



COST RECOVERY AS A KEY REQUIREMENT FOR THE IMPROVEMENT OF SWM SERVICES IN MAPUTO

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Abstract

Providing a regular solid waste collection service is one aspect of meeting the seventh Millennium Development Goal, which concerns environmental sustainability. In Maputo, Mozambique, waste collection services have been restricted by lack of municipal income. A first attempt at collecting a service fee for solid waste management in Maputo was unsuccessful. This paper describes the second attempt to generate revenue for solid waste management services from households, and the means used to recover the costs of waste management from commercial and industrial generators, which included a “Proof of Service” that is used to ensure that non-domestic generators are managing their solid wastes in an acceptable way and paying for the service. Another component of the new framework is a system for licensing private sector service providers. This paper discusses the challenges facing this new system and the significance of the steps that have been taken.

1. Introduction

In Mozambique solid waste management in urban areas is, as in most countries, within the responsibility of the local or municipal government. But, since the decentralization process started in 1998, the Mozambican municipalities are still very young and developing. They have been left without sufficient preparation or an adequate financial basis to respond to their broad and costly responsibilities, such as roads and urban infrastructure, sanitation and waste collection. Depending on central government and donor money, and organized in colonial structures and hierarchies, they did not succeed in maintaining their services on an acceptable level.

Since 2002 the GTZ- Project *Assistance in Solid Waste Management for Maputo* (Apoio a Gestão de Resíduos Sólidos Urbanos na Área de Grande Maputo, AGRESU) supports the Municipalities of Maputo and Matola in improving their management in the field of solid waste and city cleaning.

2. Local background

The city of Maputo is divided into two distinctive areas: the urbanized inner city, called “Cement City”, and the suburban neighbourhoods with limited infrastructure. The “Cement City” houses an estimated 230 000 inhabitants, while about 900 000 to 1.2 million people live in the sub- or semi-urban settlements. The inner city is mainly served by public containers (1.1m³ and some 6m³) or door-to door plastic bag collection. On average about 65% of the inner city is covered by waste collection. Big containers along the main roads are used to serve the suburban neighbourhoods. Depending on the availability of the collection trucks, about 25% to 45% of the suburban area benefits from a basic waste

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collection. But insufficient equipment and constant breakdowns of trucks cause frequent emergency situations.

In two suburban neighbourhoods primary waste collection has been successfully implemented. The experience is based on two pilot projects supported by Doctors without Borders (Médecins sans Frontières MSF), Care International and AGRESU. They were finally formalized by the municipality by signing service contracts with the two community-based groups. The proportion of people with access to improved waste collection has increased by about 7%.

Offering waste collection services to the poor urban population previously without services contributes directly to the MDG no. 7: *Ensure environmental sustainability*; Target 10: *Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation*.

3. First steps towards cost recovery

The impact of the shortage of funds for the public services of the municipality became visible in 2001 as the fleet of the waste department deteriorated quickly. The waste heaps in the streets grew rapidly since the collection vehicles did not operate reliably. Public pressure rose and forced the municipality to react.

Various attempts to involve the private sector in waste collection failed. Service contracts were prepared poorly, no clear performance measures had been defined and finally, the municipality failed to pay the private service providers. This experience left two important impressions on the city's administration:

- any cooperation with the private sector is deeply mistrusted.
- the municipality recognises the need of additional revenues for cost recovery to sustain their public services.

However, fees for public services have been unknown to the public in Mozambique so far.

3.1 Introduction of the city cleaning fee

As a first reaction to the worrying financial situation and after consultation of the new project AGRESU, the municipality decided quite rapidly to introduce a city cleaning fee ("taxa de limpeza") in the beginning of 2002. Unfortunately, it was introduced in a not very transparent manner and with almost no information and little attempt to inform the public.

Consequently, more and more people refused to pay and the private sector questioned the legal basis of the city cleaning fee. There was no immediate response from the administration to that development. By May 2002 the revenues dropped almost to zero and the state owned Electricity Company refused to continue collecting the fee with their electricity bills.

That experience changed the perceptions of the municipality and created some interest in the technical advice being offered by AGRESU. An information and awareness campaign was thoroughly prepared to accompany the reintroduction of the waste fee. It started about two months before the starting date of the fee. Television and radio spots focused on the contribution and the responsibility of everybody for cleaning the city³. Articles and advertisements in the newspapers tried to explain why the municipality needed to charge the citizens for the services provided. And finally, so called *road shows* with music, theatre and animation distributed the information in the suburban neighbourhoods where normal communication measures do not reach the citizens.

³ Which was an indirect reference to the voluntary cleaning campaigns in pre-democratic times.

