



**Conflict and Crime in municipal solid waste management: evidence from
Mombasa and Nairobi, Kenya**

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Abstract

Among the issues that stunt the move towards proper solid waste management, and which have received little research attention is the role of conflict and criminal activities in the sector. This paper begins to fill that gap by exploring conflict and crime in the context of municipal solid waste management in Kenya's two major cities of Mombasa and Nairobi, with Nairobi dominating the evidence base given the entrenched cartels in the city's SWM sector. The study builds on a scoping review of published and grey literature, including print media coverage of crime and conflict in the sector as well qualitative and quantitative data collected from the two cities under the Urban Africa Risk and Knowledge Program between March and June, 2016. Our findings indicate that the pulling out of municipal authorities from the provision of SWM services, coupled with the 'informalization' of the Kenyan economy in the 1990s and the increase in unemployment and poverty set the stage for the involvement of criminal elements in the sector. Private providers became the dominant mode of service provision and with this came competition for client base. In addition, organized criminal groups wield control over Nairobi's only dumpsite with violence and conflict as their instruments to retain control over materials' recovery and onward sale to recyclers. We conclude that criminal gangs in the sector inhibit proper waste management and there is a need for the city authorities to take over the control of the dumpsite from gangs as part of the overall strategy to address the huge public health implications it poses to the city.

Key Words: Solid waste management, Crime, Conflict, Kenya,

Introduction

This paper builds on a recent review (unpublished) of the literature on conflict and crime in the municipal solid waste management (henceforth, SWM) sector in Mombasa and Nairobi. The review provided evidence on the existence of cartels especially in Nairobi where the municipal dumpsite (Dandora dumpsite) has been overrun by these groups. The following section looks at the evolution of crime and conflict in SWM sector as well as the nature of this crime/conflict.

The late 1990s and early 2000s marked a time when Kenya's economy was at its lowest with poverty levels increasing from 48.8 percent in 1990 to more than 56 percent at the end of 2002 [1]. The structural adjustment programs (SAPs) led to loss of employment and substantive 'informalization' of the economy [2]. This period was also marked by diminishing service provision by the City Council of Nairobi in the solid waste management sector and the entry of private service providers. Over time, private businesses became the dominant service providers [3]. The period was also marked by organized criminal groups made up of young unemployed men, gaining inroads into the informal business sector in several cities, including the SWM sector. The privatization of SWM services in Nairobi led to the rapid emergence of various private waste collectors in the city [3]. This brought about competition for clientele and control of the lucrative business, which has been implicated in the use of armed cartels by solid waste service providers to protect their interests in this multi-million business [4].

Most reports on crime and violence in relation to SWM in Nairobi are located within the Dandora dumpsite itself. In the early 2000s, the dumpsite was controlled entirely by street children who called themselves *jeshi* (armies) and had divided the dumpsite into 12 bases pitted against each other in intense rivalry. Fights were common between the different *jeshi*, and only ended when someone was beaten into submission, or killed, with the dead buried in the garbage[5]. According to a 2013 report, several gangs have been fighting for control of the Dandora dumpsite using weapons (guns) to protect "their sections" of the site [6]. Though the County government of Nairobi has security officers at the site, cartels that have become the dumpsite lords have taken over, levying security fees (about \$5) to all vehicles delivering waste at the dumpsite [7]. This fee is paid in addition to tipping fees paid to the County government, therefore making the transportation and disposal of waste at this dumpsite an expensive undertaking.

Furthermore, the site provides a safe haven to gun toting criminals who operate from there, using it as a hiding place and a crime strategizing point [7]. In addition, dangerous groups are said to also operate from

the site [8]. Pathways connecting the different residential areas pass through the dumpsite and these paths are no go zones in the evening and even during the day, with criminals robbing passers-by and disappearing into the dumpsite [9]. Other reports reiterate that there are often gang-related activities, with the site as a base for two famous gangs known as Kamjesh and Mungiki, who are often linked to murder, rape, extortion and illegal taxation [10].

