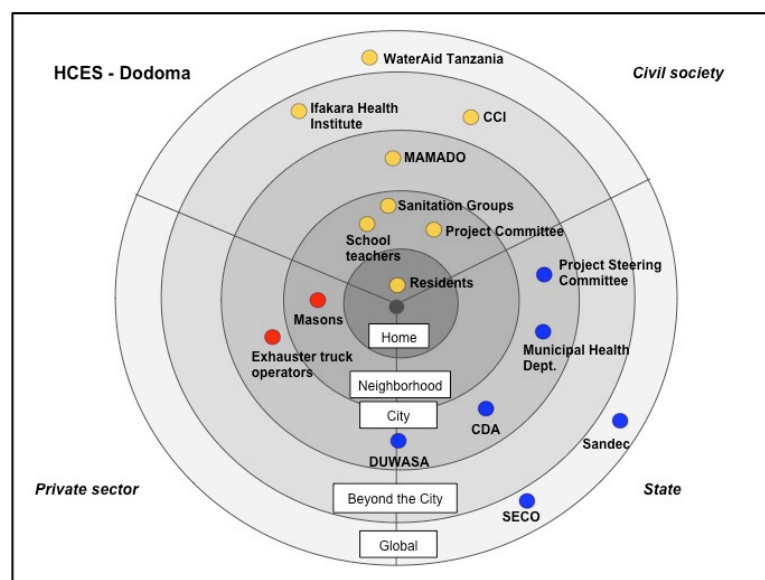
Figure 20: Stakeholders map for the HCES project in Chang'ombe. Source by the author.

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[21] Based on Eden and Ackerman 1998 and de Lopez 2001, cited by Reed et al. 2009.

Some of the key stakeholders are the local NGO MAMADO, Sandec and the Chang'ombe Project Committee. The NGO conducted the planning process and mobilized the community members to participate. The community had previous experience in participation during the land regularization and formalization of the settlement, conducted by the Capital Development Authority. In this project, the community was represented by a committee composed of eight members from the four wards of the neighborhood. New stakeholders groups emerged or were created along the process, such as the teachers of the primary school, whose involvement increased throughout the project and the Project Steering Committee (PSC), entity created to oversee the microcredit scheme. The PSC was composed of representatives of the Municipal Health Office, DUWASA, the municipal utility and WaterAid, which met only once during the implementation (Lüthi, Personal Communication 2011). Also related to the financing scheme, sanitation groups were formed in order to apply for the credit and masons were trained to construct the toilets paid via loans.

Additional stakeholders, less essential to the project, are the Ifakara Health Institute, based out in Dar es Salaam, WaterAid Tanzania, an international NGO concerned with sanitation issues and the local NGO Centre for Community Initiatives (CCI), affiliated to the Shack / Slum Dwellers International and to Homeless International. The analysis of key stakeholders of the project is displayed in Annex 4. Figure 21 shows the categorization of the stakeholders based on the analysis of power.
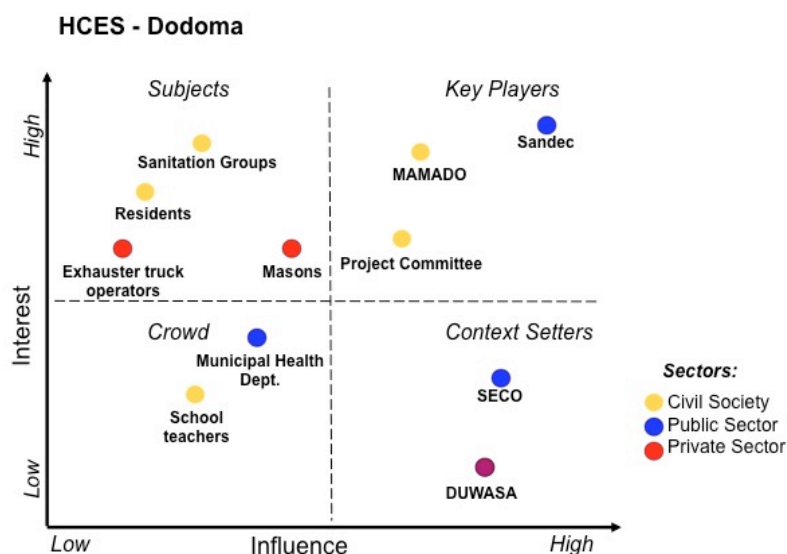
Figure 21: Interest and influence matrix for key stakeholder in HCES case. Source by the author.

Product Development and Social Marketing of Sanitation and Urban Waste Management Systems (PDSM), Kampala

The fourth phase of PDSM project worked with a small number of stakeholders, dealing mainly with the community, community health assistants and the SACCOs (Figure 22). Other relevant groups were set in the development of the project, differing throughout the phases according to their specific objectives. The community had previous experience in participatory processes, not only regarding sanitation but also concerning other issues. From the private sector, the main actor was Crestanks Uganda Limited, the company that supplies sanitation products. The local government was hardly involved in the process through the office of the Division Health Inspector and the water utility National Water and Sewerage Corporation was not involved. Possible association with the NGO Kayunga is briefly mentioned but not further developed.

The analysis of interests, influence of key stakeholders is presented in Annex 5 and the power relationship amongst them is shown in Figure 23
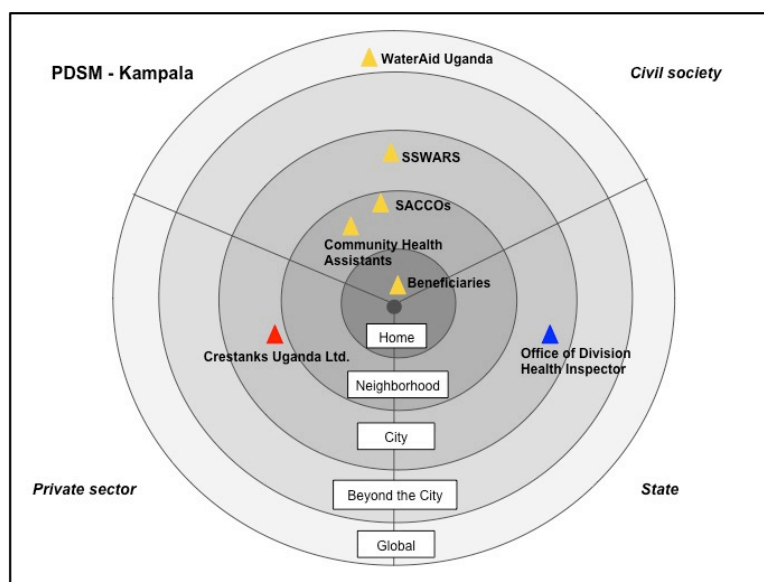
Figure 22: Stakeholders map for the PDSM project in Kawempe Division.
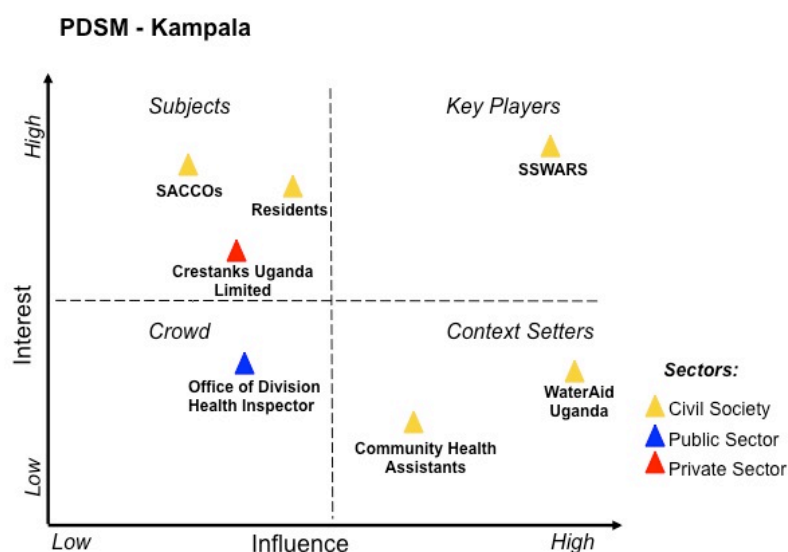
Figure 23: Interest and influence matrix for key stakeholder in PDSM case. Source by the author.

Stronger Service Providers, Better Services for All (SSP), Nairobi

WSUP works mainly through partnerships in which the international NGO and its local offices develop the strategy and contract technical and social consultants for the implementation. The project was implemented with the services and support of a total of twenty-four stakeholders represented in Figure 24. Several of them were involved in one-off activities, not performing a lasting role in the project, as it is the case of Water Services Regulatory Board (WASREB), Water Services Providers Association (WASPA), Athi Water Services Board (AWSB), National Environmental Management Authority (NEMA), Ministry of Public Health and Sanitation (MoPHs), Kenya Medical Research Institute (KEMRI). These stakeholders were informed about the project and were involved in specific negotiations.
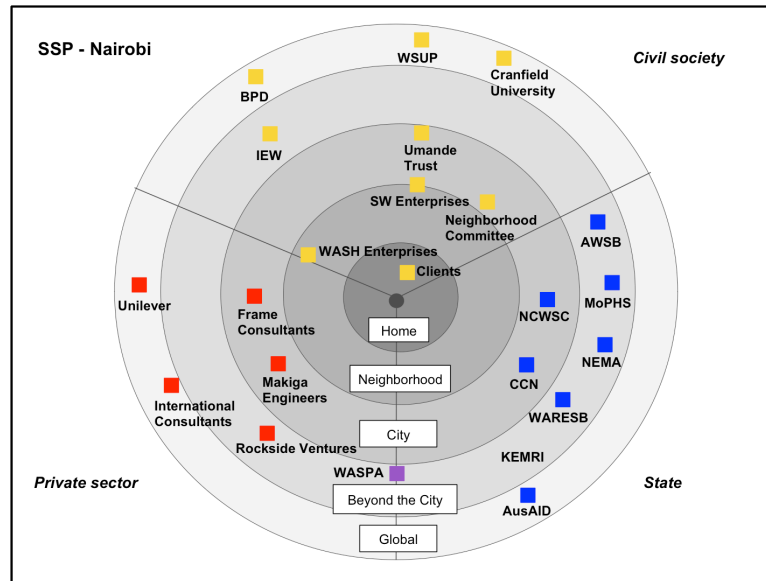
Figure 24: Stakeholders map for the SSP project in Kambi Muru. Source by the author.

Cranfield University provided a GIS training to NCWSC. The international NGO Building Partnerships for Development in Water and Sanitation (BPD) was responsible for the learning component of the project with regards to sludge removal. The consultant Rockside Venture, developed the Environmental Impact Assessment. International consultants rendered assistance to capacity building activities. Unilever funded the awareness-raising component, a hand-washing-with-soap campaign at schools. The Institute of Environment and Water (IEW) was responsible for the gender strategy in the project. The firm Makiga Engineering was in charge of the development of a sludge training and support of a manual sludge exhauster prototype and train enterprises. A detailed analysis of the influence and interests of the key stakeholders in the process are presented in the Annex 6 and the categorization of stakeholders is portrayed in Figure 25.

Figure 25: Interest and Influence matrix for the SSP case. Source: by the author.

Summary of Findings

• Though the three cases have clear differences in their emphasis, the projects have similar institutional settings and implementation structures (Figure 26). They all have stakeholders' inclusion and community participation as an important feature. They are proposed by an intermediary agency that acts at the global level, they are funded internationally via development aid and are implemented locally by NGO partners. They interact with local stakeholders and develop local structures such as project committees in order to bridge the community and external partners.

Figure 26: Comparative Interest and Influence matrix of key stakeholders from the three approaches.
Source: by the author.

- None of the projects was originally started by the community, neither was there a strong influence from the political authorities in their institution.

