

**After the Flood:
Crisis, Voice, and Innovation in Maputo's Solid Waste Management Sector**

by

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ROTCH

Submitted to the Department of Urban Studies and Planning
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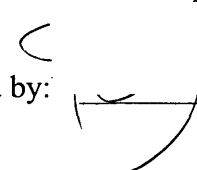
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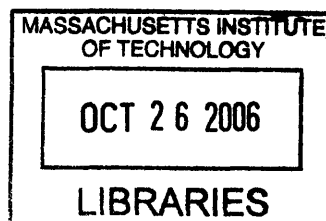
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ABSTRACT

This thesis explores responses to the problem of solid waste management (SWM) in two neighborhoods of Maputo, Mozambique in the wake of catastrophic flooding in 2000. In these neighborhoods, small-scale service providers began to organize door-to-door garbage collection on a fee-for-service basis. The emergence of community-level responses to a problem in the wake of a crisis the like the floods is not surprising in and of itself. What is surprising, however, is that the city of Maputo stepped in almost three years later, to finance and formalize what had been a private service through the extension of public contracts. What motivated the city to upgrade SWM services in these two poor, and traditionally underserved neighborhoods?

Catastrophic flooding in 2000 and the implementation of a "garbage tax" in 2002 set in motion a chain of events that increased pressure on the city to improve garbage collection. The floods catapulted the issue of solid waste onto the local political agenda, creating the political will necessary for reform. The tax was a major driver of citizen protest, simultaneously angering residents and instilling them with a sense of entitlement to better service. Citizen protest, in turn, pushed the city to improve performance in solid waste management and, ultimately, motivated the city to formalize its relationship with small-scale private providers.

Foreign NGOs and donors have both helped and hindered this process. Several NGOs have played important intermediary and technical assistance roles. Yet other donors have undermined the city's ability to keep a working fleet of garbage trucks on the road by making donations in a top-down fashion without attention to maintenance and sustainability. Whereas residents of Maputo exercised voice through protest, city officials adopt a "beggars can't be choosers" mentality when interacting with donors. Together, these stories illustrate the important dynamics of voice and accountability (or lack thereof) in shaping service-delivery reforms.

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CONTENTS

Chapter 1.	INTRODUCTION.....	9
1.1	Case Overview.....	10
1.2	A Public-Private Puzzle.....	13
1.3	Citizen Voice and Government Response.....	15
1.4	The Double Edged Role of Donors.....	16
1.5	Holding Feet to the Fire: the Challenge of Accountability.....	18
1.6	A Note on Methods.....	18
1.7	Organization of the Thesis.....	19
Chapter 2.	MAPUTO CITY: SERVICE DELIVERY IN CONTEXT.....	21
2.1	A Country in Transition.....	21
2.2	Political Decentralization.....	22
2.3	Fiscal Decentralization.....	23
2.4	A City of Contrasts: Poverty and Access to Services.....	25
Chapter 3.	GARBAGE CRISES AND LOCAL RESPONSE.....	29
3.1	Organization of the SWM Sector.....	30
3.2.	Constraints on the SWM Sector.....	32
3.3.	The Health Connection.....	33
3.4.	The Changing Nature of Waste and Increasing Burden of SWM.....	34
3.5.	Private Sector Participation in SWM.....	36
3.6.	Small-Scale Private Service Providers and Their NGO Partners.....	36
Chapter 4.	GARBAGE POLITICS: TAX, VOICE & ACCOUNTABILITY.....	43
4.1	Who Is the City?.....	44
4.2	Introduction of the Garbage Tax.....	44
4.3	Voice and Protest: Unforeseen Consequences of the Garbage Tax.....	46
4.4	Bringing the City to the Negotiating Table.....	49
4.5	The Ribbon Cutting Effect: Politicians Seeking Credit.....	51
4.6	Assessing Progress: a Bumpy Path.....	52
4.7	Taxation, Voice, and Accountability.....	53
Chapter 5.	DONOR DYNAMICS: HELPING AND HINDERING.....	55
5.1.	State-Donor Relations in Mozambique and Maputo.....	56
5.2.	“Hollowing Out” the State?.....	59
5.3.	A Capacity Building Approach: GTZ and the Garbage Tax	60
5.4.	The Intermediary Role of International NGOs.....	61
5.5.	Undermining Capacity: Truck Donors.....	62
5.6.	Donor Accountability?.....	64
Chapter 6.	CONCLUSION.....	69