This paper focuses on conflict and criminal activities/violence that endanger the safety of citizens, which are seldom addressed in the context of SWM. Violence in this paper refers to both physical and non-physical actions such as coercion and/or control. On the other hand, crime refers to acts considered illegal under the country's justice system and may or may not involve violence, such as extortion, illegal ownership and use of guns and other crude weapons and involvement in criminal activities such as illicit drugs trade, mugging, robbery etc. [11].

Methods

Background to Case Cities

Nairobi, Kenya's capital city, is growing at over 4% per annum and rose from 2.1 million in 1999 to 3.1 million in 2009 [12], despite poor urban governance, limited employment and a dearth of other life-enhancing opportunities for existing and incoming dwellers [13]. This pattern of urban growth has given rise to an increasing urbanization of poverty, with over 60% of Nairobi residents living in slums or slum-like conditions characterized by overcrowding, social and economic marginalization, poor housing and environmental conditions, insecurity of life and property, violence and social unrest [13-16]. A representative study of all slum communities in the city, identified insecurity as a major concern for 12.5% of residents [13] and in relation to SWM, poor governance has been linked to allowing open dumping and burning of wastes and control of waste collection and disposal sites in the city by criminal gangs. On the other hand, Mombasa is the second largest city in the country with a population that grew from 665,018 in 1999 to 939,370 by 2009 [12]. Moreover, it is a strategic economic node hosting the largest seaport in the East African region and an important tourist destination on the Indian Ocean coast. Consequently understanding the challenge of SWM in both cities, particularly the linkages to violence and crime will provide an important insight into addressing the overall challenges of rapid urbanization, social change and development aspirations of the country as a whole. Further, it may offer working hypotheses for better understanding the challenges of SWM in other SSA urban settings.

Data and analytical approaches

We used both quantitative and qualitative data collected from various players in the SWM sector in Nairobi and Mombasa between March and July 2016. These players include community members, County officials, waste collectors, waste pickers (scavengers), cartels and organizations (non-governmental and community based organizations) working in the study communities. We collected quantitative data from the communities using a structured questionnaire, which was fielded in a representative sample of 2480 households, with 2383 households responding to the questionnaire. In this survey, we explored various issues in SWM including an exploratory section touching on crime and conflict in SWM. Respondents were asked if they had heard about the involvement of cartels in the SWM sector. Those responding in the affirmative were then asked follow up questions to assess if the community in which they live had experienced crime/conflict related to SWM, and the nature of this crime/conflict. The qualitative data collection was conducted both in Nairobi and Mombasa and involves a combination of in-depth interviews (IDIs), key informant interviews (KIIs) and focus group discussions (FGDs) were completed in both cities, with a total of 143 purposively sampled respondents. Gender and age were taken into consideration in the selection of study participants. The IDIs and FGDs were conducted with community members and scavengers, while the KIIs were conducted with policy makers, civil society organizations, international non-governmental organizations, community based organizations and national institutions responsible for environmental issues in Kenya. All interviews were audio-recorded and transcribed verbatim by professional transcribers, translated into English, in the case of interviews conducted in the local language, and validated by an independent transcriber. After the transcription, all KIIs, IDIs and FGDs transcripts were coded for emerging themes by a qualitative data analyst using Nvivo 10.

Ethical review for the primary study from which these data were obtained, was received from Amref Health Africa's ethics and scientific review committee. Informed consent was given by each respondent and additional consent was sought from participants in the qualitative study to have the discussions recorded.

Descriptive analyses were carried out for the quantitative data while a thematic analytical approach was used for the qualitative data to explore prevailing views on crime and conflict in the waste management sector.