- *Public Sector:* The public sector had a minor participation in the three projects, despite efforts to establish communication by project staff. In the moments in which there was participation, it was often of health departments. Planning and urban development departments only interfered when they had to concede site or authorize construction work.

- *Civil Society:* The HCES case like the SSP counted on the creation of a committee to represent community interests and both cases also demonstrate good ability to network with other stakeholders.

- *Private Sector:* Apart from the SSP case, which has as tenet of its strategy the strengthening of local service providers, the private sector in the two other projects continues to play an underdeveloped role. They have little involvement in planning activities and act merely as providers.

5.3 Modes of Participation in Planning Stages

Different stakeholders have different capacities and participate in the process in different conditions. In order to provide the answer for the question of how stakeholders are involved, this part of the analysis consists in assessing what is expected from projects proponents regarding participation and then the modes of participation of key stakeholders in relation to the project stages. The basic assumption here is that the nature of this relationship may be influenced by the power each one has to interfere with the decision-making. This assessment is based on the communication flow regarding input they have in decision-making, as earlier described in this study, with the support of four analytical categories of modes of participation, namely *informative*, *consultative*, *collaborative* and *collegial*. This section features the most relevant findings from the analytical process and the detailed analysis can be found in annex (Annex 7, Annex 8 and Annex 9).

Household-Centred Environmental Sanitation (HCES), Dodoma

The HCES approach tested in Chang'ombe aimed to promote community participation and validate a '(…) systematic process of organizing local communities to be active and involved in planning and managing their own development, claiming their rights and exercising their responsibilities' (Frömelt, Lüthi and Tilley 2009). Even if the overall goal is to involve as many stakeholders as possible and from different domains (Figure 27), the plan expects that the project would serve as an example of planning '*for and with* local communities for sustainable development of water, sanitation and hygiene in low-income urban' (ibid.).

Figure 27: Community workshop (left) and experts workshop (right) realized in Chang'ombe. Photos credit Sandec 2009.

The assessment of modes of participation in the HCES in Dodoma shows that Sandec and MAMADO were in frank collaboration during most of the planning process and a more collaborative relation with the residents was established after the creation of the project committee. Whenever the residents were participating, it was in informative or consultative ways. The stage in which residents collaborated in a substantial way was during the 'Selection of alternatives', when they could choose between technologies previously selected by experts. It is possible to say that attempts were made to include the residents' concerns, like the alternative mechanism to finance the facilities. The municipal health department was consulted in specific activities and school teachers, who were believed to play an important role in the project, were consulted in the very beginning and then collaborated during the 'Implementation' stage.

The private sector is weakly represented in this case. Despite their importance, the parastatal utility company DUWASA, the exhauster truck operators, or the masons were not substantially involved in the stages of the planning process. Dodoma Urban Water Supply and Sewerage Authority (DUWASA), responsible for the water supply and sanitation services in the city was hardly involved in the process, taking part in the expert workshop and in the microfinance project steering committee in a consultative way. This fact is recognized as an institutional challenge to the project as according to the key informant on the project, "there is still a total disconnection to what utilities do, what they think their job is and the reality in the ground in these disenfranchised poor areas" (Annex 1).

The analysis shows that the 'Development of alternatives' and 'Monitoring and Evaluation' stages were the ones with less involvement of other key stakeholders apart from Sandec, MAMADO and SECO. Furthermore, the role of all stakeholders in the 'Operation and Maintenance' stage is unclear, pointing to a frail assignment of responsibilities and also to the ownership structure of the community facilities constructed.

Product Development and Social Marketing of Sanitation and Urban Waste Management Systems (PDSM), Kampala

According to the brochure that introduces the work of SSWARS, the NGO identifies the communities lacking basic water and sanitation services through consultations with relevant

local stakeholders like government technical units, government officials, community leaders and groups of senior citizens. "SSWARS visits communities and discusses planned projects with them in order to get their input in planning for community project interventions in water supply and sanitation" (SSWARS 2008).

Figure 28: Training workshop on toilet technologies, O&M and hand washing realized in Kawempe division. Photo credit SWWARS 2009.

The assessment of the modes of participation has shown to be difficult for the PDSM case. The quality of the involvement is assessed with basis on reports provided by the project proponent and the frequent use of terms like *involve, mobilize, sensitize* and *community meetings* without further detailing does not elucidate the mode by which stakeholders, in this case particularly the residents, took part in the activities neither if specific objectives have been given for that. For instance, it is pondered by one key informant that in community meetings people were given the chance to contribute and have influence on the 'Implementation', but it is not specified what were these contributions and how they in fact were incorporated in the project. If the lack of qualitative data can somehow hinder the analysis in this case, it can also indicate that the monitoring regarding the participatory strategies was not performed in a satisfactory way to allow deeper analysis of the process, although observations can still be made.

Different from the two other projects, the SSWARS had a previous relation with the community, what may indicate that the project staff was more aware of the reality and problems of the parishes. The involvement of the residents is generally carried out to inform them about the sanitation options (Figure 28), emit health messages and reaffirm the importance of the project. They are consulted in the beginning of the project, during the

'Problem identification' and later, at the 'Monitoring and Evaluation' stage. Surveys are conducted and the assessment of the needs is based on the 'Ignition' meetings in order to learn the views of the community. Often the consultation process starts with community leaders or the resourceful persons of the community, who bring the NGO and the residents together.

The interviewee notices that apart from community organizations, attendance in community meetings is low and demonstrates concernment about inappropriate encouragement practices promoted by other NGOs such as 'sitting allowances'. Although there are attempts to incorporate the residents' perspectives on the problems of the community, often poor sanitation condition and lack of sanitation facilities can be taken for granted as their objectives by the project staff. That may indicate an even bigger need to assess community priorities, since "in a community, what you think is the most important need to them is not what they view as their most important need", as pointed out by the interviewee (Annex 2).

As mentioned before, despite the interest that the private sector may have in increasing demand for their products, the company Crestanks Uganda Limited was only involved during the 'Implementation' stage, when they provided toilets. The activity to support and manage the SACCOs lacks detailing about how it was conducted and implemented. Also, despite the importance of community health assistants in promoting sanitation and improving hygiene practices, they were only involved as a group in a training activity. These three stakeholders groups, the private sector, SACCOs and health assistants, either appear to be disconnected from other stages of the process or were involved in ways that are not completely clear. It is possible to assume that potential that could emerge from this interaction was underestimated, although it is a complicated task to infer if these assumptions regarding the modes of involvement of the stakeholders during the different planning stages show characteristics of the project itself or if they are biased by the lack of detail in reporting the process.

Stronger Service Providers, Better Services for All (SSP), Nairobi

Partnerships are defined as the 'whole raison d'être' of WSUP (Parker et al. 2010, p.18). The international NGO recognizes the importance of working within existing institutional frameworks and coordinating with other initiatives by the government, private sector and

development agencies (WSUP 2010,a p.33). The WSUP supported projects work with low-income communities to ensure service levels are adequate, affordable and reflect the needs and demands of the community as well as ensuring that their responsibilities as good consumers are met. In addition, WSUP works with both the service providers and the community to promote dialogue between them (WSUP website).

The assessment of modes of participating in the SSP project in Kambi Muru shows that virtually all stages of the planning process counted on the involvement of key stakeholders. The stage of 'Definition of objectives' was the only one without participation, what may indicate that they were set outside of the project context. The goal of the project can be associated with the interest of the proponent NGO to demonstrate and upscale models of service delivery to the urban poor. WSUP has contractual relation with NGO Umande Trust and the engineer firm Frame Consultants. Though this can be considered as a service provision in a contractual basis, they worked in a collaborative way throughout the process. The research material does not allow many inferences about the modes of interaction amongst stakeholders themselves, but provide material on the interaction between stakeholders and the project proponent.

Figure 29: Community group work (left) and women in focus group discussion (right) about O&M in Kambi Muru. Photos credit WSUP 2010.

The NGO works as a mediator between the residents and WSUP. It is probably safe to assume that if residents were not included in the 'Definition of objectives' of the project, they also had small influence in the 'Definition of alternatives' available for the community. In this stage, community was consulted regarding the sites for the facilities (preference, available areas and land cession and easements). The residents were involved again through the

neighborhood committee during the 'Operation and Maintenance' stage, in which trainings were conducted with members of the community in order to provide them with the capacities to operate the facilities (Figure 29). Umande Trust also acted to mediate the relation between water vendors and the water utilities.

Frame Consultants, amongst other tasks, was in charge of the strategy developed for the sludge management in close contact with WASH enterprises, specially the sludge undertakers, who in turns were consulted in the stage 'Problem identification', and then worked in collaboration during the 'Implementation' of the strategy. They were trained in business and management skills and are expect to be contracted to provide emptying services in the community. The City Council of Nairobi was often involved in the approval and regularization of plans and compliance with standards, with a strong role in the 'Selection process'.

The project proponent is very keen on promoting and advocating service provision for the poor in a way that if the utility is not involved the project does not exist. Thus, the close and collaborative involvement with the water utility (NCWSC) is a mean to achieve the goals of the project, but also a goal in itself, since WSUP realized several capacity building activities, especially for the Informal Settlements Department. In this sense, although the project is defined as demand-driven, at times it is difficult to determine what the term means and to clearly understand the target group of the project.

Summary of Findings

• The different understandings of participation as well as the diverse expectations that proponents have regarding the involvement of stakeholders may have posed as the biggest difficulties that emerged in elaborating a set of categories to analyze the three projects and then conducting the analysis.

• Both HCES and PDSM focus on residents, while WSUP have a broader stakeholder network that enables more systemic solutions.

- Residents are generally involved in a consultative way in three cases and were represented by project or neighborhood committees, community leaders or community organizations. It is possible to say that the creation of an autonomous governance structure in two of the three cases brings project proponent and residents closer. However, it is hard to assert to what extent the consultation sessions held with the beneficiaries support the choice of the systems.

- The objective of the projects is still defined outside communities in which projects are implemented. That may indicate that the demand for sanitation is assumed based on the lack of sanitation facilities noticed by project proponents, which does not necessarily mean that people are interested in investing time and money to address the issues.

- The beneficiaries are merely called to choose the location or pick one of the solutions often designed by the projects proponents themselves or engineers and sanitation experts hired for this purposes.

6. DISCUSSION

This chapter will discuss the findings previously presented. The involvement of stakeholder groups was reviewed according to the specific objectives of the projects and also according to the stage of the project in which they take place. The analysis of the modes of interaction alongside the support of the literature permits inferring some patterns and seeks to answer the two research questions: *(i) How participation is applied to the approaches?* and *(ii) To what extent do the modes of participation adopted by the projects contribute to the achievement of the claims for participation found in the literature?* The results of this study permit inferring that the main difference amongst the three projects is that the HCES in Tanzania was a project developed with the objective of carrying out a participatory planning process while the two others included participation as a mean to achieve the objectives.

6.1 Remarks regarding the Modes of Participation

The analysis points out that the HCES project in Dodoma rests its emphasis on the planning process rather than on the delivery of sanitation facilities, which explains its observance to the structured planning stages and the documentation. The SSP project in Nairobi is primarily more concerned with infrastructure delivery and capacity building and the PDSM in Kampala focuses on awareness raising and demand creation, with some elements of income generation. The stress on 'Implementation' and 'Monitoring and Evaluating' stages, observed in both the Ugandan and Kenyan cases, attributes them characteristics of development projects, which expect patent and measurable deliverables and require accountable procedures. Nevertheless, the three projects operate in similar institutional settings and implementation structures. They are implemented by local NGOs hired and funded by international donors and have stakeholders' inclusion and community participation as important features.

