

## Policy Brief IV

### Solid Waste Management in Maputo, Mozambique



Photo: Fabio Ribeiro

This is the fourth in a series of policy briefs relating to the research project, “The Ethnography of a Divided City: Socio-politics, Poverty and Gender in Maputo, Mozambique” (2012–2015), funded by the Norwegian Research Council. The objective is to contribute with ethnographic knowledge and ‘views from below’ to on-going urban development debates and efforts by the government and donors in Mozambique.



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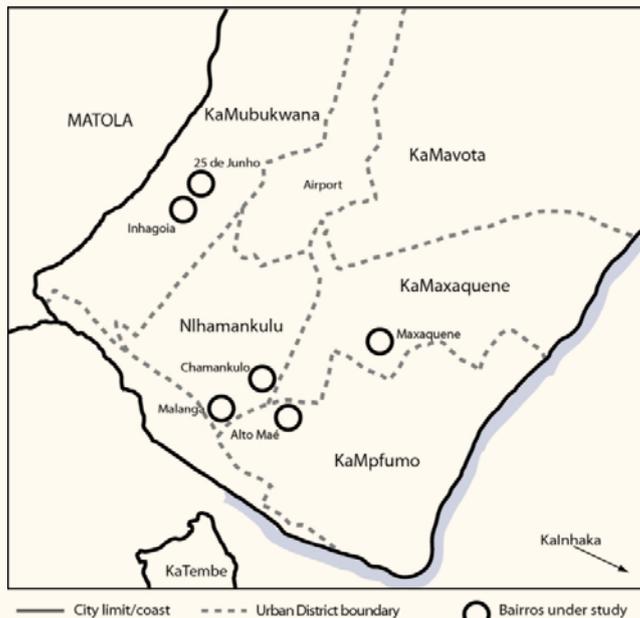
In the informal settlements in KaMaxaquene, KaMavota and KaMubukwana, the situation is more varied. In people’s own yards (*quintais*) and in the narrow alleyways (*becos*) between their dwellings, things seem impeccably clean and hardly any lixo is visible. Conversely, it is piled up in more public spaces including markets, main roads and around the few waste containers provided. KaNyaka and KaTembe are different again, being more rural than urban: here, the waste is largely out of sight.

#### What the statistics say

Sometimes statistics are superfluous: solid waste or *lixo* is clearly visible in all parts of the city of Maputo. In the formal, affluent and low-density areas, such as the District of KaMpume (see Map), the streets are relatively clean, but waste containers are scattered everywhere, often with piles of *lixo* next to them on the ground with people entering to search for things to eat or sell. In the most densely populated, economically mixed and commercial areas (mainly Nlhamankulu), *lixo* is visible not only in and around containers but also around the many informal markets, and on streets and pavements.

Drawing on the limited statistical evidence, Maputo is thought to produce a total of 1,000 metric tons of solid waste every day, of which around half is supposedly collected by the municipality. In the formal part of the city, by weight the waste collected contains 68 percent organic matter, 12 percent paper and cardboard and 10 percent plastics. In the informal parts of the city, more than half the waste consists of soil and dust. If this is excluded, 69 percent is organic waste, 5 percent paper and cardboard, 9 percent plastics and 9 percent ‘other’, including rubble (Allan and Jossias 2012). On average, people in the formal city produce 1 kg of solid waste per person per day, in the informal *bairros* 0.49 kg per day, and in KaTembe and KaNyaka 0.20 kg per day (Mertanen et al. 2013)

## CITY OF MAPUTO



Waste collection consists of a number of containers – supplied by the municipality’s ‘Directorate of Waste Collection and Cemeteries’ – that are spread out across Maputo’s 53 neighbourhoods or *bairros*. These range in number from close to a dozen in the formal parts, such as the *bairro* of Sommerschild, to one in the informal *bairro* of 25 de Junho B, which has a population of 23,000 people. In the formal city, the waste is picked up by the municipality every day or every second day and brought to the city’s only waste dump Hulene, or to private companies for recycling. In the informal city, the waste is collected through a community-based system of micro-enterprises (*micro-empresas*), with a private company contracted to transport the containers to Hulene – where approximately 250 waste pickers or *catadores* do their best to sort out the *lixo* they find useful for consumption or sale (Mertanen et al. 2013).

According to Maputo municipality’s annual “Report Card of Population’s Satisfaction with Municipal Services” (COWI 2014), solid waste collection is the service people find most important and are most dissatisfied with among the total of twenty services delivered.

## Current policies

Directly or indirectly, waste management in Mozambique is covered by a number of municipal laws. The Municipal Framework Law gives municipalities responsibility for ‘environment, basic sanitation and the quality of life’. The Municipal Finance Law makes them responsible for investing in systems of collection and treatment of solid waste and the cleaning of public areas. The ‘Regulations on the Organisation and Functioning of Municipal Technical and Administrative Services’ allow municipalities to create autonomous public services and municipal public companies to be managed as enterprises, and to create public service concessions to be run by private firms.

