

**THE ANTECEDENT ROLE OF COMMUNITY
PARTICIPATION IN SOLID WASTE MANAGEMENT:
OPPORTUNITIES AND CHALLENGES FOR THE COUNTY
GOVERNMENT OF KISUMU**

Wilson William Agembo Onyango*

Abstract

Solid waste management is one of the main responsibilities of county governments in Kenya and developing countries in general. One of the ways in which county governments in the developing countries handle solid waste management is through public private partnerships and public community partnerships. This paper tried to examine the factors that have led to the successes or failures of public community partnerships in solid waste management and looks at how these factors can be adopted in the wider context by the county government of Kisumu. From the study, factors such as effective leadership and strong institutional frameworks are needed for public community partnerships to be successful. Public community partnerships are current and promoted around the world in developing countries. It is therefore relevant to study the actors that are involved and examine the factors that can contribute to the successes or failures of such partnerships.

Keywords: Public Community Partnerships, Partnerships, Co-Production, Solid Waste Management, Local Government.

* **Lecturer Catholic University of East Africa**

1.1 Background to the Study

Developing countries have witnessed rapid urbanization. Growth of urban cities peaked in the 1950's with expansion of the population by more than 3% per year. Almost half of the world's population lives in the urban cities (WHO, 2012). Today, the number of urban residents increase around 60 million every year and the global urban population is projected to grow at 1.5% per year between 2025 and 2030 (WHO, 2012).

Rural urban migration has been orchestrated with the mindset that these cities offer better health care, education, employment opportunities and culture (Moore et al, 2002). However, the rapid and often unplanned increase in population puts the human health at risk because of associated conditions like unemployment, poverty, settlement on marginal land, environmental degradation, and the demands on service delivery becomes more than the environment can handle. The rapid urbanization is associated with the emergence of slums and informal settlements (Owusu and Afutu-Kotey, 2010: 1). "Managing the urban environment sustainably will therefore become one of the major challenges for the future" (UNEP, 2002, cited by Moore et al, 2002: 270). Such services include water treatment and waste disposal (Moore et al, 2002). Solid waste management is an integral part of the basic urban services and is an important part of environmental health service (Ahmed and Ali, 2004: 468).

The result of this urban growth is the increase in urban pollution (Karanja, 2005: 288). In Asia for instance, there is an increase in quantity and toxicity of waste in the middle income countries, especially in the cities because of the rapid urbanization, increase in industrialization, growth of incomes and a "more sophisticated form of consumerism" (UN-HABITAT, 2010: XXVI). Jakarta has experienced a dramatic increase in its population from 530,000 in 1930 to 11.5 million in 1995 and in Dhaka there was an increase from 3.5 million in 1951 to 13 million in the 1990's (Moatvilli cited by Atienza, 2008: 2). The World Bank reported that in Asia about 760,000 tones or about 2.7 million cubic meters of Municipal solid waste is generated per day. These figures are projected to increase to 1.8 million tones or 5.2 million cubic metres of waste generated per day in 2025 (UN-HABITAT, 2010: XXVI).

According to the world bank, cited by Karanja (2005), “communities have often organized themselves as providers, especially in the areas of waste water and solid waste, with NGOs playing a key role of providing financial and technical input in design and implementation” (Karanja, 2005: 275).

1.2 Statement of the Problem

Despite the efforts made by governments over the past decades to address this problem of waste management, many municipalities still have difficulties (Atienza, 2008: 2). In some developing countries one of the gaps and weakness of the waste management system is that the roles of the informal sectors like the NGOs and the CBOs have not yet been recognised. As pointed by Palczynski (2002), in Cairo, Egypt, “The important role of local companies, NGOs and the informal sector (the Zabbaleen) has not been recognized by the municipal and national governments” (ibid: VII). In the developing countries, the urban poor could recycle a high proportion of the waste to generate income for themselves as well as protect the environment, so there is the need however to develop cooperation of the community sectors and the public sectors to be able to reach solutions that are more sustainable (ibid: II). According to Atienza (2008), community participation is an “effective means to address solid waste management in most developing countries” (ibid: 1). The United Nations also stated that “Community groups have considerable potential for managing local collection services. (Schubeler et al, 1996). The CBOs identify, organise and manage community based initiatives in areas where the municipal authorities are too weak to ensure provision of public services to the whole city, UNCHS cited by (Awortwi, 2003: 91).