The three projects reaffirm the role of NGOs, rather than local governments, as channels to support community development, with support from international donors (Oosterveer and Spaargaren 2010, p.23). The existence of these intermediary-implementing agencies, which in the case of the SSP project also relies on the local private sector, place these actors amongst key players, with high interest and influence over the achievement of projects outcomes. They act in the household/community domain supporting the development of local structures such

as project committees and advocate for projects beneficiaries before donors. These stakeholders work in close collaboration with project proponents through the process. This structure is somewhat different in the PDSM, in which the SSWARS, the project proponent, plays this intermediary role and implements the project itself.

In the three cases community members formed the subjects group, which means that though it is considered that favorable outcomes relies largely in community appreciation and appropriation of the process and results, they had little power to influence the direction of the projects. Possibly this is one of the most sensitive issues in this analysis, that recognizes that residents participated mainly in consultation sessions and it is not always clear to what extent those consultation sessions supported the choices made or interfered with the course of actions. At least as proposed, the HCES project was committed to including the beneficiaries since the start of the planning process and the interaction between residents and project proponents increased in HCES, as well as in SSP, with the creation of a committee to represent community interests.

The SSP project was the only one that engaged with the public sector in a significant way. With both high interest and influence, the city-owned utility NCWSC was amongst the key players, with whom the project proponent established collaborative modes of participation in most of the planning stages. The City Council of Nairobi also participated in the form of collaboration particularly from the 'Selection Process' stage onwards. In the other two cases, there was not a strong influence from political authorities: health departments were allocated amongst the crowd stakeholders group, with little interest and influence over the project.

Similar findings also apply when the involvement of private sector is regarded, which may indicate that the SSP in Nairobi demonstrates better ability to network with stakeholders from different domains and from different sectors. Despite potentially having common interests with actors from the private sector, the interaction was modest and in late stages of the processes of the HCES in Dodoma and the PDSM in Kampala.

6.2 Remarks regarding Planning Stages

Ignition and Problem Identification

The first approaches to the communities or beneficiaries by the projects proponents are in the 'Ignition' and 'Problem Identification' stages. The theory review points out that significant improvement can be achieved when people's inputs and priorities are incorporated in early stages of the planning processes. Furthermore, high level of involvement in mobilization signals a strong demand for the project (Nance and Ortolano 2007). None of the studied projects, however, was originally started by the community and the objectives of the projects were defined outside the community domain in which projects are implemented.

This research indicates that in the three cases residents were informed about the projects at the start and that project practitioners conduct the 'Problem identification' stage with basis on consultations with the community, being the most common approach to assess the needs through observations and surveys. Even if this thesis did not intend to investigate the demand for sanitation in poor areas, some points emerge from the findings of this research and may indicate that the demand for sanitation is assumed with basis on the lack of sanitation facilities noticed by project proponents, what does not necessarily mean that people are interested in investing time and money to address the issues.

Definition of Objectives and Development of Alternatives

Key decisions are made and the program is defined in the 'Development of alternatives' and 'Selection process' stages. According to Hamdi and Goethert (1997, pp.78-79) those are crucial moments to involve the community in the essence of a 'true participatory project'. The authors also recognize that although different levels of participation may be appropriate, 'without stakeholder participation, results have repeatedly been wasteful'.

According to the theoretical model assigned by Reed (2008), stakeholder participation is recommended to be considered in early stages of the process combined with the definition of clear objectives agreed among stakeholders at the outset. Even so, the analysis of the three cases showed that the designing of policies and projects was conducted with small

participation of the community. The plans were established beforehand and participation of the community and of other stakeholders was punctually requested according to the stage of the implementing process.

It is worth noticing that in the three cases community participation is to some extent detached from technical issues. In this sense, the broader potential of participation that may emerge from the consideration of local knowledge has been little explored. The cases demonstrated timid efforts to profit from existing settings, structures and *modus operandi* found in the communities in which they were applied. This reiterates the difficulties pointed out by Ashby (1986) in finding ways that valorize the residents' expert knowledge about their own reality and enable them to use their own available resources and capacities.

Also, it is possible to observe that this approach to planning, which misses the opportunities of including different stakeholders, particularly the beneficiaries of the project, may still be embedded in social hierarchy structures that place poor households in a 'subordinate role and inferior status', in which they seldom feel comfortable to discuss with experts or authorities, remaining with a passive role, waiting to be told what to do, similar to what was pointed by Ashby (1987, p.240).

Selection Process and Action Planning

The analysis conducted by Ashby (1987) revealed that in participatory processes participants are conventionally requested to compare alternatives preselected by experts based on their interpretation of user's needs and objectives. Similar features can be found in the three cases, where experts conducted the technical design of the solutions and residents chose between the available options and locations. The possibility to choose the site may have helped to address accessibility and somehow gender issues. It also means that if people/beneficiaries are not involved in the designing of the facility, they may not be aware of how the system works or even when there are pre-defined options, they may not completely address the expectations of the ones who will make use of them.

Still, this research recognizes that the involvement of other stakeholders in the decision-making is not free of risk and not always grants the attainment of the expected results or the

most adequate solution. Consensual decisions are important because if the power to decide is shared, so are the responsibilities for failures and successes. The quality of the decisions depends largely on the amount of information available and also on the criteria used in order to make the decisions. This can be seen in the HCES case, in which technological options with easy maintenance were offered but the installation costs showed to be above the residents' capacity to pay. Thus, the facilities chosen by beneficiaries and constructed via microloans, even if decided by themselves, showed to be either of poor quality or not the most appropriate technological options considering the user needs (Annex 1).

This experience indicates that the residents either did not understand the technologies used or that the need for a place to shower was not recognized in an earlier stage of the process, either by residents or experts, despite inquires about the possibility to construct options different from the ones chosen in the planning process. The key informant recognizes that "We failed to see that people also need a place to shower. We just realized later, as a lesson learnt, to take a closer look at what they want, besides at what they can pay, to make sure you are recommending the right solution and sustainable technologies" (Annex 1). In this sense, planners are supposed to adopt a posture that considers residents' knowledge about their own realities, as well as both their objectives and constraints.

Stakeholders' involvement during the 'Action planning' stage of the processes is believed to offer the potential advantage of inducing innovative solution if methods and ways are devised for that. "The tradeoff is more time-intensive preparation. It also requires a change in customary practice and an acceptance that technical knowledge does not assure primacy" (Hamdi and Goethert 1997, p.78). Even so, the information on the three projects does not offer enough evidence to demonstrate that other actors were involved at this stage. The SSP case is the one that had more collaboration within some key stakeholders, particularly amongst the partners. Nevertheless, beneficiaries played a secondary role.

Implementation and Operation and Maintenance

The research conducted by Nance and Ortolano (2007) demonstrated limited impact of the construction and maintenance forms of participation and the HCES case corroborates that idea. An evaluation of the demonstration toilets conducted by external consultants pointed

that regardless the training activities, the toilets constructed by the masons were mostly poor in quality and sometimes were not correctly built in technical terms (Günther and Basler & Hofmann AG 2010). This can be explained by the involvement of masons[22] only in a late stage of the process, as pointed out before.

According to the key-informant of the project, the poor quality of facilities was due to the weak implementation of the hardware component by MAMADO. The NGO demonstrated poor managerial and financial skills and did not count with an engineer within the team, differently from the community mobilization activities, where it played a key role. "A NGO makes a good work on mobilization and carrying on workshops but that doesn't necessarily mean they are doing a good job completing the hardware part" (Annex 1). The fact that trained masons faced competition and price undercutting from unskilled ones was a further challenge.

Often in sanitation projects and programs residents are expected to operate and maintain the facilities, providing labor or managing savings or collective loans, like in the cases of PDSM and HCES, respectively. According to Hamdi and Goethert (1997), handing over these daily activities to community members can also render income generation. Even so, many times some technical skills are required, thus 'realistic assessment of capacity must be made for shared maintenance to be successful' (ibid., p.78). Furthermore, clear, definite tasks must be agreed and preferentially in earlier stages of the planning process. The Kenyan case showed to be more engaged in developing permanent strategies for performing these tasks, involving the local community and a broader stakeholder network that enables more systemic solutions.

Monitoring and Evaluation

'Monitoring and Evaluating' activities can be even more required when stakeholders are not involved in earlier stages. A continuous monitoring process allows the recognition of overlooked issues in design and selection stages and permits adaptations to new circumstances. In this sense, not only experts' parameters are needed, but also participation of beneficiaries to evaluate the performance of the technologies according to their criteria,

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[22] The sanitation groups were only created in the implementation phase as well as the training of masons as part of the microcredit scheme. It is not possible to say whether the individuals took part in previous workshops and meetings addressing technical issues.

values and needs (Ashby 1986). This indicates that a collaborative way to perform evaluation may improve the quality of the projects' outputs. The results presented in the previous chapter showed that projects practitioners are usually the ones who perform 'Monitoring and Evaluation' activities, in which other stakeholders are consulted about punctual issues, when considered required. In the HCES case, evaluations pointed to the low ability to pay of the residents, what required new strategies to increase affordability of facilities.

In the SSP case, focus group sections conducted with women addressed the need of better solutions to menstrual hygiene products, an issue not considered in the design phases but later incorporated into the facilities. Such issues can be easily solved but are likely to be passed up by technicians and hardly raised in collective meetings. This example raises the issue of the flexibility of the methodology applied in participatory assessments in order not only to avoid inhibition but also to encourage feedbacks from beneficiaries (Biggs 1989). Equally relevant is the adaptation of the methods to the groups of stakeholders assembled and to the purpose of the activity.

6.3 Strengths and Weaknesses of the Modes of Participation

The involvement of communities in the three projects already signalizes that there are institutions inclined to participatory approaches both in terms of financing and conducting initiatives as such. Still, this research has shown different understandings of participation especially in terms of the diverse expectations regarding the involvement of stakeholders. The many ways employed to apply participation to sanitation projects corroborates Goethert's view that a wide range of practices and perceptions are gathered under the term participation (2005). The findings of this study suggest that this variety does not define the core of the concept of participation nor indicates a lack of clarity in establishing clear approaches to it. Rather than that, the results point towards a combination of the two aspects. This section will present the strengths and weaknesses of the modes of participation previously discussed.

Strengths

The institutional set-up in Kenya showed to be one step ahead in terms of recognition of pro-poor sanitation policies, as demonstrated by the institution of the Informal Sector Department within the utility. Also, the joined efforts and the close relation with the City Council of Nairobi enabled the achievement of complementary improvement that was likely to be overlooked. The establishment of a platform of dialogue between municipal governments and service providers advocate in support of informal and unplanned settlements needs and their recognition as a constituent part of the urban reality. Connections to permanent local structures like the government or utilities can also remain and replicate for other parts of the cities.

The Kenyan project had a clear focus on building capacity of services providers. Substantial efforts were channeled to the utility, but also strategies were drawn to build capacity and generate income for small entrepreneurs of the WASH sector, namely the sludge undertakers, water vendors and solid waste enterprises. The structures developed by SSP, whether based on demand or supply, seem to be more sustainable due to connections to other key stakeholders in the sanitation chain indispensable for the proper functioning of the system.

Despite the acknowledged benefits of improving environmental sanitation, projects seem to be more likely to be sustained when neither sanitation nor participation are considered exclusively as an expected outcome itself. The scarcity of resources in monetized set ups shows that when linkages with income generation opportunities are established, members of community are more likely to embrace the cause. The informant on the PDSM project affirms that "the difference between operating in urban slum areas and operating in village areas is that in slum areas whatever you do, the first focus is on how much they are going to benefit from participating in that project. So, money comes first before they can even get the most important message that you have for them regarding their health" (Annex 2).

In this sense, efforts to arrange micro-credit or saving schemes, though facilitating the construction of toilets, fail to address the most pressing need of the poor communities: income generation. Ways to align these two demands are more inclined to succeed, therefore are recommended to be further explored and tested. The results presented in this study also lead

to the assumption that schemes aiming to improve sanitation provision in developing countries should tend to small groups that make their earnings from the sanitation services as a strategy to last, recognizing their knowledge, providing with skills and improving working conditions.