In Maputo municipality, the by-laws and regulations on cleansing urban solid waste aim to i) improve the social conditions of citizens, through progressively involving them in solid waste solutions, ii) improve conditions of the environment, hygiene and public health, as well as increasing reuse and recycling, and iii) promote participation of the private sector, not only in collection and transport but also in activities of recycling and reuse. In addition, it is stated that the municipality must support the creation of cooperatives, micro-enterprises and associations of citizens seeking to participate in the waste management system. The Maputo municipality’s main donor partner is the World Bank, and its comprehensive ProMaputo project (2007–2015) includes solid waste management.

Thus, there is a clear contrast between the legal and organisational framework around waste collection that is in many ways progressive, and the actual system of waste collection that does not function to the satisfaction of the city’s inhabitants.

## Ethnographic contributions

Critical voices on urban management tend to portray conflicting governmentalities (in the sense of ‘ways to govern’) in this kind of context, which reveal Western ‘top-down’ municipal development models, on the one hand, and the ways in which the poor majority develop their own spatial trajectories through every day practises and diffuse forms of power, on the other (Diouf and Fredericks 2013). In Maputo, the municipal authorities recognise waste management as exceedingly complex and work actively on several fronts including through public, private and community partnerships (pers. comm., municipal authorities). In the meantime, people in the communities put waste at the top of their list of problems and regard the continued problem of *lixo* in their environments as symptomatic of wider spatial and social inequalities and injustice.

Since publication of Mary Douglas’s (1966) ‘Purity and Danger: An Analysis of Concepts of Pollution and Taboo’, anthropology has been occupied with the way ‘dirt’ as ‘matter out of place’ is culturally constructed; it also understands that the response to it varies among different social formations. Among people in the formal and informal *bairros* of Maputo,<sup>1</sup> the local terms for solid waste or *lixo* (*nsila*, *tchaka*, *nzambwa*) invariably signify something that is *suja* (dirty), *inutil* (of no use) and *faz mal* (does harm). Nevertheless, the significance of *lixo* in people’s lives has varied over time and space.

According to both the municipal authority responsible for waste collection and the elders in the informal *bairros*, there was a clear, dual system during the colonial era. Waste collection functioned well in the formal Portuguese part of the city, but did not exist in the informal ‘African’ part. However, as 67-year-old Mr Vasco, resident of Inhagoia A, put it, there was really no need for formal waste collection then, because people did not produce much *lixo*; most of it was given to domestic animals or burnt, and people had ample space to bury it in holes (*covas*) in their yards.

The issue became more pressing after Independence in 1975. A larger part of the population became middle-class consumers,

the central parts of the city became more crowded with both residents and commerce, and living space in the informal settlements became more crowded as people moved to the capital city. Still, while “[w]e could no longer bury our *lixo* in our quintas as there was no space, and it made us sick’ as Senhora Verónica from Inhagoia A put it, others insist that the *bairros* were clean as ‘we had brigades (brigadas) who cleaned the communities during the time of [the first president of independent Mozambique] Samora [Machel]’ (Mr Pateca, Bairro Triunfo).

As solid waste became an increasing problem in the formal as well as in the informal areas – manifested by frequent outbreaks of cholera in some of the most congested *bairros* such as Mafalala – the municipality increased its effort by entering into public–private partnerships for collection and depositing, and by establishing *micro-empresas* to collect *lixo* in the informal communities. However, the decision that most significantly affected people’s perception of waste and how it was dealt with was a monthly fee of 45 meticaís for waste collection as part of the pre-pay electricity bill in 2008 – forcing practically everyone to contribute.

With this, *lixo* became a contested issue in the informal settlements – and a bone of contention between the municipality and the communities. While the municipal authority insists

consider to be their private space – mainly their own dwellings and small yards and the narrow *becos* where they spend time with neighbours and friends. They then nearly demonstratively throw away their *lixo* in public spaces, such as main roads, marketplaces and around the waste containers that have become symbols of their poverty and marginalisation.

What allows the system to tick over without a complete inundation of waste in the poorest *bairros* is the continued practice of burying *lixo* in the yard, with all the health hazards this entails, alongside the work carried out by the *catadores* who exploit the situation for their own benefit. A parallel system of community-based *catadores* who collect *lixo* for a small fee has developed. Some are linked to professional operators who separate the waste for resale to the – albeit still relatively few – waste recycling companies that operate in the city.