Results

Descriptive results

Results in Table 1 indicate that 27.5% of respondents had heard about the involvement of gangs/cartels in the SWM sector. Of those responding in the affirmative, 52.4% reported that their community experienced crime/conflict related to SWM. It is worth noting that the overwhelming majority of respondents in this section were from Nairobi (85.1%). The most common criminal activity reported was armed robbery (50.5%) followed by fights and disputes at 16.4% and 15.6% respectively. Killings, and rape/defilement were also reported as some of the crimes associated with SWM in the study communities.

Table 1: Crime and conflict in study communities

	Mombasa	Nairobi	Total
Heard of cartels in SWM			
Yes	10.3	45.7	27.5
Total	1,225	1,158	2,383
Community experienced crime related to SWM			
Yes	34.9	56.5	52.4
Total	19.2	80.8	100
N	126	529	655
Type of crime community has experienced			
Robbery	55.2	49.7	50.5
Fights	5.2	18.4	16.4
Disputes	19.0	15.1	15.6
Rape/defilements	1.7	3.0	2.8
Killings	1.7	3.3	3.1
Others	17.2	10.5	11.0
Total	14.9	85.1	100
N	58	332	390

Conflict and crime in solid waste management: Evidence from qualitative data

Qualitative accounts from various players in the sector confirm the existence of criminal elements within the sector; while conflict was also reported. The results are presented under themes identified during data coding and analysis.

Enablers of cartels

Opinions from respondents over why cartels exist in the SWM sector, especially in Nairobi where the issue was recurrent in the discussions indicate that corruption within the Nairobi County Council was to blame. This is because officials who had been compromised allowed for powerful individuals to get into the SWM from where they diverted resources into personal businesses while also under-delivering on agreed upon goals. Such 'white collar' cartels are linked to individuals using their connections within the County offices to get contracts to collect, transport and dispose waste, without necessarily going through laid down procurement procedures or even meeting the minimum qualifications.

"Cartels, let me tell you, the cartels come in because the kind of leadership that we have eh I think is one that needs to be more forthright eh? In terms of engaging with eh the business of garbage collection and eeh how the contractors are paid. If it is not done above board, it can really make cartels..." [sic] [KII, Nairobi County Office]

Another enabler was the lack of adequate security staff at the dumpsites to keep the cartels away. The situation is said to have deteriorated to a level where the County has lost control of the dumpsites to these groups as the following opinion indicates:

"Some boys have even been killed and also they are like cartels soliciting money from the guys who deliver the waste at the dumpsite... These guys are a problem to us, because for sure even at the final disposal site. In fact we are where we are because the County does not own that place [Dandora dumpsite]. It's being owned by other guys" [sic] [KII, Nairobi County Office]

In addition to these 'white collar' cartels, there are other forms of cartels that exist in the dumpsite, who have taken over the control of vehicles bringing waste into the site. Indeed, among waste pickers based at the Dandora dumpsite, there is an unspoken rule that you can't pick all recyclables from a given lorry. There is usually an 'owner' (the person who has paid for the recyclables, usually a cartel leader) of the

lorry who must be considered and some of the recoverable materials have to be left for him to sell as demonstrated by the following quote:

“Now, there is a way when the vehicle comes to dump, there are those things you are supposed to pick and it is like sharing you see; there are things you have to leave for the person who has ‘bought’ that vehicle [waste load], eeh, the one who has brought the vehicle. There are those things you must leave for him and you go with yours, it becomes like 50/50” [50% share] [sic] (FGD, waste pickers, Nairobi).

Further it was revealed that there were exclusive vehicles that could not be touched by ‘outsider’ waste pickers,

“No those from that place [Dandora dumpsite] are the worst. You even hear other times that they have killed each other; you can’t step on their vehicles [those carrying waste] for more than two years, isn’t that how it is? ...” [sic] (FGD, waste pickers, Nairobi).

Violent tendencies

There were reports of aggression from waste pickers towards the ‘outsider’ as indicated in the following quote;

“Lack of employment is their main excuse. If you happen to meet about ten of them walking, they have knives. Once they spot an unfamiliar person they pounce on him/her even if it is during the day” [sic] (KII, Community leader, Mombasa).