Weaknesses

The institutionally embedded stakeholder participation in development policies may signalize a formal commitment. Nevertheless it may also indicate that the institutionalization of participatory approaches, when not based on broader philosophical concerns, is likely to be seen as one more requirement in which it is included but not on genuine grounds. The 'incentives' given to people to attend meetings as recurrently mentioned in the interviews can indicate a common practice to involve the beneficiaries somehow in participatory activities. Rowe and Frewer (2000, p.10) suggest that this kind of attitude 'may reflect the intentions of authorities where the appearance of involvement is sufficient, and little genuine interest exists in implementing any recommendations that might arise from the exercise'. In this sense, Reed (2008, p. 2427) points out the need "to go beyond increasing the incentives for participation, to enable stakeholders to influence or alter the questions that are asked and the outputs that are produced".

Furthermore, some inherent factors in participatory processes may conflict with the logic in which development aid projects operate. Farrington and Martin (1988) point some of these features such as the flexible, open-ended and context-specific nature, the less tangible results and often the required time to produce results or rich evaluations. In this sense it may be possible to say that although the discourse on participation has changed, the practices concerning bureaucracy were not adapted and possibly not flexible enough to incorporate and assimilate people's participation. Nevertheless, it is difficult to assert how participation is allowed depending on the model of financing of the projects or the degree of dependency on external financial aid that may hinder the continuity of such initiatives.

According to Biggs (1989), in cases where consultative modes are employed, 'fixed roles are assigned in a more hierarchical structure, than in the collaborative or collegial modes, which require mutual respect and open two-way communication'. The active participation in

researches often requires breaking down socioeconomic barriers like the ethnic and educational background, social class and language, which separate scientists from resource-poor clients. In many situations it is easier to organize research within the contract or consultative modes (Biggs 1989). Even if consultative ways of participation can influence the course of projects and programs it is difficult to assess from the analyzed project documents how and to what extent the information derived from consultative sections were included in the plans. Though indicating a two-way communication flow, this mode of involvement does not imply commitment from the side of project proponent.

Participatory processes are time-intensive both for project proponents and stakeholders willing to participate, requiring effective interaction between actors. The willingness of residents to participate in the decision-making process and that of local governments and service providers to invest in sanitation in disenfranchised areas are part of a process that demands time. Not only that but also constant experimentation, documentation and analysis that together can feedback the practice and further advocacy and in turn can set in motion a virtuous cycle. Moreover it is a socio-cultural process in which a culture of participation is stimulated aiming at the nurturing of a civic sense and a co-responsibility atmosphere.

6.4 Final Remarks

Based on the previous discussion, this section aims at providing some possible answers to the two research questions.

(i) How participation is applied to the approaches?

While the PDSM and SSP projects have pragmatic and/or instrumental perspective regarding the claims for community participation, the HCES approach indicated a more normative perspective, since it is the only one that incorporates the empowerment of communities in its objectives. In general, community members have more space to contribute during the stages of 'Implementation' and 'Operation and Maintenance', in initiatives in which communities are involved in order to fill a space left unobserved by local governments and utilities. The way communities are seen as 'part of the solution' in the analyzed projects demonstrate

instrumental participation, sometimes relegated to labor force to substitute insufficient money in a monetized society or to the provision of land.

In none of the stages, or with any stakeholder groups the project proponent established a collegial mode of participation. If sharing of power is a fundamental parameter to participatory approaches (Goethert 2005) the results of this research could conclude that none of the projects were participative in its nature. Nevertheless, it is impossible to deny that the three cases showed concerns and attempts to involve the impacted parties in different degrees and with different purposes. In other words, the parameter may not reflect practices found in the field. The debate of issues in participation is permeated by ethical concerns and often tends to fall into dualisms like formative and instrumental, good and bad, true and fraud or as mean or as end. In face of that, rather than assigning values to the practices, this research aimed at understanding participation in the context of the projects in which it was applied. The question that emerges from this assumption is whether the practice must adapt to respond to the claims of a theoretical model or theory should be fed with findings from experiences and evolve.

To what extent do the modes of participation contribute to the achievement of the claims for participation found in the literature?

The findings of this research permit seeing that franc consultation in which two-way communication flows between the parties happens during project implementation, operation and maintenance can collaborate to the appropriateness of the solutions, when there is significant commitment of the power holder to address other stakeholders' concerns. Having committed local governments or utilities that consults and mediates the interests of different stakeholders willing to incorporate their inputs in the plans may be one step further towards more appropriate solutions. The choice of this mode demands more intensive monitoring and evaluation including the users during the implementation phase in order to review points that may have been overlooked by planners during the design process.

Due to the short period of time after the completion of projects, it is difficult to evaluate to what extent sustainability claims are or will be achieved, even so, the results of this research indicates that ongoing consultations with projects beneficiaries during 'Monitoring and

Evaluating' stage can increase the effectiveness and durability of projects outcomes. If in one hand consultation sessions held in late stages of the planning process with stakeholders can contribute to the achievement of claims for participation, they appear to serve less to the empowerment of civil society and emancipation purposes than to address context-specific hindrances.

Also, the findings demonstrate that the three projects have a strong software component, what signalizes a mild change from the focus on hardware provision, archetypal of conventional planning, to a more intangible, difficult to quantify and with not so immediate results. The change is in progress, but hardware provision remains the model for measuring outcomes and outputs of projects and if it is, in one hand, due to the classic development aid framework, it is on the other, due to remnants of a 'handout culture', in which needy communities were seen as recipient of external support, and not as part of the solution. Therefore issues like ownership and shared responsibility regarding processes and results, knowledge about the implemented technology may remain unattended and this may be attributed to the small participation in initial stages. The findings of the analysis of planning steps and modes of participation may suggest that if approaches are interests in achieving these claims, focus should be place in the conceptualization of the project.

The issue of social cohesion and gain of social capital appear to be a more intricate issue than short duration projects can address. This claim refers mainly to processes in which beneficiaries valorize outputs of projects as their own collective achievements and the felling of ownership of the provided service is expected to imply a careful handling of the facilities and willingness to pay and maintain it, though it is complicated to evaluate how far the three projects evolved in that direction.

Alternative participatory approaches, although in small-scale project contexts, can contribute to the achievement of the claims, but they will hardly overcome by themselves the urban sanitation challenges and shortcomings of conventional supply-driven systems. Even if the modes of participation in the three contemporary projects have demonstrated to address some of the claims for alternative approaches, it would be naïve to believe they alone will be able to fill all the gaps in conventional provision.

In this sense, the findings of this thesis support the argument that people initiatives have the perspective of scaling up the provision of sanitation in urban settings, but this potential will only be leveraged when there are solid policies and staff able to stimulate and support this kind of engagement in the institutional level. Otherwise, these initiatives, in spite of their good intentions, will remain as isolated projects with small chance to make the transition from a self-help charity based model to an effective empowerment of citizens and their recognition as key players in this process.

7. CONCLUSIONS AND RECCOMENDATIONS

The review of the literature on environmental sanitation in urban areas highlighted some challenges to planning and provision of services in the developing world. Solutions provided by public or private utilities promote conventional, top-down approaches that present a number of constraints such as costly over-engineered centralized sewer systems with limited capacities to reach the poor. Likewise, dwellers of informal and unplanned settlements in poor urban and peri-urban areas in developing regions remain relying on low standard sanitation facilities. Also contribute to the acute deficit of sanitation the unclear assignment of responsibilities largely due to an insecure tenure status, low institutional capacity of local governments and service providers and the lack of interest in investing in poor areas

In face of that, the answers that emerged from theory and practice deny one-size-fits-all solutions and demand more affordable, flexible and adaptable to local contexts sanitation systems. These expectations raised the call for innovative participatory approaches to sanitation that include stakeholder groups especially on the demand side in planning and decision-making. The prospects offered by these alternative approaches range from the implementation of site-specific, concerned with socio-cultural contexts solutions, to the development of capacities for operation and maintenance relying on community contributions and aiming at the ownership of process and results and empowerment of communities, what this work refers to as claims for participation. Nonetheless, the critique of this perspective points out that participation is lower in practice than it is advocated in theory. Little evidence links processes to outcomes and scarce evidence validate participatory approaches regarding stakeholders' participation in the distinct stages of the planning process.

This research investigated three pro-poor approaches to sanitation that have stakeholders' involvement as a feature implemented in East-African cities in order to (i) understand how participation is applied to the approaches and (ii) to what extent the modes of participation adopted by the projects contribute to the achievement of the claims for participation found in the literature. The research process was conducted with the support of guiding questions and based on secondary qualitative data mainly provided by project documents and additional interviews with key informants of the projects. Despite the limitations faced during the

process, cross-examination of data, recurrent step backs and returns to the theory encouraged and were fed into this research.

7.1 Final Considerations

The literature on participation posits that the modes or levels of participation as well as methods applied to include stakeholders in a planning process may vary according to the different stages in which they occur. Nevertheless, the findings of this research lead to the conclusion that even meager participation of the different stakeholder groups, namely civil society, public and private sector can interfere in different ways with the results of the planning process, especially regarding the achievement of the claims for participation. Furthermore it shows that the modes of participation through which stakeholders were involved, especially the consultation with civil society, can support pragmatic claims for participation in sanitation projects, such as capacity development for operation and maintenance and greater efficiency and effectiveness though community contributions. But aspects regarding ownership of process and results are still left aside, what points to the importance of the initial stages, in which solid basis for participation and shared responsibility can be established.

The increase in pro-poor advocacy and improvements in the capacity of utilities to serve poor areas regarded as potential and unexplored markets can help provide either on-site or centralized system services, leveraging the collection and disposal of human waste, potentially contributing to better environmental conditions. Nevertheless, the issue inescapably passes through the recognition and acceptance of informal realities by local and national governments and in this sense communities play a crucial role in demanding their needs and claiming for their rights. Thus, activities focused on awareness raising and demand creation, usually carried out in the beginning of planning processes, appear to be essential for the recognition of this role by citizens.

There is a peculiar circular movement in the critic literature about participation and development. It started with the appeal for more qualitative analysis focused on the processes instead of the neo-classical econometrics methods concerned with measurements and outcomes. Apparently, at the present moment, the concern is back to the outcomes. Scholars

state that recent researches on participation have been mainly concerned with processes, leaving the outcomes aside. What seems to be a consensus is the need for methods to evaluate the outcomes that can capture also intangible development aspects other than counting 'deliverables'. At the same time, the results of the present investigation show that the investigation of implementation processes is crucial in order to proceed with the analysis of outcomes. Without this knowledge, it is hardly possible to infer which actions produced results, hence the task of generating recommendations for corrections in the path and further improvements in the approach is even more difficult.

The results of this study show that a better understanding of the participatory processes, the verification of process and the possibility of linkage to the claims rely largely on the monitoring of participation itself and appropriate indicators to measure that. Even if this study could not measure the sustainability of outcomes, it is possible to say that participation influences project outputs in positive ways. Even if restricted, space for residents to manifest their preferences can help mitigate negative reactions and advance timidly towards more adequate solutions. In the cases analyzed, any of the kinds of participation discussed in this research, even if instrumental or incipient, has shown to be better than none in order to deliver solutions appropriate to the context in which they are embedded.

7.2 Recommendations

Participation can be assessed from different points of view. The research problem and question emerged from the review of the literature as well as the analytical categories established to analyze the data collected for this research. The delimitation of the scope of this analysis does not mean unawareness of the array of possibilities due to the broadness of the research field that remain uncovered, like communication issues between stakeholders that emerge from hierarchical behavior patterns and can compromise the effective two-way communication flow and linkages between outcomes of participatory practices and project outcomes.