3.2 From the fee to designated funds

The restart of the city cleaning fee was an immediate success. With new motivation and awareness the people paid their fee of about 80 US cents per month and household. The fee was paid by an additional surcharge on the electricity bills and collected by “Electricidade de Moçambique, EdM”, the Electricity Company. The city earned about US\$ 50,000 to 60,000 USD per month with that fee.

The city could have covered - theoretically - about 45% of the operational costs of city cleaning, such as waste collection and street sweeping. But the money went to the general budget of the city, leaving the solid waste sector almost as dependant on the centralized budget as before. With only a slight increase in available funds, the equipment continued to deteriorate and service provision became dependent on the next donor contribution.

The councillor responsible for waste management understood very soon that continuous financing and at least some independence from the general budget would be necessary to guarantee continuous operation of the collection services. It took one year of political lobbying, but finally he succeeded with the support of AGRESU to convince the municipal council to earmark the revenues of the waste fee to be used only in the Waste Department. Despite numerous remaining problems with the public administration, the earmarked funds helped a lot to improve operational planning and the maintenance of the collection fleet.

4. Increasing the revenues

Since the waste fee had been introduced and designated, the discussions between the project and the municipality turned towards another problem. Industrial, commercial or public waste producers (non-domestic waste producers) occupy between 25% and 40% of the collection capacities of the public collection system, especially in the city centre.

As the waste fee is collected only from private households, these waste producers do not contribute to city cleaning or waste collection. The old municipal ordinance defined waste fees for the non-domestic waste generators. As these fees are not collected by the electricity bill, the municipality has no possibility to collect them. Some enterprises have service contracts with the municipality. The prices are negotiated and do not reflect the actual costs for the service. And finally, some of the municipal controllers collected a fee directly from some waste generators, creating a confusing and disorganized situation.

Thus, in the current situation the non-domestic waste generators are indirectly subsidized by citizens from the suburban areas who do pay their waste fee but do not receive an adequate service. Only some of these waste generators (especially the big hotels and some factories) have contracts with private service providers, while others are using the public collection system or bring their waste directly to the municipal dump or to illegal dump sites.

The existing private service providers for waste collection do not have any legal right to operate within the municipality's territory. By law, every kind of waste collection is the exclusive responsibility of the municipality. This leaves the private operators without security for investments, and without even a minimum of quality standards.

4.1 The idea

Based on the “polluter pays”- principle, which is defined in the national environmental law, the idea was to oblige the non-domestic waste generators to take responsibility for the removal of their solid waste. Each of them should prove to the municipality, that his waste is removed according to the law by a licensed private service provider or by the municipality. This proof is combined with a general municipal

sanitation fee, which is meant for general city cleaning purposes. The amount of the fee is classified according to the quantity of waste produced.

Therefore, instruments for three different objectives had to be developed:

- the “proof of service” (in Portuguese. “Prova de Serviço”) with the necessary legal basis and waste fee classification
- a license for the participation of the private sector in solid waste management to guarantee the legality of operation for private service providers and to introduce minimum quality standards
- contracting guidelines and a revision of the prices for waste collection services provided by the waste department of the municipality

The idea comes from the German “Entsorgungsnachweis”, which requires commercial or industrial waste generators to certify the adequacy of the disposal or treatment of their different waste streams. It was then locally developed under consideration of the different local problems and circumstances.

4.2 What are the expected outcomes and impacts?

Table 1 shows the expected outcomes and impacts on the various impact levels, according to the GTZ *Impact Chain* model.

Table 1 Outcomes and impacts

Impact level	Impact Hypothesis
Activities and Output of the Project	Legal instruments e.g. revision of municipal ordinances, new by-law; Equipment, software development; Consultancy for the implementation process, technical support
Use of Output	Approval of legal instruments by Municipal Assembly; Continuous implementation process, Recruitment of qualified staff
Outcomes (direct benefits)	Improvement of public collection system, Possible market orientation of the municipal services; Increase in revenues; New and regularized market for private solid waste service provision, Better control of private sector activities
(Attribution gap for the contributions of the project)	
Impacts (indirect benefits)	More resources for better service provision of the public waste collection system; Financial resources for extending the waste collection to more suburban areas; New investments and jobs in the sector created by the private sector
Contribution to MDG	Improved living conditions for the urban poor by establishing waste collection in suburban areas (indicator: number of people with access to improved sanitation); Reducing absolute poverty by motivating the creation of jobs by the private sector in solid waste management (indicator: number of new employed people in suburban primary waste collection)

4.3 What has been done so far?

In order to implement the "proof of service", the municipal law for city cleaning had to be revised. In addition, a by-law on the participation of private service providers in SWM had to be designed to regulate and control private sector activities in waste management by a new license scheme.

The process started at the end of 2003 with the contracting of a local legal consultant. Close cooperation on all intervention levels accelerated the approval of the new city laws by the Municipal

Council (August 2004) as well as by the Municipal Assembly (September 2004). The laws were officially announced in February 2005, while the official inauguration took place only in September 2005.