While recognising the important work done by the *catadores*, people in the informal communities still regard this type of work as associated with ‘dirt’ and thus as degrading – which is one reason why people do not usually separate their *lixo* for sale, even though they need the money. The *catadores* working (and in some cases living) in the huge waste dump in the *bairro* of Hulene are stigmatised (“We consider them to be crazy (*malucos*)”, according to 44-year-old Mr Marcos, resident of 25 de Junho).<sup>2</sup> The *catadores* sense the stigma: “There are



Waste is a symbol of spatial and social inequalities and injustice.

that the system functions well, and that if it does not ‘it is people’s own fault as they can complain to the municipality’, the residents are increasingly concerned about the *lixo* that piles up in parts of their *bairros*; they also argue that they are treated differently to those in the formal city where *lixo* is collected ‘every day’.

In the *bairros* Inhagoia A and B – which are crowded and unregulated, and the low-lying parts frequently flood – a population of 35,000 people share two waste containers that are collected at irregular intervals and often days after they are full. At the same time, the system for collecting *lixo* from people’s houses is corrupt and inefficient: these household collections are carried out by *lixo* collectors with carts (*chovas*), who are employed by micro-companies. Instead of employing people from the communities, the public tenders are won by people from outside the local area. In addition, there is a cap on the number of employees permitted to work in this capacity, so only a fraction of households receive the service.

Due to the combination of having to pay fees for services they do not receive, and the problems with *lixo* piling up, uncollected, people perceive the risks as significant not only for their health and well-being but also for their dignity as modern, urban citizens. Individuals have resorted to keeping clean what they

people who do not consider me a good neighbour. They call me names like ‘that drunkard who carries *lixo*’. Others don’t greet me when I pass them” (Mr Gota, unemployed builder, 25 de Junho).

Currently, then, the issue of waste collection is a symbol of a divided city; it has tangible implications for people’s self-esteem, well-being and health. While the municipality is in the process of improving the system in the formal parts of the city, including systems for the separation and reuse of different types of *lixo*, people in the informal settlements do not get the services they pay for and regard the waste piling up as a major problem in their lives.

According to the municipal authority, burying *lixo* “cannot be accepted, and is a crime against the environment”. The authority’s main solution to the problem of solid waste management is to “educate the people and make them produce less waste”. Thus the municipality and its subjects seem to be worlds apart on the issue of solid waste. The implementation of existing laws and regulations, as well as tangible interventions to improve conditions in the informal settlements, would seem to be necessary before the municipality can ‘form citizens in their own image’ (Foucault 1991).

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## Possible interventions

All African urban governments have to work in the context of two realities: a formal city with an organised social and physical infrastructure, including land, housing and relations with its inhabitants that operate through socio-political control mechanisms, such as taxation and fees; and an informal city often only partially under control (Bertelsen et al. 2014).

The most common strategy for urban development and management has been the attempt to formalise the informal, including the development of formal systems of waste management in public–private partnerships (Diouf and Fredericks 2014). In Maputo, this has been combined with an innovative but ill-functioning system of community-based micro-enterprises for collection at the household level.

The informal and poor city will still encompass the large majority of African urban dwellers for years to come (Pieterse 2008), and solid waste management must to a larger extent be based on specific political and social processes in such shantytowns. In Maputo, these need to encompass the following:

Basic framework conditions must be in place, with a sufficient number of containers and trucks to off-load at an appropriate site; they must be brought back quickly to avoid or minimise periods with no access, which undermines confidence in the system.

Points of contact and communication concerning waste management must be directed at people in each *bairro*, which means the *bairro* secretary and community leaders who have the capacity to organise community-based *lixo* collection.

People in the communities see the value of separating different types of waste, including the soil, branches and leaves produced when people clean their yard. This type of *lixo* constitutes the bulk of the waste. Once waste has been separated, sites for each type are needed that are clearly identifiable and accessible.

To combat the stigma of *catadores*, they should be licensed and given uniforms (or something similar) by the municipality (showing that some of the taxation goes back to the community). Relevant and realistic fees for members and non-members of the micro-enterprises should be communicated on local radio and at community meetings.

To reinvigorate the tradition of collective cleaning of public places such as markets, roads, schools and health posts, responsibility should be given to heads of quarters (*quaterões*), which usually encompass 50 to 100 households. Rewards for the cleanest *quaterão* should be introduced.

## Endnotes

<sup>1</sup> Fieldwork for this study was carried out in February 2015, mainly in the informal barrios of Inhagoia and 25 de Junho; individual interviews were also carried out with residents of the formal bairros of Sommershield and Triunfo.

<sup>2</sup> In fact, Allen and Jossias (2012) show that people working there represent a broad range of ages and backgrounds: eight percent are educated to university level.

## Further reading

Allen, Charlotte and E. Jossias (2012). "Mapping of the Policy Context and Catadores Organisations in Maputo, Mozambique". *WIEGO Organising Brief No. 6*. Cambridge, MA: Women in Informal Employment Globalising and Organising.

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