In Kenya, general waste management has been the responsibility of the Ministry of Local Government before it was transferred to the county governments. The county governments are therefore in charge of collection and final disposal of solid waste through their Waste Management Departments (WMDs) and their Environmental Health and Sanitation Departments. In Kisumu county, the two main types of solution to the problem of waste management are the Public Private Partnerships (PPP) and the Public Community partnerships (PCP). Public community partnership has gained quite a lot of attention in the recent years. It is the partnership between the CBOs and the local government to work towards the same goal and in this case the

goal is sustainable waste management. The CBOs work in these areas because public sector has withdrawn from it and the private sector has shown relatively less willingness to operate (Awortwi, 2003: 91).

1.3 Objective

Some cities have been successful in forming public community partnerships while others have not been able to do so. The objective of this research is to look at the factors that have led to the successes and failures of Public Community Partnerships in the selected cities and examine how it can be adopted in the context of Ghana

1.4 Research question

What are the factors that can explain successes and failures of Public Community Partnerships?

Sub questions

1. What are the institutional frameworks that led to the success or failures of Public community partnerships in urban cities?
2. What are the interests or incentives that have driven the various stakeholders to form partnerships in the past?
3. How can these experiences from other cities be transferred to Kisumu towards the achievement of Public community partnerships?

1.5 Justification of the Study

This paper is relevant to both theory and policy. For theory, it is intended to explore and explain Public community partnerships that happen globally with the case studies and what the underlining factors that contribute to it are. For policy, it will inform the policy makers about what needs to be considered when adopting such partnerships

Literature Review

This chapter seeks to clarify the key concepts and theories that have been used in this study. It shows the analytical framework that will be used in this study.

Solid Waste Management (SWM)

According to the World Bank, solid waste management means “to collect, treat and dispose of solid wastes generated by all urban population groups in an environmentally and socially satisfactory manner using the most economical means available” (World Bank, 2011:1). In his paper, Schubler separates the definition of Solid waste management into two. Solid waste is defined to include “refuse from households, non-hazardous solid waste from industrial, commercial and institutional establishments (including hospitals), market waste, yard waste and street sweeping” and the management of the waste is a cyclical process which includes “setting objectives, establishing long-term plans, programming, budgeting, implementation, operation and maintenance, monitoring and evaluation, cost control, revision of objectives and plans” (Schubler, 1996:18).

The objective of solid waste management is basically the use of resources efficiently in the process of waste materials (Squires, 2006). According to Baud et al, there are a range of actors in urban solid waste management and they can be clustered into four groups which are the public sector (national authorities, local authorities and local public departments) constituting a central set of players; the private sector (large and small registered enterprises carrying out collection, transport, disposal and recycling); the small-scale, non-recognized private sector (waste pickers, itinerant buyers, traders in waste materials and non-registered small-scale enterprises); local community and its representatives (NGOs and CBOs) (Baud et al, 2001:3). In recent years there been differences in the opinions about how solid waste should be managed. **Local government**

The 20th century has experienced a profound rise in the scope of local democracy though out the developing world, this is associated with the devolution of political, economical and administrative authorities to local governments (Bardhan and Mookherjee, 2006: 1). Local government is the second or third realm of government and it has been created to develop closer ties between the government and the local citizenry (Reddy, 2003: VII). Shah and Shah define local governments as specific institutions or entities that are created by national constitutions, by the state constitutions, by ordinary legislation of a higher level of central government, by provincial or state legislation, or by an executive order to deliver a range of specified services to a relatively small geographically delineated area (Shah and Shah, 2007: 72). Amongst other roles, local governments need to play the role of a mediator between various networks and

entities to encourage cooperation and also tap into the energies of the broader community (Shah and Shah, 2007:72).

Civil Society Organizations (CSOs)

Civil society consists of a broad realm of voluntary associations that are between family and the states (Ottaway, 183). According to Hegel, “the civil society comprises of the realm of organizations that lie between the family at one extreme and the state at the other” Hegel cited by Ottaway, 167, but according to Ottaway, this definition is unsatisfactory because even though civil society is not the whole society but part of it, it is difficult to understand which part of the society that is known as the civil society (ibid).