Appendices.....	73
Appendix 1 Timeline of Events.....	73
Appendix 2 Comparison of ADASBU and UGSM.....	74

Bibliography.....	75
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TABLES

Table 1	Maputo City Budget at a Glance.....	24
Table 2	Characterization of Maputo Neighborhoods.....	26
Table 3	Citywide Access to Basic Infrastructure.....	27
Table 4	Municipal Solid Waste Collection, By Area of City.....	31
Table 5	Primary Actors at a Glance.....	38

LIST OF ACCRONYMS

ADASBU	<i>Associação para o Desenvolvimento de Agua e Saneamento de Bairro Urbanização</i>
AGRESU	<i>Apoio ao Gestão de Resíduos Sólidos Urbanos</i>
DMSC	<i>Direcção Municipal de Salubridade e Cimentários</i>
GOM	Government of Mozambique
GTZ	<i>Gesellschaft fur Technische Zusammenarbeit,</i>
INGO	International Non-Governmental Organization
MSF	<i>Médecins Sans Frontières</i>
PPP	Public Private Partnership
PSP	Private Sector Participation
SWM	Solid Waste Management
SSPP	Small-Scale Private Service Provider
UGSM	Uaene, Gama Serviços de Maxaquene
WSE	Water, Sanitation, and Environmental Services

Conversion: \$1 USD = 24,000 *Meticais*

CHAPTER 1 INTRODUCTION

In early 2000, unusually heavy rains and a series of cyclones produced the worst recorded flooding in Mozambique in over 100 years. The capital city, Maputo, home to approximately 1.3 million people, was among the worst affected regions of the country. The flooding was particularly acute in Maputo's low-income neighborhoods, or *bairros*, where drainage, sanitation, and garbage collection are highly inadequate. Poor garbage collection intensified the effects of the floods, blocking drains and creating pools of standing water. The receding waters revealed a sea of contaminated debris, what residents referred to as "mountains of garbage."

This thesis explores post-flood responses to the problem of solid waste management (SWM) in two Maputo neighborhoods, where small-scale service providers organized garbage collection, and the processes by which these local initiatives were, in time, institutionalized through the extension of public service contracts. Two, interconnected stories unfold involving, on the one hand, actors internal to the city (residents, small-scale service providers, and representatives of the city government) and, on the other, external actors (foreign NGOs and donors). Together these stories illustrate the important dynamics of voice and accountability (or lack thereof) in shaping service-delivery reforms.

Citizens and government in Maputo are engaged in a cycle of voice and response leading to improvements in SWM and (in an incipient form) increased government accountability. This cycle was set in motion first by the 2000 floods and second by the imposition of a citywide "garbage tax." The floods highlighted the problems of solid

waste, catapulting it onto the local political agenda. In an effort to clean up the city, the Municipal Council implemented a new tax earmarked for solid waste management. The tax elicited resistance from Maputo residents, as well as a sense of entitlement to better service that sparked protests in which residents blocked the streets with garbage. These manifestations of citizen voice increased pressure upon the city government to improve its performance in SWM.