Often, concepts like 'demand-responsive', 'demand-driven' or 'people-centered', stakeholder involvement and participation are used interchangeably with different meanings and understandings. The current use of those definitions is broad and certainly the practice does

not cover all the aspects that would make them suitable for being described as such, allowing misinterpretation. Perhaps the definition demands too much from the approaches and often interventions are evaluated based on conceptual and theoretical models instead of considering the 'project theory'. In this sense, the research field in sanitation could make better use of theory-based evaluation methods. Such methods may allow the verification of the postulate that 'participation is less found in the practices than it is advocated in the literature' as it could be checked in the small contexts of project-related practices. That would allow a comparison between conceptual and theoretical models and project theory as well as project theory and project practices; and maybe the key for solving this question can be found.

Furthermore, systematic evaluation of participatory processes provided by practitioners or primary researchers can better feed internal evaluations as well as offer valuable database[23] for secondary researchers. Both in their turns can upscale the production of knowledge regarding participation and perhaps contribute to the fundamental questions in the field. That could not only improve evaluation of the involvement of stakeholders practice in environmental sanitation projects, but also eventually substantiate the many claims for participation.

Regarding the projects practices in the field, this research stresses the need for other modes of participation in early stages of the process rather than those of informing and consulting. This reaffirms the need for clear definition of participatory objectives and the claim it intends to address in the firsts stages of the process, avoiding the possible misunderstandings amongst stakeholders. Besides that, clearly stated goals of participation and the assignment of shared responsibilities to the project in the outset are more likely to contribute to the gaining of ownership of processes and results by the stakeholders. In addition, it is believed that collaborative modes of participation in the beginning stages can provide better inputs to projects, leverage peoples' commitment and demand towards the decision-making stage with regards to more appropriate solutions.

Furthermore, the results of this analysis points in the direction of better coordination efforts to engage with actors from other sectors and domains, profiting from existing networks and

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[23] It is important to consider every last ethical principles involved in the issue, including permits, authorizations, anonymizing efforts and security of the source amongst others. For more details on this discussion, see Heaton 2008.

potential common interests different stakeholder groups may have. In this sense, this work also reaffirms the need for considering planners as mediators or facilitators of processes. Regarding development aid projects, this research recognizes that projects with a participatory nature may require more financial and time flexibility and some degree of experimentation in order to overcame scaling-up challenges in slum and slum-like areas. Thus, it recommends the consideration that outcomes of such interventions may need more time to be rooted and more complex analysis than the conventional result-based frameworks.

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ANNEX

Annex 1: Interview transcript - Case HCES Dodoma.

Interviewee Christoph Lüthi (Sandec – Water and Sanitation in Developing Countries)
Date: October, 14th 2011
Duration: 80 minutes (face to face)

What was your position in the project?

I coordinated the 7 HCES projects.

How many times were you in the field/project area?

I was there four times, including the selection of the city and the local partner. Liz was in the expert meetings.

How the participation process was designed?

Participation is designed as part of the approach; include as many stakeholders as possible.

Which tools were used?

Multi-stakeholders workshops.

How the meetings were managed?

The workshops were well organized thanks to the NGO, our local partner.

How were the people invited?

By writing letters, follow up phone calls and even visits.

Was the number of people participating the expected?

The meetings had good representation, exception for DUWASA.

Is DUWASA a private company? Does it receive subsidies from the government?

Para-statal, they have their own budget, but the political oversight is by the Ministry. They are accountable to the federal ministry, but they are autonomous and they are powerful, they have their own budget, they can set their own salary level, and it is higher than when it was public, and with that they can hire better staff. Sector reform 2002. Highly subsidized, expected to have cost-recovery. Dodoma is one of the three that recovers the investment. But they are not able to recover infrastructure expansion, external donors.

Did the community have other previous participation experience before?

Regularization of the plots, few years earlier. The settlement is mainly composed of house/land owners, also with tenants.

Was the community willing to participate?

Yes, high attendance of groups of teachers, for instance

To what do you attribute the willingness to participate?

To the problems. They are willing to see improvements: lack of sanitation and roads

During the step 3, the problems elucidated by the community were safe water and waste management.

During step 4, the main concern appeared to be wastewater and clean environment. To which factor do you attribute this change in people's perception?

In workshops were tackled the importance of sanitation. Sensitization, hygiene education.

So, you do think that sanitation is more important than waste management?

Waste management is more visible, but for health reasons yes, for instance mortality under 5.

To which extent the moderation/facilitation process influenced the prioritization exercise?

We sensitize the community and increase visibility of sanitation. For example, Laos, they didn't have sanitation problems but constant floods.

There was an intentional change in the order of planning steps and step 4 and 5 were conducted simultaneously. How could the experts narrow down the system options if the community's priorities had not been chosen? So, if in the prioritization waste management were selected, what would you have to do, since the experts workshop was already conducted?

We would have to call a second experts workshop, bring other actors from the sector.

So, were you lucky that community prioritize wastewater?

McConville says that the process is manipulated and the process moderators can influence the project. But the approach is flexible enough. In Nepal, water was not a problem, but sanitation yes. The experts suggested on-site treatments, but the community didn't want it.

When describing the stakeholders, a committee with 12 members is mentioned. Further, an 8 members-committee is mentioned. Are they the same?

There are 4 wards, 2 members per ward, 1 male and 1 female. 4 additional were chosen.

And the members received the incentives. Did all the workshops participants receive it too?

The members of the committee received bicycles, since they were volunteers and a kind of incentive must be given. In the 2 biggest workshops, lunch was given to everybody.

With ¾ of the population living with less than US$2,00/day, how was the expectancy of having cost recovery?

The only way to reach the poor is lowing the cost of the toilet. Construction material in Sub-Saharan Africa represented 70% of costs. There are two ways for lowing the entry cost: microfinance (18-24 months) or lowing toilet standards with cheaper materials. We decided for upgraded existing pits and improved superstructure (cement blocs). The cheapest one was around US$ 170, cheaper when shared by 2 families. US$1,50 per family per month.

What about the financing mechanism, was it implemented?

We had a good response. 60-70 families applied in the first phase. We had only 15,000 CHF, enough for 20 micro finance loans for upgrading or building new toilets in the first phase. There were not other

phases. The biggest problem we faced there is that it was weakly implemented in the ground by the same NGO – so, that's a word of warning, even so a NGO makes a good work on mobilization and carrying on workshops it doesn't mean necessarily they are doing a good job completing the hardware part, building facilities on the ground, there was no engineers, poor quality facilities, wrong, hard time bringing costs down, material costs went up, weak management, financial and reporting skills. All families paid back. Community obligation was being met.

The goal of HCES is 'enable and maintain conditions whereby people lead healthy and productive lives and the natural environment is protected'. What were the goals of the project?

It raises the question of capacity development. In CLUES we give priority, capacity not only involving communities, but also for the NGOs. It has to be addressed very seriously, even more in Sub-Sahara Africa, where small NGOs are still very week. It was an implicit goal. How do you reach your end goals by working together with intermediaries? And the role of intermediary was not met. We were unable to build the capacity of this NGO.

Improve access to safe sanitation and improving the urban environment.

Were they met?

No. 20 toilets built in a community of 35,000, we can not say it was achieved. What was achieved is that we were able to validate the planning process, from the begging to the end. And we were able to get fund at least for the first phase. But that is clear, we are a research institute, we are not an implementing institution. We are not measured by the number of toilets built. We are here to test, validate approaches to see what went right and what went wrong.

The report only mentions outputs but no outcomes. What were the main outcomes of the project?

The project was not finished by that time. There are 2 main outcomes: 1) community is much more aware of cleaner urban environment, even knowing that it is hard to measure. 2) I would see it in more an institutional level, the utility is now more aware that they also have to provide a kind of solution for low-income areas, where sewers are not a reality.

Were people satisfied? How satisfied were they?

There was no post-assessment; we did it for Nepal and Laos. Except for 5 key stakeholders (members of Committee and the head of an NGO) Not about outcomes, but about planning. It was still ongoing

Are the people still involved? How?

Yes, we had a pilot test phase that we build public facilities around the community. We use that as sensitization. It was open in the International Toilet Day; it was an event, with school band, work with kids in early age, about hand washing, toilet at home. It is also an outcome. Another long-term outcome was a health club at school; they make health drives within the community, convincing households why they should have a toilet. It comes up as it goes along. The inclusion of schools became one output.

What is the effectiveness of people's involvement?

The critical point is that the options workshop should had been followed by focus group. We failed to see that people also need a place to shower. We just realized later, as a lesson learnt. Closer look at what they want, besides what they can pay, to make sure you are recommending the right solution and sustainable technologies.

What do you believe to be the impact of the project (people's lives, sanitation provision)?

The outcome is the school heath club.

Who is the most important stakeholder in sanitation provision in your opinion?

It was the NGO, Mamado. They drove the process.

Who, in your opinion is still not included in the process still today?

I would still say DUWASA. Only in 2011 they are changing mindsets at higher levels, what doesn't happen overnight. There is a total disconnection to what utilities do, what they thing their job is and the reality in the ground in these disenfranchised poor areas. We don't have clout to do that, agencies like WSP and World bank would have more.

Did you see any obstacles for people participation?

There are the usual: time to participate in a multi-step participation process. You should spend more time assessing issues. That is where the trade off is, how much time can you spend assessing the issues, and how deep can we go with information collected in half a day.

That leads to my next question. When you say that more time should be spent assessing issues, to which extent it gets closer to conventional planning process and far from community planning?

You are right. Originally the survey was not foreseen, but we got additional funding for research, from the NCCR Program. It is called PAM with around 30,000 CHF, specifically to build pilot infrastructure, but we decided to make a classical structured survey, to find out more deeply what the priorities are, how much they are willing to pay, how much can they pay. I don't think it is going to be a normal step within the CLUES process, but there is one tool that enables people to do surveys. I think it is still one of the best way to get deeper information on what people think. A one to one survey or focus groups. If you say it moves away from community participation, I think it complements community participation and they shouldn't be seen as one or the other. I am not saying it has to be done. In Nala, for example, in Nepal, this kind of survey was not done, what they did was a poverty assessment, where they went from house to house to do the assets, how much assets each family has, but was not a classical survey. That was more to see which household could afford the sewers and which could not.

The survey was conducted by a Research Institute. Are they private?

They are from Dar es Salam, funded by the government. It is the main health research institute in Tanzania and they are heavily subsidized inclusive by Switzerland also. So, the Swiss Tropical Institute in Basel was one of the founding members of this institute, in the 1960s and 70s.

How technical issues were addressed?

The Compendium was already available in a draft form. The cover photo shows the process leader of MAMADO. The systems were available, the technologies were already there, the images that we had. It is also an output. The Compendium was hardly influenced by our experience in Dodoma, using it in a community set up, in a live set up to discuss with communities and experts and testing its applicability with low income and low education. Maybe it was Sandec's agenda. To validate the tool on site.

Were they understandable for all part?

Let's talk about the experts first. The experts need quite some time to understand the system logic, not only in Dodoma, even though they were sanitarian engineers and planners. But then it was seen as a useful tool. The document started to be translated into Kiswahili. But with the community, that's why we thought first the experts workshop to narrow down to two options and then explain to the community, already tailored to the settings and contexts of the country. And that makes a lot of more sense. We use simple, understandable pictograms. And that work quite well, at the end of the day people was able to decide: convenience and price.

But they were chosen the dry toilet?

Especially due to our NGO, he has been to ten one to one trainings, but he is not an engineer. This is Africa, with people that do not have the skills and know-how.

How was the degree of divergent opinions?

No, not in this set up. The technologies selected were the ones the community wanted, and what they could build with seco money.

It was not perceived before, wasn't it no communicated by the community, nor noticed by the experts?

It was known before by local experts, but they didn't realize it would become a problem because so many people chose the fossa alterna option, but it was because it was a cheaper option than the VIP toilet one (Double Ventilation Improved Pit). Poor income families go for the lowest cost facility they can find.