In understanding how people come together to form associations and have the same goal as well as defend their interest, it is better to accept the diversity and complexity of the civil society (ibid). Civil society organizations emerged in the 1990’s as actors that are influential in national development and they have assumed the responsibility of provision of basic services (Clayton et al, 2000: III). Civil societies are made up of social forces that do not identify themselves with political parties or the state, they usually are made up of members or followers that can be mobilized towards the achievement of a goal (Rauch: 23).

According to Ottaway (2008), in the developing world, the relationship between the civil society organizations and the state can be complex. CSOs have one of three kinds of relationship with the state institutions: CSOs can be antagonistic to the state if the state is repressive, CSOs can ignore the state and avoid their control when the state is weak and does not have the capacity to deliver their services, or when the state is strong, CSOs are also well developed, the relationship between the two tends to be constructive and cooperative (Ottaway (2008), 178-179). The term civil society organizations will be used to cover NGOs and CBOs in this study.

Non-Governmental Organizations (NGOs)

NGOs are non-governmental organizations and they can be either local or international. They are defined as “non-profit and voluntary citizens’ groups operating on a local, national or international level (NGO Global Network, 1988 cited by Kang, 2010:221). Another definition of

NGOs is “civil society organizations that are formed independently of the state but register voluntarily under specified laws in order to gain official recognition to pursue purposes that are not self-serving but oriented towards public benefit” (NCP, 2000:9). There are different ways in which NGOs are defined, but what most of the definitions have in common is that they are non-profit and operate voluntarily.

Activities of NGOs are usually based on communities and the improvement of the lives of people in communities (Kang, 2010: 224). They work in different aspects of development regardless of the nation’s income. They “produce and implement technological innovations, they work as public service contractors for governments, they work as promoters of grassroots development, self-help and empowerment movements, and NGOs are active in information and advocacy work” (Cassini, 1995: 217). NGOs can be very useful because they build the capacity of communities to make them participate in local solid waste management (Schubeler et al, 1996: 33).

Community Based Organizations (CBOs)

Despite the efforts and contributions of CBOs towards the development of their communities, they are viewed as informal or small organizations some governments. CBOs are defined as “informal institutions that are formed by members of a community to address a need” (Ahmed and Ali, 2004:470). According to Schubeler et al (1996), the preconditions for effective participation and community-based waste management systems includes the adequate awareness of the problem and the organizational capacities (ibid: 33). The objective of CBOs is usually to provide social services to the communities (Ahmed and Ali, 2003:3). The community based organizations cannot operate in isolation, according to Coatham and Martinali (2010), “their ability to innovate can also depend upon a number of factors including their organizational attributes, internal cultures, external influences and the institutional framework within which they operate”(ibid: 3). According to Scubeler et al, “the introduction of community-based solutions calls for awareness building measures as well as organizational and technical support” (Schubeler et al, 1996: 36).

Public Community Partnerships (PCP)

For development to be effective, it requires partnerships with the various levels of government and other actors such as the civil society. Since local governments cannot face all the challenges of local development alone, they engage in partnership arrangements with other actors in the urban areas (Obiri-Opareh, 2003: 61). One of such partnerships is the public community partnerships. The concept public community partnerships can be defined as the local government, CBOs and NGOs coming together to form partnerships in service delivery. CBOs which may arise in middle and upper income neighborhoods as well as in low-income areas may become valuable partners of the government in local waste management. The community based organizations can assist with the provision of this service. According to Gross, 2010 cited by Krishna, when the local government and the Community based organizations (CBO's) work together, it improves the government stability and performance because the CBO's provide information and access to the citizens as well as bringing the communities' social capital to bear upon the local projects (Krishna, 2003:2).

To borrow from Krishna, there are two types of roles the community organizations can play in the partnerships which are deepening and the stretching role. The deepening role is when the CBO's organize the citizens and mobilize resources, usually on a long term basis. (Krishna, 2003: 7). According to Krishna, "the larger their deepening role, the more CBOs need to be involved not just in project identification but also in design, implementation and budget management" (Krishna, 2003:6). And the stretching role is when the CBOs act because the government does not perform their mandated tasks effectively (ibid). According to Brenshen and Marshal, many authors have argued that when two or more actors decide to partner, it can have a substantial positive impact on performance, with regards to time, cost, quality objectives, and also with regard to more general outcomes such as greater innovation and improved user satisfaction (Construction Industry Institute, CII, 1989, 1991; NED, 1991;CRINE, 1994; Latham, 1994; Bennett and Jayes,1995, 1998; ACTIVE, 1996; Bennett et al., 1996 cited by Brenshen and Marshal, 2000: 820). For PCPs to be effective, it demands a high level of citizen participation, strong community organizations and the support of NGOs (UNCHS, 1993 cited by Awortwi, 2003: 110).