Actors external to the city—foreign NGOs and donors—have both helped and hindered this process. A NGO played a key role in extending technical assistance to the city in designing, implementing, and politically managing the garbage tax. A group of NGOs also played an important intermediary role, bringing private provider organizations and city representatives face-to-face. However, another group of donors has undermined the city’s ability to keep a working fleet of garbage trucks on the road by giving “tied aid”—requiring that the city purchase particular brands of truck without attention to whether spare parts are locally available and the challenges of maintenance. In contrast to Maputo residents, who have made their voices heard through protest and resistance, the city government has adopted a “beggars can’t be choosers” mentality when dealing with donors.

1.1. Case Overview

The neighborhoods in question, Urbanização and Maxaquene,¹ are low-lying neighborhoods with a high water table, making them prone to flooding; each suffered a dramatic increase in cholera and malaria following the 2000 floods. The neighborhoods

¹ The full name of this *bairro* is Maxaquene ‘A’, not to be confused with its neighbors Maxaquene B, C, and D. However, for the sake of simplicity, I shorten the name to just Maxaquene.

are densely populated, vehicle inaccessible, and among the poorest areas of the city.

Almost two-thirds of *bairro* residents live in poverty. Together, these neighborhoods are home to 40,000 people, or just over three percent of the total city population.

In both *bairros*, small-scale private service providers (SSPPs) —in one case a community association and in the other a micro-enterprise—organized private responses to the problem of solid waste management, assisted to varying degrees by the International NGOs (INGOs) *Médecins Sans Frontières* (MSF) and CARE International. Beginning in 2001, the SSPPs in Urbanização and Maxaquene developed systems for “primary” garbage collection. Passing door-to-door with handcarts, the SSPPs charged a small fee to remove household solid waste to municipal dumpsters on the outskirts of the *bairros*, where the city is responsible for “secondary” collection—emptying the dumpsters and carting the waste to the municipal dump. Primary collection services were unprecedented in these *bairros*, where residents were previously expected to carry their waste to municipal dumpsters, often a considerable distance from their homes. As a result, many individuals resorted to illegally dumping their garbage in ad hoc sites throughout the neighborhood or in drainage ditches, creating health hazards and increasing the risk of flooding.

In 2002, the Municipal Council of Maputo, with assistance from the German NGO *Gesellschaft für Technische Zusammenarbeit* (GTZ), introduced a tax designed to finance citywide improvements to solid waste management. The implementation of this “garbage tax” set in motion a series of events, including protest by residents that, in turn, increased pressure on the city to improve performance in garbage collection and set the stage for the negotiation of contracts between the city and the SSPPs in Urbanização

and Maxaquene. International NGOs played an important intermediary role in bringing the SSPPs and representatives of the city face-to-face and supporting the SSPPs' demands for contracts.

After two years of negotiations, the city awarded service contracts to the SSPPs, institutionalizing primary collection as a public service free of charge to all residents of these two *bairros*. Maputo is unique in this respect. While private sector participation in solid waste management is common in cities across the world, very few cities formally contract small-scale providers for collection.²

Through the cooperation of private providers (responsible for primary collection) and the city (responsible for secondary collection), the residents of Urbanização and Maxaquene receive a level of garbage service unparalleled in other suburban *bairros*. Only one other area³ amongst Maputo's 60-plus neighborhoods receives publicly funded door-to-door collection. While the average rate of collection in Maputo's suburbs is just 20%, in Urbanização and Maxaquene 40 to 75% of solid waste generated is gathered through a combination of private primary collection and public secondary collection. Yet the city's ability to carry out secondary collection remains highly constrained by both operational and institutional factors. These include the poor repair of the city's trucks and the behavior of foreign donors in the solid waste sector, who have given trucks in an uncoordinated and top-down fashion without thought to the technical challenges and costs of maintenance and repair. These externally induced constraints may threaten to undermine the progress made in Urbanização and Maxaquene since effective primary collection is not possible without timely and regular secondary collection.

² A study of 16 countries across Latin America, Asia, and Africa found only one city (Fez, Morocco) where the municipality had established formal contracts for private "primary collection" (Cointreau-Levine 2000).