To which extend peoples' opinion was considered?

During the assessment phase that should be more careful assessment with regard behaviors of families and needs of the family regarding not only about sanitation but also shower facilities, cleanliness. But I think the options that were chosen were based on the community workshop. This reflects what the community wanted and what they could pay for. With one exception and it was the upgrading of existing pits, but it was not discussed during the workshop, but it was added later on, specially for this cost reasons. We did in two cases, in Nepal and in Laos, ex-post surveys, so after things have been implemented and finished about people satisfaction and the most interesting finding there is that the community, the beneficiaries if you want, are more satisfied with the process and its outcomes than the experts, so the local and national experts.

Could more people have participated or could the people who participated have participated more?

That is always the question how far, how deep can you go with participation and the trade-offs. There is first of all the size of the communities. Dealing with a community of several hundreds of people and you involve 80 or 90 in workshops, there you have a pretty good response, about 10% of the community. Of course, if your are dealing in a slum settlement with 30 or 40 thousand of people and you have 80 participants, that is a low rate of participation. But, I don't think you are going to ever be able to involve 50% of households in a slum settlement of 35,000 people. You always have to deal with some kind of representation. I would say it was successfully done in TZ, the 2 selected persons from each ward, one had to be a woman, who represented that ward within the implementation of the project. I don't see any way around, there is no way you will be able to handle 10 workshops with 80 to 100 people each, it is not financial feasible and you would go crazy doing that. It is a combination; you are doing open workshops, everybody who is interested can come. You will always have the risk of people capturing the process, the elites, so-called, but then you have to be sure that you are mobilizing people that represents minorities and disenfranchised people, women groups, youth groups. Through the NGO that we were working with, we made sure that that was the case. It doesn't mean they are going to speak during the workshop, but especially in this pocket voting, where people vote anonymously they have a word to say. I don't see a way around representation, but it should be combined with more direct interventions, like focus groups and open workshops. The votes were secret, according to gender. So we were able to 'genderdized' the votes in the end. There was some interesting differences. Women gave much more weight to issues like water and waste and man's main concern was roads.

Major strength

Involve of all main stakeholders from the very begging. You don't bring they on board when things have already been decided, about design, technology, choices and etc. and that's definitely one strength. And that leads to the second one, where you come up with more realistic and more implementable solutions that are more founded in the economic reality, but also in the institutional realities in these countries. This kind of planning allows you to come with incremental planning and implementation, so you tart with something easy to do, quick fixes what the US Americans call it the low hanging fruits, easy to pick. You can phase the implementation, and that is a difference from conventional planning.

Major weakness

Time and Money. If you compare to top-down processes where you have a strong institution that can do the planning like in Brazil, from the municipal authorities you can probably say that it is quicker and faster, you can get results on the ground in less time. But as we all know, the countries we are dealing with especially for HCES, these institutions are not that strong, they are not able to deliver the kind of outcomes we are able to see in Brazil. And that's why I think there are limitations to classical top-down approaches. But, I think we have seen. If you want to do the planning correct and come up

with results it takes time and I think you need to count for that one year of planning phase. It was interesting to see that the one-year was not seen as a problem for the communities in Africa, but it was seen as problem in Asia, both in Laos and in Nepal. The second one is the money. So planning is not for free, so if you are having local institutions that are helping you, they are not doing that for free, this money has to count. On the other hand, the classical donor approach of international NGOs like WaterAid, Plan International, of course they also have planning costs, they just include in their staff and overhead costs. And third weakness and we partly addressed that in the CLUES, is finding money for implementation. It was not addressed early enough in some of the cases. But we also saw that if you have a good planning document, an action plan agreed upon by all stakeholders, it was not that hard to find funds. I will give 3 examples for that, Nepal with WaterAid, in Laos a private bank contributed and in the Kenyan case, the utility provided the material for the construction of sanitation blocks.

Final Words

Is a 12 months of planning involving local costs about 18-20,000 dollars worth of costs? With what you come up in the end? And there I would say, globally, in the validation process, the testing phase, from 2009 to 2011, I would say probably not. But that is the freedom of a research institute. It can invest in things that don't have to be 100% implementable, like NGOs and donors agencies. But to test a new approach to things and also say 'well, it doesn't work because of this, this and this and we have to improve on that'. Our main goal, of course, is testing in seven different cities was to come up with a more appropriate planning framework than HCES offered and that's CLUES, where we try to bring in the lessons learnt from the 7 countries, 7 implementation sites. With what we think it is now a more realistic approach, so 7 steps instead of 10 steps, a lot simpler than in the old guidelines we had, that was more experts from the north telling how you should do in the south, and the toolbox is also a big difference. We actually give communities and NGOs tools that they can work with.

Annex 2: Interview transcript - Case PDSM Kampala.

Interviewee Innocent Kamara (former staff of SSWARS)
Date: November 16th, 2011
Duration: 43 minutes (via Skype)

What was your position in the project?

Monitoring and evaluation of the activities that were taking place and impact assessments and then the other was to do community mobilization.

So you were directly involved with community participation? How it works?

So basically, ideally, if we have an activity in the community, the first is to identify the most resourceful persons in the community, who acts as a link between the organization and the community. So, sometimes we work with local leaders in that community and other times we work with any resourceful person like groups, for example in the cases where we have the village heath teams. So, we work with this people and in case we have any community meetings or sensitizations, then we use to work with them, to mobilize the community, like telling them how we are going to meet them and give sort of issues that will be discussed with the community. The local leaders help us to mobilize the whole community. Of course we can have some meetings with civil society organizations whenever the meeting So there is to build their capacity.

Which was the number of people attending to these meetings? Was there any kind of representatives?

In slums the level of participations is always low. In the best-case scenario, can come 100 people. Is also depends on the impact of what you are doing. For example, if what you are trying to do doesn't contribute to most of them, from their own perception, than the tendency is that is going to be super low. It always depend on which messages you are carrying, the importance they attribute to this kind of sensitizations you have for them.

And within sanitation, do you think there are points that are more appealing? That bring/attract more people to the meetings?

Some of the practices we are trying to use, introducing our drama kind of messages. So, when there is some acting, when they feel active or involved, the participation is always high. So, for example, if you have an open drama kind of show, of course some will come for the amusement, seeing people acting, or for fun. But during fun, our aim is to send health related kind of messages. So it always depends on the way that we pack the messages, for also different kind of activities. Like for product devolvement scenarios we devolved desk models of different kinds of toilet facilities and people could visualize the kind of facility and through that we were also able to tell them which of the costs, they would prefer, the advantages and disadvantages of each of these facilities and the appropriate areas of which of the facilities could fit.

Were they for communal facility or for individual household?

No, no, it ranges from community and private facilities. The costs always vary from the cheapest model to the most expansive model, because most of the slums contain poor and rich people living in these areas.

And did you use the 'Sanicenter' to dispose these models?

No. One of the other need of the community was that we didn't have a resource base, where they always could go for learning, for getting knowledge and people to construct facilities for them. So one of the things was construct a resource center within the slum that people could have access to information, if they need information, they could get this information from the resource center. We just put the models there so they can go and see the options they wanted and for learning. The resource center could also work as a link base to people who could build the facilities.

Did you access the need of the people?

Always the first point of entrance is having a community needs assessment with the community itself. And from the needs assessment, we try to package whatever activities according to that needs.

How this assessment is done?

First it is a survey and second, we could also get their needs through interactions. So, there is a step in the community, an ignition kind of meeting, where we get the views of the community and these interactions.

And then you include these needs in the project and based on that you decide what you are doing, the activities, when do you want to include the people and things like that?

Yes, yes, but of course it depends on the kinds of needs they are raising. Sometimes the needs just go beyond the scope of our project. So, in this case, we cannot integrate them, but we can still advise them and then we explain about the project, so we can have the same kind of footing regarding the project and regarding the involvement of the community.

And what about income generation? Do you think it is a good way to sell sanitation facilities?

Yes, it is probably the best way because most of these urban areas are so much money-driven. The difference between operating in urban slum areas and operating in village areas is that in slum areas whatever you do, the first focus is how much they are going to benefit from participating in that project. So, money comes first before they can even get the most important message that you have for them regarding their health. So sometimes that is why we had to also make some of our activities to build the capacity of the slum in term of waste recycling, so they can reuse the waste and they can sell the products they made from their waste to generate some income for themselves. Money comes first, and health second.

In the report of march 2007, it is written that communities are really hard to manage, as one of the lessons learnt. Do you agree with that?

In a community, what you think the most important need to them is not what they view as the most important need. Like we said, from one perspective, health is the most important thing for them, from

their perspective is money. So, sometimes people come for meetings, but they are expecting some sitting allowance and expect some money to take back home. So, the message is you have to put approximate, not to be the most important, but could be most important than the probably makes they come to that meeting is the percentage they are going to get that. Because most of them have already temporal jobs, it is hard for them to save time to come for that meeting. They want to use that time to look for money, sustain their families. And there is also the dynamics of slums, where there are so many cultures, from different backgrounds, so many heterogeneous people, so, it takes time to put everything together. It takes time until all these people have the same type of footing. So mobilization is far difficult in the slums than it is in upgrade areas.

Did the community have previous experiences with participation?

Yes, honestly these slums always have different projects coming in with different kind of activities altogether. So, ideally most of them have a civil society organization or a NGO operating in that area but always with different kind of objectives.

Apart from these community organizations, did people participate in the different projects?

Yes, but it is always minimum.

In the report is mentioned that the coordination with other partners are a challenge. Which other partners you mean?

For example, sometimes in the community, there could be different NGOs and all have different interests and the way you access the community is always different. There are some NGOS giving sitting allowance to people come to the meetings. So people do not come to your meeting if you do not give sitting allowance, but that sitting allowance may not be an objective of the project itself. So, it would be nice if different NGOS have a common criteria of entering and interacting with the community, meaning that you take away some redundancies (sic) that make people fully appreciate the need of the programs you are having for them, and in this case, really health should come first and then money second. Some NGO should not be giving money to poor people come to the meetings, people need to appreciate the need for a given activity and they should come out of the value they attach to or the value they put in participation in that meeting.

In the report you anticipate that the community contribution may not be forth coming…

Like, in projects, we expect 10% contribution from the community and beneficiaries of the project of facility. It could be in terms of materials, and also a revolving fund where the community was organized in groups like fifteen, thirteen, depending and they are always supposed to give a monthly contribution. So, they use that money to buy themselves a facility, but it should also revolve among all members. But when the members don't contribute, it means that the whole motive of SACCO fails to materialize.

Where were the 'Sanicenter' and the 'Recycling Center' built?

The recycling center was in Bwaise and the resource center was in Mulago III. They are different

buildings because what is contained in each of the areas is totally different.

Is the Recycling Center still working?

Currently it isn't working well because people, the community continues to mix their waste and ideally they were supposed to be separating their waste to bring them to the waste-recycling center. So that failed and also one of the problem came with the funding because we had put somebody to keep on managing the waste recycling center and then the donors didn't want us to pay for that person. So, in a way things didn't work out well, separation currently is minimal. But the most important was the capacity built for the community always recycles their own waste, so that still works and people make different kinds of products from different kinds of waste at their homes. So, there are people still working from their homes, not coming necessarily to the waste recycling center. The center was made for training, for the training program, where they were hold. So the people who initially go to the training trained their other colleagues in the area where they stay. The machines that were initially bought could be replicated and fabricated, so people fabricated their own machines, like the brick making machines.

What about the revolving funds? How many people applied?

It didn't pick out the expectation. Most people were complaining, like I told you, initially each of the members of that group was supposed to be making a monthly contribution, so each time a member of the group should be benefiting but the levels of compliance were minimum, and it didn't pick up like the expectation.

And to why do you attribute this minimum level of compliance?

One, they didn't prioritize it so much. Two, It is also related to the unpredictable income they get on a monthly basis, so when they try to focus on their needs, there are needs more pressing than taking this little money to a group.