Institutional Framework

Institutional framework includes the laws, rules and regulations or existing structure that facilitates or prohibits such partnerships. According to Schudler (1996), the institutional conditions for municipal solid waste management include the institutional structures and arrangements and also organizational procedures and the capacity of responsible institutions (Schudler, 1996: 30). To elaborate more on the institutional framework, it includes

- **Distribution of functions, responsibilities and authority** between local, regional and central government institutions (i.e. decentralization) and among local governments in a metropolitan area (as in laws for policies) including CBOs and NGOs in the area of KWASCO
- **Organizational structure** of the institutions responsible for KWASCO, including the coordination between KWASCO and other sectors and/or urban management functions. (Schubeler et al, 1996:30)

Case 1: “Community-based SWM Activities: Extent, Motivation and Impacts” (Anne Mumbi Karanja, 2005: 275-292) Nairobi, Kenya

Methodology

Introduction

In 1996, there was a presidential directive prompted for the entry of private companies into the SWM by instructing the Nairobi City Council to involve the private sector in the management of the city’s solid waste. This entry became particular notable in 1997. However, prior to this directive and entry, Community-based composting groups had been increasing in numbers in the city since 1992. These community provided self-services for themselves because of the failure of public and the private sector in service provision. The major role played by the community based groups was composting. An example of a community- based composting group in Nairobi was Uvumbuzi Club, an environmental conservation lobbying association. This organization was the initiator of solid waste composting and this was a way of dealing with the organic fraction of the household waste collected especially in the low income areas because of the deterioration of the services by the public sector in these areas. Clean-up campaign was the aim of this initiative; however an objective of income generation for the poor was added to the project to make it marketable. This in turn became the primary motivation for composting.

The second factor is that it also allows for rising income generation, which benefits a large portion of the population, particularly those with limited resources at their disposal. One of the negative contributions of the re-use and recycle system in this city is that, members suffered health problems because of the nature of their work. The health problems included body aches, fungal infections, stomach ailments and headaches. Most of the potential problems that came with the management of garbage could be avoided by prudent management. In conclusion, there were none or fewer partnerships between the NCC and the CBO's. There was more space for the private organizations to operate with the NCC than the Community-based groups. One of the reasons was that the residential areas that these organizations work were not recognized by the authorities. Also the efforts of these groups to initiate links and partnerships with the NCC and government were met with disinterest, lengthy bureaucracy and corruption. The activities carried out by the groups in these communities were seen as self-help and received less attention from the authorities.

This case study was in Nairobi, the capital city of Kenya. The field work was carried out amongst several actors including the public waste department and its parent ministry, private companies including the waste pickers, traders and re-processors that were in the formal and informal sectors. The focus of the study was on the factors that could be measured using social science indicators. During this study period there was a review of existing literature to obtain the information on contemporary debates about urban waste management, service delivery including resource recovery and recycling as well as experiences from other developing countries. Media reports and photography was also used in this study. A combination of purposive and stratified sampling was used according to the area of the city, the economic activities and the income level of the residents. The primary data for this study was collected between March 1997 and September 1998 during this period there was a slight disruption during the months of October 1997 and March 1998 resulting from the heavy El nino rains. Follow-up visits were made to the data collection places during the field visits and also during the write-up stages by the researcher and this was important to know the seasonality of the especially for the waste recycling.

Case 2: “Ridding Nyanya of Filth: Issues of Popular Participation in Solid Waste Management” (Onyanta Adama, 2007:161-183) – Nyanya, Abuja-Nigeria

Methodology

The process of data collection was classified into three headings namely, exploratory phase, main field work and follow-up visits. The exploratory phase was in July 2003. The main field work was between June and August 2004. The follow-up visits were useful because it updated the data and it also helped in filling the gap that existed during the write up stage. The researcher started with secondary data and because Abuja was a new city, many studies had not been done on it so the secondary sources were government-commissioned reports, memos, and documents. One example of the secondary source is the Abuja master plan. For the addressing of the main research questions, interviews were the main source of data. In total 65 interviews were conducted during the study period. Even though some of the interviews were semi-structured, most of them were open-ended. Additional data was drawn from focus group discussions. For the sampling techniques, purposive, systematic random and snowball or chain sampling methods were used. This book was printed in Sweden by Universitetservice US-AB, Stockholm, Sweden, 2007 and distributed by Almqvist & Wiksell International.