³ The third is the affluent neighborhood of Somersfield (Chapter 2)

Although home to a small fraction of the city's population, the events that unfolded in these two bairros represent a significant change in service delivery arrangements, involving the collaboration of both public and private actors, and have the potential to be extended to other neighborhoods of the city. Municipal Plans to expand the pilot projects developed in these two neighborhoods to three new *bairros* are currently under way.

1.2. A Public-Private Puzzle

The emergence of community-level responses to a problem in the wake of a crisis like the floods is not surprising in and of itself. What is surprising, however, is that the city of Maputo stepped in almost three years later, to finance and formalize what had been a private service through the extension of public contracts. The city's actions are striking on several levels. First, Urbanização and Maxaquene are poor and traditionally underserved neighborhoods. A common criticism of private sector participation in service delivery is that private service providers tend to flock to more affluent areas of cities, leaving public agencies to work in poorer neighborhoods where service delivery is more difficult (Cointreau-Levine 1994, Bately 1996). In Maputo, however, the city has awarded contracts for SWM to private providers who live and operate exclusively in poor neighborhoods.

Second, the city of Maputo experienced a 50% budget shortfall in 2005. Why in the context of these fiscal constraints did the city finance a new and higher level of SWM service where no precedent for primary collection existed? The contracts are a relatively low-cost endeavor, representing at present just 1.5% of the city's total budget for SWM.

Yet, the contracts carry hidden burdens including increased pressure on city agencies to improve secondary garbage collection and, as such, the effects of the contracts on the city are not negligible. Further, the municipality's severe budget constraints make any increase in public spending significant.

Third, Mozambique, like many developing nations over the course of the last two decades, has undergone an intensive privatization campaign entailing the sale of many state-owned enterprises and increased private sector participation (PSP) in the delivery of services (Pitcher 2005).⁴ At first glance, the case described here might look like another example of privatization. Yet the sequence of events in this case does not represent a typical "contracting out" of a public service to a private enterprise. Rather, private actors (the SSPPs, supported by international NGOs) "brought in" the city, securing a public commitment to finance and support what had been a private service. The city's active role stands in contrast to a large literature on PSP in public service delivery that tends to relegate public sector actors to "back-stage" regulatory and oversight roles (Bately 1996, Fiszbein 2000). Rather than abdicate or devolve responsibility, the city took on new and higher levels of commitment (financial and political) to solid waste management, targeting poor, traditionally underserved neighborhoods. The case presented here therefore challenges a number of common perceptions concerning private sector participation in the service delivery literature.

⁴ Mozambique's public water company, for example, underwent a privatization process in 1999 and is operated under a long-term lease by a private consortium.

1.3. Citizen Voice and Government Accountability

Actors internal to the city—residents, tax payers, private service providers, and officials and representatives of the city government—are engaged in a cycle of resistance and response which have led to positive outcomes, including significant improvements to solid waste management and increased government accountability to citizen demand. Several events set the stage for this cycle. First, the 2000 floods highlighted for both residents and city representatives the problems of solid waste management in an acute manner that could not be ignored. Second, the garbage tax, introduced in 2002, sparked a series of protests that increased pressure upon the city government to improve its performance in solid waste management. Residents—angered by poor SWM conditions and by the imposition of the tax—began to express their voice in part because of a lack of “exit” options (Hirschman 1970). Yet the imposition of the tax also gave residents a sense of entitlement to better service that pushed them to protest and make demands on the city government. As such the introduction of the tax was an important event, both in galvanizing citizen action and in promoting a “fiscal contract” between tax-paying citizens and a service-delivering government (Moore 1998, Lindert 2004).