Further, waste pickers were reported to turn violent in protest over the encroachment on their area of operation, while criminal elements together with waste pickers were said to take advantage of the dumpsite to commit crime such as stealing personal items from passers-by. Similar violent behaviours were reported in Nairobi especially on the dumpsite where waste pickers were said to be violent towards strangers on the dumpsite or towards other groups.

“...there are some boys that come here at the dumpsite and steal from us, our male waste pickers are the ones who help us...they understand us...they ask us to help chase away new comers/strangers (on the dumpsite)” [sic] (FGD, Waste pickers, Nairobi).

Exclusive territories

In Nairobi, conflict arose at different levels with 'work bases' in residential areas and dumpsites being exclusive to given groups of waste pickers, and no other group would work offload the waste collected there nor buy any recyclables recovered from another base as summed up in this quote;

"When you go there [to another dumpsite or collection point], there are owners, so even when you go there you will not buy" [sic] (FGD, waste pickers, Nairobi).

This exclusivity also extended to the dumpsite where vehicles were 'bought' by a cartel leader and only 'his' waste pickers would be allowed to scavenge from his vehicles; with an apparent rotation of waste pickers every two years.

"No those from that place [Dandora dumpsite] are the worst. You even hear other times that they have killed each other; you can't step on their vehicles [those carrying waste] for more than two years, isn't that how it is? ..." [sic] (FGD, waste pickers, Nairobi).

There were opinions indicating that conflicts also arose between waste handlers and their customers, for example where customers (waste producers mostly households) were unwilling to pay the waste collection fees as agreed. Further waste pickers operating from residential areas faced conflicts with residents who would accuse them of stealing from their homes/compounds.

Control of the dumpsite

Crime and the use of violence were associated with certain gangs/cartels that have gained control over the municipal dumpsite, where fights among different cartels to gain control of the lucrative business on the dumpsite is the order of the day.

"Yeah, the cartels as I know them because... everyone understands these cartels in their own way in Nairobi...But the way we understand them is that they are an inhibition to proper waste management in the county. One because they tend to control who gets into those sides [dumpsite], where they dump and how they dump it. They're [waste transporters] again charged some fees and all that..." [sic] (IDI, NGO officer, Nairobi).

“...they are scared of nobody I don’t know the support they got but they are even violent if you try to stop them they can even hurt you. I understand they charge around three hundred per lorry and more than a hundred lorries come there daily ...” [sic] (KII, Environment Officer, Nairobi).

The cartels are said to have become so bold that they now run their own parallel dumpsite which they are ready to protect through violence if anyone tries to stop them, as the following indicates:

“Now that our trucks broke down and we are not even able to place or be in control of these independent contractors things have been very difficult in this place, such that even now in Ngomongo a certain cartel has even come up and created their parallel dumping ground which indeed is very dangerous because I hear they were able to contact one or two private owners of those trucks [to deliver to their dumpsite]. ... it has become very difficult to control them ... they are scared of nobody I don’t know the support they got but they are even violent if you try to stop them they can even hurt you. I understand they charge around three hundred per lorry and more than a hundred lorries come there daily ...”[sic] [KII, Environment Officer, Nairobi].

Operating base for criminal gangs

The dumpsite is a zone for violent criminal gangs who use it as their operating base.

“...it has become a crime zone for armed gangsters because there is a dump they out- grow the control and they are now controlling [it] themselves. It has become a dangerous place to go to visit ...i was trying to send these youths to put up things and they won’t even let them... they were even beaten up and chased away” [sic] (KII, Environment Officer, Nairobi)

In addition, petty thieves who snatch valuables from motorists or passers-by use the dumpsite as a hiding place

“...So crime is there but what happened is that the police department, police service, they are trying to find a way. How do motorists try to take care of themselves? ...there are crimes that have been reported over and over again. Phone snatching because not all are able to afford...because of the traffic.... So when people walk along those lines they get their phones snatched and they run to the dumpsite [sic] [KII, Mombasa NGO officer].