Analysis: Factors that led to the Success and Failure of PCPs

This chapter tries to answer the main research question by using a stakeholder analysis table and comparing them to other successes or failures apart from the five case studies selected for this research.

Stakeholder Analysis

Stakeholder analysis is defined as “the identification of a project’s key stakeholders, an assessment of their interests, and the ways in which these interests affect project riskiness and viability” (Social Development Department, 2005: 6). Primary stakeholders are those ultimately affected, by the project. Secondary stakeholders are the intermediaries in the aid delivery process and they include both winners and losers, and those involved or excluded from the decision-making process. Key stakeholders are those who can significantly affect, or are important to the success of the project (ibid: 6-7). According to Olander, stakeholder analysis are done before the

commencement of the project and used to determine the probable stakeholders (Olader, 2007: 277)

For instance in Nagoya city, the partnerships were initialed by the local government but in Nairobi City, it was initiated by the NGOs and the CBOs. They are grouped according to the stakeholders and their roles. The interests for the partnerships in this study is also viewed as the incentives that motivated stakeholders to either go or not go into PCPs in SWM, followed by the interests and incentives for partnerships, then accountability, co-production, effective leadership, the role of public awareness, the role of intermediaries, external influence and programmes.

Institutional Framework

“Lack of political support and institutional support from the local authority and central government affects the work of the CBOs engaged in composting” (Kibwage, 1996; JICA, 1998; and Mulei and Bokea, 1999 cited by Karanja, 2005: 283). In the cases that succeeded in forming PCP, they had existing structures that allowed for that to happen. The components that are needed for strong institutional frameworks are distribution of functions, responsibilities and authority, organizational structure of the institutions responsible for SWM, interests and incentives for partnerships and accountability.

Organizational Structure of Institutions Responsible for the SWM

The actors that were responsible for the solid waste management in the two cases were the local governments. However the partnerships brought different actors in it. In Nairobi city, the City Government was the main institution in charge of SWM. In Nyanya, solid waste management was the responsibility of the health department of the Ranchi Municipal Corporation. In Nairobi, the Institutions responsible for the SWM were the Nairobi City Council in collaboration with the private sector. In Nyanya, the institution in charge of the SWM was the local government.

Interests and incentives for partnerships

For a partnership to exist, both parties must have similar interest. From the stakeholder analysis tables, it can be seen that the cities entered into partnerships for different reasons. For the cities that succeeded in PCPs the common interest they had is waste reduction and cleanliness of the city. Most of the incentives for partnerships were for purposive and solidarity reasons. Purposive

incentives include intangible rewards and are related to goals and solidarity incentives are rewards from being part of a group (Clark and Wilson, 1961).

However, in the cities that there were no partnerships, it can be seen that it was because one of the parties was not interested. People are coming together to support themselves and their families by participating directly or indirectly in waste collection or recycling (Ahmed and Ali, 2004: 469). This was however not the case in Nyanya. In Nyanya unlike the four other cities, the community members here were not interested in waste management services; they gave low priorities to the solid waste management activities, so that even though the government launched the solid waste management project that was to promote partnerships, it did not succeed because of the lack of cooperation of the community members. This can be linked to the point Atienza made: one of the reasons that municipalities have failed to comply with solid waste is because of the “lack of cooperation and participation of the community” (Atienza, 2008: 2). If the community members are not interested in corporation and participation, PCPs cannot exist.

Accountability

The form of accountability that existed differed according to the case. In Nagoya city, both the long and short routes of accountability were experienced. The NGO also encouraged the citizens to have a voice and there was direct dialogue between the community and the NGO to ensure accountability and transparency. However in Nairobi and Nyanya, much could not be said about accountability because in Nairobi, there was so space for the community to participate and in Nyanya, the community did not want to participate.

Role of Public Awareness

Public awareness was also one of the factors that lead to the successes of the PCPs in the Nairobi and Nyanya, because the public awareness of the protection of the environment grew amongst the residents during the protests, they were willing to cooperate with the city government in the waste management activities. Here in Nyanya, it was because there was less awareness about the health implications of improper waste management, there were no activist’s attitudes or protests on the side of the residents to cooperate with the local government or to form community-based SWM similar to what was experienced in the other case studies.