The implementation process started in November 2004 with the contracting of a local software company to develop the database and application. The software includes all administrative processes related to the “proof of service”, the payments of waste fees, the licensing of private waste operators and the management of service contracts of the waste department. The system started to operate in September 2005.

Open discussions with the various stakeholders and especially with the private sector helped greatly in developing instruments which then were broadly accepted. The “Proof of Service” was then communicated to the public by newspaper articles and interviews (on radio and television) with the responsible city councillor, who took every possibility to promote the new system. A full information campaign involving TV, radio and print advertisements has not been launched so far, because the municipal staff responsible for operating the system is not yet able to attend to this because of a high number of applicants. But, the response by the target group so far shows a positive attitude towards the “Proof of Service”.

In the beginning of 2006 a team of external consultants will assist the waste department to finally implement and optimize the system. The team will focus on the preparation of consistent guidelines and checklists and on the individual training of the staff.

4.4 Sustainability

Since the system is not yet fully operational it is difficult to discuss its sustainability. Although no experiences can prove our point so far, the following considerations might respond to some of the concerns already identified.

One considerable risk for the “proof of service” is the institutional weakness of the municipality. Adequate instruments to control the use of the system, the flow of money and the monitoring system are necessary. The software was designed to offer the maximum control of the processes and of the associated documents (such as licenses and the “proof of service”). Still, a strong supervisory unit is needed to guarantee that the system will work effectively.

The system is designed to be an almost independent unit within the waste department. It has its own staff and manager who actually report directly to the director of the waste department. It returns the revenues to the financial sector on a weekly basis, holds information for the collection sector about the service contracts and coordinates the activities of the department’s controlling unit regarding the proof of service. The system could easily be outsourced (for example, in form of a public private partnership), if considered necessary.

Since it creates revenues, there is a strong political motivation to support its success. Considering the costs of operation, it should be easy to sustain the system with only a small percentage of the revenues created.

5. Lessons learned

Despite the various difficulties with the implementation, it is still impressive that a system based on the “polluter pays”- principle has finally been approved. The Municipality of Maputo is very eager to adopt and implement modern principles in solid waste management notwithstanding the capacity limitations and restrictive budgets.

While personal motivation and a true ownership on the political level made this possible in first place, it was a certain lack of motivation and competence on the implementation level which caused a lot of the problems that have been experienced.

Even with new ideas and sufficient training, it is very difficult to change the minds and habits of people who worked a long time under strict hierarchical structures, where responsibility is held under control only by the decision makers. The public salary system with its low wages does not really motivate either. The implementation processes are time-consuming and need a lot of patience. Success cannot be taken for granted, if the issues of motivation and individual capacity are not fully addressed. Technical assistance is essential to accompany the changes and to prepare and train all involved personnel.

Political decision makers do not always recognize the conditions and resources necessary to change an existing system or implement a new one. They tend to force the implementation which is sometimes quite counterproductive as their decisions will be ignored or undermined by the executive staff. Clearly defined work plans, resources, responsibilities and timeframes help to maintain political expectation on a realistic level.

It can not be stressed enough that true political commitment is a key factor for the success the project had so far. In the Mozambican context, development processes need a strong leadership to surpass the old structures and habits of the municipal departments.

6. Conclusions and perspectives

For the Municipality of Maputo, cost recovery is a central aspect of improving solid waste management services in the city. In order to finance the expansion of positive experiences with community-based waste collection, the city needs additional revenues. A very new approach – the “proof of service” – was developed and is been implemented to achieve a better balanced waste fee system in which also the industrial, commercial and public waste producers contribute to the cost recovery of the sector. As of now it is the first application of the “polluter pays”- principle in Mozambique.

One important aspect, which has to be discussed, is the usage of the revenues. With a strong focus on using that money mainly to expand suburban waste collection, the municipality had a striking argument for convincing their target groups.

Considering that a sound financial background for municipal services is essential for Maputo, future activities will try to adjust the current waste fee for the households. A proportional fee (for example connected to energy consumption) will be investigated. Other models of financing waste collection and disposal are constantly discussed with the municipality. Still, there is some political reluctance towards involving the private sector, especially considering the collection of revenues.

We believe that the “proof of service” could be adapted to all places where the contribution of non-domestic waste generators to municipal sanitation and waste management is not yet clearly defined. It is designed to accompany a municipal waste or sanitation fee for households.

It will be an indirect but indispensable contribution to achieve the Millennium Development Goal No. 7, Target 10, when the revenues and additional resources are used to improve service provision for the suburban areas. The stimulation (and regulation) of the market for solid waste management services integrated in the “proof of service” should also have a positive impact on local medium-sized and community-based micro-enterprises (MDG 1, Target 1).