Dishonoured agreements

Another form of conflict involved the County government representatives and waste collectors especially the informal groups and waste pickers. There were discussions indicating that agreements between the County government representatives and these two groups were not honoured, causing waste to remain uncollected in the case of collection groups and destabilizing waste pickers

“What I can say is that because this county council official is disturbing us especially regarding the garbage area [holding area to allow waste picking], the way we were keeping the garbage before, now we can’t, if you keep it there now you will be taken to the police and that is not very good. They should let us do our work so we can take it there”[sic] (FGD waste pickers, Nairobi).

Also, it emerged that some county officials were barring waste collection groups based in informal settlements from disposing waste in certain ‘holding areas’ as reported in the case of Mombasa

“They came and told me, “old man, now we are being denied access to that place for us not to dump waste there” I told them, we have been advised all the waste to be dumped there. County’s role is to carry the waste and dump”. So there was some friction but later it stopped”[sic] (KII, Community Leader, Mombasa)

Discussion

The study set out to assess the crime/conflict and SWM nexus especially in Nairobi where the issue has been intensively highlighted in different media. Results have revealed that community members are aware of criminal or violent activities linked to SWM, with armed robbery, fights and disputes being the commonest, and more serious crimes such as rape/defilements and killings were also prevalent, especially at the dumpsites and in communities closer to the dumpsites. The enablers of crime and conflict, especially in Nairobi can be assessed from two critical points. The first point is the laxity in government regulation of private service providers and deeply vested business interests, which has allowed the formation of ‘white collar’ cartels that control who gets contracted to provide SWM services. This has been fuelled by the unregulated market in which private companies are competing for client base, with some resorting to the use of armed cartels to establish their exclusive areas of operation. These findings are in line with previous reports on the role of corruption in licensing of SWM service providers and the control of the multi-million business on the dumpsite [5, 6, 18].

Secondly, and most manifest is conflict and crime in relation to domination and control of the official dumpsite and associated recycling and sundry activities by gangs. The disposal site remains dominated by criminal gangs, who have established themselves to extort money from private service providers or conduct other illegal activities such as weapon and drug trades. Other forms of conflict reported include conflict between waste pickers, informal waste collectors and county representatives, who are seen to interfere with the work of the two groups either through extortion or going against agreements between them. In addition, waste pickers working at the dumpsite report being met with violence if one strays into waste belonging to another groups or goes to pick waste from a different dumpsite or collection point. These findings resonate with media coverage of the cartels working on the dumpsite [4]. As has been found elsewhere [19], the presence of criminal elements in an important public health facility like dumpsites, spells disaster for the residents of the city, as it leads to inefficiencies in waste handling, with implications for human and environmental health. While published studies on the involvement of criminal groups in waste management are rare, the few that we could find suggest that crime leads to poor waste management, as collectors and transporters keep off routes or disposal sites where these elements are present. Unpublished literature on Nairobi suggests that transporters have been forced to dump in illegal sites to stay away from the municipal dumpsite where cartels charge fees for each truckload delivered, over and above the legal municipal authority fees they must pay. In addition, insecurity associated with the presence of criminal elements has also led to transporters choosing illegal dumpsites over the legal site. The forgoing may contribute to upsurge in illegal dumpsites in the city and the consequential risks to human health and wellbeing.

Conclusions

Our analysis show that criminal gangs in the sector inhibit proper waste management especially in Nairobi. There is therefore a need to address the issue of cartels, including the underlying structural and policy factors that have led to gaps in the SWM chain, enabling these groups to control a facility with huge public health implications. Finally, the dearth of literature and systematic studies into the phenomenon of crime and conflict in the SWM sector highlights a need for robust scientific studies to inform policy and action shifts towards better and environmentally sound waste management methods needed to lessen the risks to health and restore the dignity of lives of vulnerable primarily exposed communities.

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