Who were the key-actors in this projects that were important for the implementation of the process?

First the community champions, the resourceful persons within the community. Those play a grater role; what help us much is that they are in direct contact with the community. So, even after the sensitization, the village health teams continue to carry on the sensitization messages.

So you didn't have any contact with the municipality, utilities?

They are there, always in a community we involve the local leaders, part of the governments, and also the municipality people such as the division health sector are greater involved in our work. Then do the private sector, there are some manufacturers of sanitation products and for Uganda we have some like Crestanks Limited that manufacture sanitation products, polifibers (sic), local masons, were trained in ways of building sanitation facilities in bricks and cement. So there are various actors always involved in such activities. And the communities themselves, so it is a wide range of actors that are always involved and have to work together. If a project is to be successful.

And was there someone already working with waste in the community before you started the project?

Yes, there are some other organizations that have some kind of trainings in sorting the waste, not in the areas we were operating.

Independent, informal?

Yes, independent. It depends on the use of that waste, if they have immediate use of the waste, independently, they carry on these activities for their own good.

And what is the importance of including the people, of community participation?

For your project to be sustainable, the people have to play a leading role.

Would you say that the community played a leading role in this project? How?

They did because through their involvement they managed the activities in that project, through the training of the waste recycling, most of them did the activity and also trained other people. So, by involving them they can take care of the facility provided to them, for example, they know how to properly use them. The main importance of involvement comes about sustainability of the facilities but also appreciating and putting into course sensitization messages. If the messages are focused on hand washing with soap, then people should always remember to wash their hand before eating, breast-feeding. If it comes to happen in their lives, then it is a success. If not, it means that people didn't appreciate the project in their lives and their community.

Who is the most important stakeholder in sanitation provision in your opinion?

The beneficiaries.

Was the community willing to participate?

No, you actually build or you influence their participation. In the urban slums it is a process, when you need first build trust with the community. So, the process of getting them involved to participate is also something that takes time and through the various social networks. You need to create some kind of network in that community for them to fully appreciate the need to participate. So, if you went on the first day, you can get few people coming, but depending on the importance of your project, the number can always increase. And that is also something that all donors appreciate. In slums it is hard to work in particular time frames because it is a process, actually given kind of project in these areas.

Were people satisfied? How satisfied were they?

Some, not always satisfied. Because a project always has minimum benefits to the community, especially when it goes to investments. Most of the communities expect you to invest physically in their facilities, what it is often not the objective of the project. The objective of the project is to give you better ways of investing in sanitation facilities but you should do the physical investment. But most of these people have other restrictions like money to put up the facilities, so if I just come in the community and tell the importance of having a toilet and you don't have the actual money to build it, doesn't' contribute much. I can't say that people are totally satisfied with the activities now. Because there are some levels of success of those who are able to invest and the others are able to take the hygiene and health messages, and that is difficult to quantify.

Was the number of people participating the one expected?

It was less than we expected but of course, we ideally knew the situation of the slums, so it was average and it was enough for our activities. It was also varying from one slum to the other.

How was the opinion of the beneficiaries considered in the project? How could they chose, how could they have a voice?

Most of our community initiatives have participatory nature. We have community meetings, so in these meetings what we do is discuss and come to some level of agreement.

On what, for instance?

In the activities we have in the communities. If you go to a community, the first risk to whatever project is poverty, so how is your project is going to solve their poverty related problems, so you need to make them understand that through investment, for example in sanitation, it will improve their health, so meaning that will be fewer causalities of disease outbreaks and that money you can save for other important activities like educating their children, for example. So through discussion you come to understand each other, you come to some level of agreement. And, once you make them appreciate, once you are able to convince them enough, then you are likely o get higher levels of participation and success of the project.

Do you think social marketing is making a good work in mobilizing the people?

Yes, you are trying to say to the community 'look, you are not looking at sanitation as a good itself, but also as an economic good'. So, the social marketing is trying to bring a different context in promoting sanitation, because here we are using the economic perspective, like promoting any other good or product on the market. So techniques of marketing matter to make people trust.

Who are involved in the stakeholders' workshop?

I mean other key-players like NGOs, CBOs, the government authorities, the private sector, the manufacturer of sanitation products, for example. It was always a way to find a common way of approaching the communities, so that we don't create conflicts or differences, and make community members prioritize.

How was the consultative meetings organized?

Village champions, leaders, we mainly discussed issues related to sanitation. In the meetings, when the program starts there are always sensitization, we have drama and we use to communicate. The first meeting is to introduce the project and programs and also the objectives so we can get their feedback on their problems, what they see as the most pressing challenge for them, then, after that we have to make sure that during our sensitization integrate community's needs. Often poverty is the most pressing challenge, so during our programs we use to have some skills building such as transforming waste in some saleable products, e.g., we trained community to recycle their waste and through the recycling. So in a way trying to create some employment-related kinds of activities.

Annex 3: Interview transcript - Case SSP Nairobi.

Interviewee: Kariuki Mugo (Water and Sanitation for the Urban Poor)
Date: November, 7th 2011
Duration: 41 minutes (via skype)

The WSUP project is a broad project, different outcomes, and different activities. It must have been a lot of work…

Yes, a lot of work. That is why we didn't have time to do a lot of write up until we think we have nailed down the project

But it is finished already. Wasn't it until July?

We got a six-month extension.

The project was supposed to scale up an existing program. What was the program about?

In this sense, we have been doing similar work in Kibera. If you look at the way we had implemented this project, there is a very big shift from the approach that we took in the previous project. For example, in the previous phase we were doing more what we call bio latrines, the ones with bio-digester, and the 'bio-center' to produce gas. It didn't really work very well, because at the moment, without any sewage connection, without any good access for exhausting the waste, you don't get much out of it, you still have problems. We are not doing any bio-centers, we are doing public *ablution* blocks, and public toilets and we have done a lot of sewer extension. We have being trying to develop low-cost sewer, modeled on the condominium system in Brazil. And of course other components, that include water supply. We are shifting. Something like the water kiosks isolated in Kibera, we are not doing that anymore and again, we have done a lot in terms of hand washing promotion, what we haven't done before. What I call an improvement in our approach.

Which was the specific area of the project? Gatwekera, Soweto West (and Mukuru) + Kisumu Ndogo and Kambi Muru. Are they all in Kibera?

No, we are not working in Mukuru which is a separate settlement altogether. This project was implemented in Kambi Muru village, for this particular funding. We are also working in the 3 villages of Gatwekera, Soweto West and Kisumu Ndogo with other funds. Some of the activities in the projects overlap geographically, but there are slight differences in nature of project components.

The project had 3 different financing sources, AusAID, USAID, and Rockefeller Foundation. How did you coordinate and combine them?

There is no geographical distinction where the money has gone.

What would be the relation of this project with a broader citywide plan?

What we have been done in Kambi Muru has never been done before in Kibera, and to a large extent in Kenya. We have been able to construct kilometers of sewers in very dense communities, also demonstrating something called the yard latrines. We have the public ones that are commercial units,

where people pay per use. But again, we have another level, the shared toilets that serve around 120 - 150 people and shared between three or four plots and connecting that to sewers. There are a lot of things that have raised a lot of interest and I think that is the direction of thinking of the water utility and we want to continue to promote to bigger settlements. So, in this sense that is meant to go to scale.

Is the Informal Settlements' Department a good way to cope with the problems? Are they managing it?

That makes sense in a larger utility like in Nairobi. If you have a very small utility (2000 – 5000 connections) than you don't need to have a separated department. But in Nairobi there are a lot of challenges, a lot of demand to serve the high-end consumers, if they don't really have a specific department to deal with the problem of low-income settlements, then you are sure they would never get anywhere. It is an initiative from the management of the water company based on experiences elsewhere. We invest our resources in supporting the department in capacity development, as well as the entire company towards improving in commercialization.

There was an incorporation of two additional points on the initial proposal…

Let me put this way, in this particular project, one of the things we have never addressed before is the sludge management. The moment you do bio-latrines, sewer toilets and sewer extension; you still remain with a large part of the population that cannot access those improvements in terms of investments requirements or technical reasons. So, in the short and midterms, you should consider how people could continue using pit latrines while waiting for incremental upgrading of services. Sludge management is very key issue, that's why we are doing it. The gender issues agenda; this is a thematic area in WSUP. All of our projects should have gender intervention, so the fact that it lacks in the original proposal that was an oversight. It should have been included.

And how did you mobilize the community?

In WSUP we like to remain a very lean organization. We have very few staff. We deliver most of our work through private sector consultants, institutional partners, contractors and also NGOs. In terms of community organization in Kibera, we contract an NGO called Umande Trust. We contract the NGO to do that work and we manage the process. They are based in Kibera, with most staff coming from Kibera. What we do is say very clearly the kind of process we want followed, which is normally more advanced than any NGO. We developed the project as well as strengthen the capacity of the NGO team at the same time. We deliver and also develop capacity to do similar kind of assignment in future.

From the six expected outcomes, which do you consider the most important?

Everything is very key; if you do a lot of software and no hardware, it is really hard to show your demonstrable impact, and lots of hardware may not be implementable, or unlikely to sustain operation and maintenance. This means you cannot do that without the organization. In terms of institutional

capacity building, our work as WSUP is basically to support institutions in extending services in scale to the low-income settlements. You have to look at the social, technical, financial, commercial and regulation constraints. You have to look at the entire environment, and so that you can build a sustainable and scalable model. And that model is what you tell the company: 'Look, it can work, you can go to the World Bank and you can borrow money and you can do this, get revenue out of this, you can sustain services out of the way you are used to do normal business'. So that's how it works.

So how and why is the project considered demand-driven?

There is no doubt about the demand for services in low-income settlements. I don't think there is any question, no doubt. There are only two things that you need to know. One is the utilities have big challenges to provide their services there, whether it is because they lack capacity to invest or not. Generally speaking, it is not because they lack the financial muscle, no, it is not always the biggest problem. The biggest problem is they do not know how to deliver these services there. How do you extend a sewer line in a very dense settlement? Where the land belongs to the government and people are settled there in an unapproved kind of tenure. How do you extend services there with a very high kind of informal arrangements, with cartels, especially illegal waters vendors? So how do you break that pattern of very high presence of informal services? How do you deal with issues of environment? How do you come up with a model technically feasible that can meet the environmental standards of the city, while you are serving people who are living in river valleys, and those sorts of things? How do you make the company see that they can make revenue out of services for very poor people? The companies usually have the perception that these people cannot pay, so it doesn't make any business sense to invest there. So how do you demonstrate to this company that it makes sense to invest in this kind of settlements, that you can actually borrow money, invest and recover investment cost? So it is a cocktail of issues, but I don't think that the question of demand would actually arrive in low-income settlements. It is evident.

What in your opinion was successfully implemented? For the ones that were not completed, to what do you attribute?

Primarily I think that our proposal to implement the project in 13 months was basically based on the funding call requirements of Australian Government (AusAid), that stipulated that funded projects had to be implemented in one year. But I think that from both quarters, experience showed that it was not possible to implement that kind of project in 13 months and that is not only for WSUP, but for all grantees that receive that funding. And for us it is not just about delivering the project, a lot of our work goes into building sustainable mechanisms for operation and management. So, right now we have done nearly all the community organization that should be done, we've done all the construction work, all the hand washing campaign and promotion. Fantastic. But we are now into another phase, discussing with the water company, discussing with the local people, how do you manage the business, how do to manage the sewers. A process of contracting and putting management systems

for use of the infrastructure. I would say, for me, that everything in the project was delivered. Successfully delivered. We had some evaluation from the Australian Government in July this year, it was one year down the line and it was very positive.

And from the people side, are they also satisfied with the outcomes?

I think people are very happy. We have done things what have never been done by any other development organization in the history of Kibera.