Third, the tax threatened the small-scale private providers in Urbanização and Maxaquene, who operated on a fee-for-service basis. The introduction of the tax meant that their clients were effectively double billed for waste removal service (once via the tax and once by the SSPPs). This reduced demand for the SSPPs’ service, giving them an incentive to lobby the city government for contracts. Fourth, garbage collection gained traction as a key issue in the mayoral election of 2003, creating the political support and momentum necessary for changes. Taken together, these events—the floods, the

introduction of a tax, citizen protests, and the mayoral campaign—increased the willingness of actors in the city government to formalize its relationship with the small-scale providers.

1.4. The Double Edged Role of Donors

Donor-state relations in Mozambique (as in much of Africa) are marked by power imbalance and dependency. However, in this case, some international NGOs have come to play a positive, intermediary role—even though at the same time other donors have played a negative role, undermining city capacity.

With an aid/GDP ratio of 15% (two times the average for sub-Saharan Africa), Mozambique is one of the world's most aid dependent countries, (Hodges and Tibana 2005). Over fifty percent of all public spending in Mozambique is financed through foreign aid (World Bank 2005). The role of donors and NGOs in Mozambique, as in many other least developed countries, has come under attack by those who claim that donors “sap” or “hollow out” the capacity of the public sector by diverting resources and personnel (Hanlon 1991, Ribot and Oyono 2005). Others warn that flooding countries with aid undermines both accountability and capacity (Moore 1988, Moss et al 2006). On the other hand, another group of authors see NGOs and donors as “filling the gap”; providing assistance and services where “weak”, or “predatory” states are incapable or unwilling to deliver (Fowler 1991, Ndegwa 1996). While these two strands of literature disagree on whether NGOs (and, more broadly, donor agencies) are part of the solution or part of the problem, they concur in their assessment that NGOs replace or substitute state function.

The case presented in this thesis cuts across both the positive and negative portrayal of donors in the literature, suggesting a much more complicated picture. First, it is essential to disaggregate between NGOs and bilateral donors that played very different roles in this case, both helping and hindering the process of upgrading SWM in Urbanização and Maxaquene. In a positive instance, MSF, GTZ, and CARE played an intermediary role by establishing a Working Group to bring representatives of the city and the small-scale providers face-to-face. NGO intermediation of this type is relatively unique practice in Maputo, and stems from the 2000 floods in which NGOs and the city government directly collaborated for the first time.

GTZ played another important role by providing technical assistance to the city government in crafting and subsequently responding to criticisms of the garbage tax. In both of these instances, international NGOs *engaged with*, rather than replaced or substituted, the city government. A third example of donor activity, however, is less positive. Bilateral donors have donated trucks with expensive foreign parts without taking into consideration the burden of repairs. Moreover, in the case of one donor this aid is “tied,” requiring the purchase of equipment exclusively from the donor country. In a fleet of 18 trucks, the city has five different brands of trucks, making maintenance, repairs, and the search for spare parts extremely difficult. Bilateral agencies have persisted in making such donations, despite common knowledge of the problems they bring. There are no mechanisms in place to hold these donors accountable.

1.5. Holding Feet to the Fire: the Challenge of Accountability

My study illustrates dynamics of voice and of accountability related to taxation, but also highlights the on-going problems of lack of accountability in the donor world. In these two intertwined stories, voice and accountability have played out in very different ways. First, the story of local politics and taxation shows residents' and taxpayers' efforts to "hold the city's feet to the fire" to demand improvements in garbage collection. Second, the story of the truck donors highlights a lack of accountability. These two stories highlight the importance of voice and accountability in service delivery reform processes. In both, the presence or absence of voice and accountability have shaped outcomes, either pushing forward or undermining the reforms.

1.6. A Note on Methods

This thesis is the result of fieldwork carried out in Maputo over two periods: June through August 2005, and March 2006. During these visits, I interviewed a wide range of people, including residents, *bairro* leaders, private service providers and their staff, city officials, and NGO staff. My interviews were, for the most part, conducted in Portuguese and were unstructured. I also completed a series of survey-based, semi-structured interviews with residents of Urbanização and Maxaquene, inquiring about their household waste management practices and opinions regarding SWM services. These interviews were conducted in Portuguese or in local languages, including Shangana and Ronga, with the help of a translator. Unless speaking with a public official, interviews were carried out on a condition of anonymity. Quotes from interviews are therefore attributed to generic sources, such as "*bairro* resident" or "NGO staff," unless more

specific description of the respondent is necessary. All translations from Portuguese to English are my own.