External Influence

From the success case studies, it observed that the International organizations had a role to play in the forming of partnerships. They supported the community based waste management activities through funding. In Ranchi for instance, the International organization decided to support the CJP on the conditions that there was space for partnerships. The projects in Nagoya city and Guimaras were also supported by the International organizations through funding. In Nairobi, even though there was no partnership between the NCC and the CBOs, these CBOs were still supported by the International bodies. Conclusions

Conclusions

This paper has attempted to analyze the factors that can explain the success and failures of PCPs in the five chosen case studies. This chapter will look at the major findings, policy recommendations and the conditions that will have to be in place for the PCPs to happen in the context of the GSMA of Ghana. A suggestion for further studies is also found in this chapter.

Major Findings from case studies

From the analysis, it was observed that the factors that led to the successes are similar in the case studies. In the literature about PCPs, much was not said about local government and community leadership. The leadership that was discussed in PCPs were national leadership, however from this study it was seen that local government and community leadership.

The role of intermediary was also not much discussed in the PCP literature, but as was seen from the case studies; their role helps for the PCPs to be successful. This is because the intermediaries are part of the community and are aware of the ways to communicate with them, they understand their language and they have more information about the communities. The intermediaries can come from the part of the community or the part of the local government or the community.

Policy recommendations

Leadership at the community needs to be nurtured by policy makers and donors. Donor's level may be useful when drawing up policies for PCPs in the future. For donors, they can invest in

capacity building programme for leaders or train more people in the community for leadership roles and this can tend to benefit the whole community.

The role of intermediaries should also be taken seriously when drawing up policies for PCPs. Donors can also decide to train and develop people that serve as the link between the actors in the PCPs.

Factors for PCPs in the county Government of Kisumu

In the context of Kisumu County, there is no public community partnership in solid waste management approach. Looking at the factors that led to the success and failure of the case studies, the following steps will need to be in place for PCPs to happen in the county of Kisumu

Strong Institutional framework

In the county assembly of Kisumu must legislate and come up with laws for PCPs, these laws will have to be strengthened especially in the area of SWM to allow for the collaboration between the CBOs and the authorities of the county government. According to one of the interviewees the reason why there is no partnership between the state and the CSOs in Kisumu is because of the “weak state and sanitation management laws” (Zeim, 2012). For PCPs to exist and be successful in the Kisumu County, there will have to be strong institutional frameworks to allow such partnerships to happen. As was seen in the success cases, this helped to lead to the PCPs.

The strong institutional framework will also have to create the space for the CBOs to operate. In an interview with the Development Planning Officer of the KIWASCO (Kisumu water and sewerage company), when asked why there are no PCPs the response was “if the CBOs come what will be their contribution, are they going to take the waste for free?” This reflects a rather very narrow conception of the role CBOs as only collectors for a fee because in other case studies it was seen that the CBOs were able to contribute to the SWM. In Nagoya city, the CBOs helped in creation of public awareness about the new waste management system that was introduced into the city.

REFERENCE

- Ahmed, S.A. and Ali, M. (2004) 'Partnerships for Solid Waste Management in Developing Countries: Linking Theories to Realities', *Habitat International* 28(3): 467-479.
- Bardhan, P. and Dilip M. (eds)(2006) 'Decentralization and Local Governance in Developing Countries: A Comparative Perspective', Cambridge, MA: MIT Press
- . Crook, R. C. and Manor J. (1998) *Democracy and Decentralization in South Asia and West Africa: Participation, Accountability and Performance*, Cambridge: CUP
- Crook, R.C. and Manor, J. (1998) *Democracy and Decentralisation in South Asia and West Africa: Participation, Accountability and Performance / Richard C. Crook and James Manor*. Cambridge [etc.]: Cambridge University Press.
- Goddard, H.C. (1995) 'The Benefits and Costs of Alternative Solid Waste Management Policies', *Resources, Conservation and Recycling* 13(3): 183-213.
- Janine, R. (2011) 'Civil society and security sector oversight', *African Security Review*, 20(4): 21-33
- Karanja, A. (2005) 'Solid Waste Management in Nairobi: Actors, Institutional Arrangements and Contributions to Sustainable Development'. Ph.D. thesis, Development Studies, Institute of Social Studies, The Hague, The Netherlands.