What was the biggest difficulty of the project?

If you look at the project, and generally all projects in low-income settlements that require community organization and negotiation, and relationship between the water company and communities, I think time is always a big challenge.

Is the neighborhood committee the same as PSC?

When we were writing the proposal we were basically modeling it on the previous work that was ongoing in Gatwekera and there we are using Project Steering Committee (PSC) as the community engagement structure. When it came to implement this project, we realized that the PSC would not deliver it, because the committee involves representatives from all the villages, kind of a detached membership. We came up with the idea of a neighborhood committee that we have now transformed into a neighborhood association. The people from community came together and they elected stakeholders representatives. Whether it is the youth, the women, people living with HIV, local administration, water vendors; each key stakeholder is represented in the negotiation and that's what enabled us to deliver the project. The PSC persists, but I would say that by now we have made a decision to completely discontinue it. We don't think it is serving any useful purpose.

Do they, neighborhood association, deal with other issues or just sanitation?

Presently they are dealing with water, sanitation and hygiene, but the idea behind our intention to transform the structure of a committee to a neighborhood association is that we are going to give some kind of sustainable role that will continue existing, to oversee the operation of the infrastructure. The infrastructure will be basically managed by a commercial operator, competitively recruited from the market with a business plan and contracted by the water company. But then, again, the neighborhood association will have an oversight role, that involves monitoring the use, making sure that the facilities meets the social expectations of the community if people cannot afford to pay for the services, security for the infrastructure in general and we are going to make sure that part of the revenues from the commercial operation of the infrastructure go into financing the activities of the neighborhood association. Now, our expectation is that the neighborhood association should transform more into some kind of broad issue structure. That should look into solid waste management, security, etc, so we are trying to promote it to lead any government or NGO initiative in the area, that can go beyond the activities that we are doing.

Did people in community have already other experiences with participation?

Before, I would say no, one of the reason that we chose Kambi Muru because there had been many attempts by NGOs to do some work there and they had failed, quite a number of them, very well known in Kenya, and we decided to try. So, I wouldn't say that there was anything like that in the community. I think we managed to turn it around and see a lot of active participation and success in implementing our project.

And why did they fail before?

I have no idea, but I think it is poor strategies, especially in organizing the community.

So you think that Umande Trust made a good work?

But that was our strategy; they had never applied it before. WSUP knows what had to be done, contracting one of the local NGOs to do the work and we monitored that business very closely. Basically, they have done good work in mobilizing, but I think we had the strategy, looking at the history a little bit.

Was it well operationalized? Did they have a good capacity to implement?

We owe the neighborhood association a lot of credit for making this project work.

Were you the project manager?

I am in charge of the WSUP business. I oversee what has been done there. I wouldn't call myself the manager, but I am in charge of the business.

Which stakeholder is more important to be included in the process?

We work with partner institutions, so if the water company is not there, then we have no business. So, we must have the water company or any other institution that is mandated to serve the urban poor. So that's why we exist. So, the first thing we do is that we have an agreement with the service provider to join hands and develop the model.

And what about peoples' participation?

You never do anything without them. Those are the clients, there are so many parties involved in low-income settlements, the people living there and these settlements are highly politicized, there are also political interests in these settlements, wherever you are going to work. And that's why water companies and other institutions cannot be able to deliver services the way they do it for middle and high-income areas, because in middle and high-income areas you do not really need community processes to deliver services. You just lay pipes along the road, connect people, meter them, bill them and they pay. That is the business. But in terms of low-income settlements, then you need to really understand peoples' way of life; you need to talk to them to overcome political issues, interests and all that. It is a cocktail of issues that you have to deal with and mainly to involve people.

Annex 4: Assessment of the interests, influence, role and remarks of key stakeholders of the HCES case in Dodoma. Source: by the author.

Stakeholder	Interest	Influence	Role	Remarks
MAMADO	Implementation of donor-funded projects, financing of operational costs	Mobilization of the community, moderate decision-making power	Connection between proponent and community, facilitation of the process	Low-quality in the project implementation
Project Committee	Appropriateness of projects outcomes	Connection between implementing agency and community	Representation of the community	Posing of community interests
Sandec	Validation of HCES approach	Articulation between donor and implementing agency	Project proponent Developer of the methodology, technical know-how	Steer the planning process
DUWASA	Sewerage extension, increase in the number of clients	Provision of formal sanitation	Formalization of on-site sanitation, fecal sludge transport and treatment	Neglecting of pro-poor technologies
Municipal Health Department	Awareness raising in community, reducing burden of diseases	Connection between project and local government	Convergent interest with project objectives	Important role in campaigns
Sanitation groups	Financing of sanitation facilities	Responsible for the loans, guarantee of payment	Main beneficiaries of microcredit scheme	No fulfillment of expectations
Masons	New opportunities for income generation	Responsible for the quality of the constructions	Members of community, delivery of the products	Low-quality of constructed facilities
Residents	Improved and affordable sanitation facilities, better environmental conditions	Acceptability or denial of project	Beneficiaries of the project	Represented by the project committee, application for the loans
SECO	Include a participatory component in its TZ development portfolio	Timing and resources control, closer relation with the utility	Funding agency of HCES project and water and sewerage extension in Dodoma	Conducted evaluations of constructed facilities
Exhauster truck operators	Increased demand for services	Only two service providers available, price control	Emptying latrines	Not involved in the project
School teachers	Better hygiene conditions at school, students' health	Children education on hygiene practices	Key role model	Active role in sanitation campaign

Annex 5: Assessment of the interests, influence, role and remarks of key stakeholders of the SSWARS case in Kampala. Source: by the author.

Stakeholder	Interest	Influence	Role	Remarks
SSWARS	Implementation of donor-funded projects, financing of operational costs	Design of projects	Implementing agency	Adoption of community claims
Office of the Division Health Inspector	Reduced burden of diseases	Connection between project and local government	Convergent interest with project objectives	
SACCOs	Financing of sanitation facilities	Mobilization of other community members	Scaling-up households facilities	No fulfillment of expectations
Residents	Improved and affordable sanitation facilities, better environmental conditions	Appreciation of project	Beneficiaries of the project	
WaterAid Uganda	International NGO, improve WASH conditions in poor countries	Timing and resources control	Funding agency	Conducted evaluations
Community Health Assistants	Capacity building activities	Behavior change and hygiene practices	Active role in sanitation promotion	Better hygiene conditions
Crestanks Uganda Limited	New markets	Price and delivery of sanitation products	Provision of facilities	Delays on the project, products not affordable

Annex 6: Assessment of the interests, influence, role and remarks of key stakeholders of the WSUP Casc in Kambi Muru. Source: by the author.

Stakeholder	Interest	Influence	Role	Remarks
WASH Enterprises	Increase demand for service, income generation	Prices	Members of community, provision of environmental services	Beneficiaries of training activities, better quality of services, formalization
Residents (Clients)	Improved and affordable sanitation facilities, better environmental conditions	Acceptability or denial of project	Beneficiaries of the project, providing of information and land	Represented by the project committee
AusAID	International Cooperation	Timing and resources control	Funding agency	
Frame Consultants	Service provider	Provision of surveys, analyses, financial and viability plans	Mediation, design and supervision of construction sites	
Neighborhood Committee	Appropriateness of projects outcomes	Connection between implementing agency and community	Representation of the community	Posing of community interests
Umande Trust	Implementation of donor-funded projects, financing of operational costs	Mobilization of the community	Connection between proponent and community, facilitation of the process	
WSUP	Piloting of scalable service provision models for the urban poor	Articulation between donor and implementing agencies	Project proponent, developer of the methodology, technical know-how, pro-poor advocacy	Steering of the planning and implementation process
CCN	Regularization of SW enterprises	Approval of plans	Development of SW strategies for slums, negotiation	
NCWSC	Sewage extension, increase in the number of clients, regularization of WASH enterprises, increase revenues	Formal sanitation provider, approval of plans, prescription of standards	Formalization of on-site sanitation, fecal sludge strategy, hardware provision	

Annex 7: Assessment of modes of participation in the HCES case in Dodoma. Source by the author.

Key Stakeholders:

DUWASA

Exhauster truck operators

MAMADO

Masons

Municipal Health Department

Project Committee

Residents

Sandec

Sanitation groups

School teachers

SECO

Legend:

CT: Contractual

CS: Consultative

CB: Collaborative

CL: Collegial

NI: No involvement

NA: Not applicable

UN: Unclear

IF: Informative

Stage	DUWASA	Exhauster truck operators	MAMADO	Masons	Municipal Health Department	Project Committee	Residents	Sanitation groups	School teachers	SECO
Ignition	NI	NI	CT	NI	CS	NA	IN/CS	NA	CS	CT
Problem identification	NI	NI	CB	NI	NI	NA	CS	NA	NI	CT
Definition of objectives	NI	NI	CB	NI	NI	NA	IF/CS	NA	NI	CT
Development of alternatives	CS	NI	CB	NI	CS	NA	NI	NA	NI	CT
Selection process	NI	NI	CB	NI	NI	CB	CB	NA	NI	CT
Action planning	NI	NI	CB	NI	NI	CS	IF	NA	NI	IN
Implementation	NI	NI	CL	IF/CT	CB	CS	IF	CT	CB	CT
Operation and Maintenance	CT	NI	UN	UN	UN	UN	UN	UN	NI	CT
Monitoring and Evaluation	NI	NI	CB	NI	NI	NI	NI	NI	NI	IF

Annex 8: Assessment of modes of participation in the PDSM case in Kampala. Source by the author.

Key Stakeholders:

Community Health Assistant

Crestanks Uganda Limited

Office of Division Health Inspector

Residents

SACCOs

WaterAid Uganda

Legend:

CT: Contractual

CS: Consultative

CB: Collaborative

CL: Collegial

NI: No involvement

NA: Not applicable

UN: Unclear

IF: Informative

Stage \ Stakeholder	Community Health Assistants	Crestanks Uganda Limited	Office of Division Health Inspector	Residents	SACCOs	WaterAid Uganda
Ignition	UN	NI	UN	IF/CS	UN	CT
Problem identification	UN	NI	UN	CS	UN	CT
Definition of objectives	NI	NI	NI	UN	UN	CT
Development of alternatives	NI	NI	NI	IF	UN	CT
Selection process	NI	NI	NI	UN	UN	CT
Action planning	NI	NI	NI	UN	UN	CT
Implementation	IF	CT	UN	IF	CB	CT
Operation and Maintenance	NI	NI	NI	IF	UN	CT
Monitoring and Evaluation	NI	NI	UN	CS	UN	IF

Annex 9: Assessment of modes of participation in the SSP case in Nairobi. Source by the author.

Key Stakeholders:

AusAid

CCN

Frame Consultants

NCWSC

Neighborhood Committee

Residents

Umande Trust

Wash Enterprise

Legend:

CT: Contractual

CS: Consultative

CB: Collaborative

CL: Collegial

NI: No involvement

NA: Not applicable

UN: Unclear

IF: Informative

Stage \ Stakeholder	AusAid	CCN	Frame Consultants	NCWSC	Neighborhood Committee	Residents	Umande Trust	Wash Enterprises
Ignition	CT	NI	NI	CS	CS	CS	CB	NI
Problem identification	CT	NI	CT	CS/IF	CS	CS	CB	CS
Definition of objectives	CT	NI	NI	NI	NI	NI	NI	NI
Development of alternatives	CT	CS	CB	CS	NI	CS	CB	NI
Selection process	CT	CB	CB	CB	CS	CS	CB	NI
Action planning	CT	CB	CB	CB	UN	CS	CB	NI
Implementation	CT	CB	CB	CB	UN	CT	CB	CB
Operation and Maintenance	CT	NI	CB	CB	CB	UN	UN	IF
Monitoring and Evaluation	IF	CB	CB	CB	CS	UN	CB	UC