1.7. Organization of the Thesis

The remainder of the thesis is organized as follows. I begin, in Chapter 2, by presenting some stage-setting information on the city of Maputo, its history and development and patterns of service delivery. Chapter 3 examines local solid waste management initiatives developed at the *bairro*-level in response to the 2000 floods, and introduces in detail the small-scale private providers and their NGO partners. Chapter 4 explores the process by which local initiatives were formalized and institutionalized by the extension of city contracts. I focus, in particular, on the positioning of solid waste management as a key issue in municipal elections, and on the expression of citizen voice through informal means including protest and resistance related to the garbage tax. Chapter 5 explores the roles of foreign donors and NGOs in either helping or hindering the process of upgrading SWM in Urbanização. I describe the positive contributions of NGOs that have worked as intermediaries between the city and the small-scale private providers or have offered technical assistance to the city government. I contrast these cases with the example of the truck donors. I conclude, in Chapter 6, with some reflections on voice and accountability in service-delivery upgrading.

CHAPTER 2

MAPUTO CITY: SERVICE DELIVERY IN CONTEXT

Over the past three decades Mozambique has undergone dramatic political, social, and economic changes, transitioning first from a Portuguese colony to a single-party socialist state, then to multi-party system, undergoing a process of political and economic liberalization. How have Mozambique's economic and political transitions affected service delivery in the capital city Maputo? How has the newly elected city government of Maputo, less than a decade old, managed increased responsibilities for service delivery? In this chapter I provide a brief account of recent Mozambican history (section 1) and explore the transition to political and fiscal decentralization in Maputo, describing the structure of city government (section 2) and municipal finance (section 3) since the first local elections in 1998. In section 4, I examine historical patterns of inequality and infrastructure development in Maputo and their implications for service delivery today.

2.1. A Country in Transition

In 1975, following a decade long armed-struggle, Mozambique won its independence from the Portuguese and the Marxist-Leninist opposition force, Frelimo,⁵ established itself in government. From 1975 to 1994, Mozambique was a one-party state. During much of this time, Frelimo exercised strong, central control, even at the local level. City planning, including the provision of urban services, was the purview of centrally controlled bodies.

⁵ *Frente para a Libertação de Moçambique*. Frelimo has governed Mozambique for thirty years since Independence in 1975, winning national elections in 1994, 1999, and 2004.

In the late 1980s, following more than a decade of war,⁶ economic sanctions by South Africa, drought and famine, Frelimo leadership had little choice but to seek sources of foreign capital. In so doing, Frelimo opened Mozambique to foreign donors who brought with them aid conditioned on a reform agenda including democratization (the first multiparty elections were held in 1994), decentralization (leading to the formal recognition of municipalities in 1998), and a broad platform of economic reforms including structural adjustment and the privatization of numerous state enterprises.

Constitutional reforms in 1990, in preparation for peace accords in 1992 and elections in 1994, laid the groundwork for decentralization. Yet political and fiscal decentralization did not come to Mozambique's cities until 1998 when the first local elections were held in 33 municipalities recognized by the central state.⁷ Following decentralization, city governments became responsible for an increased share of municipal services and have to power to levy local taxes and fees.

2.2. Political Decentralization

Since 1998, Maputo residents have elected their Mayor (the executive) and representatives to the Municipal Assembly (the legislative branch). Mayors and Assembly Members are elected every five years, and terms are unlimited. Voter turnout in the first municipal elections in 1998 was very low, just 15% but increased to 24% in the 2003 municipal elections. Frelimo maintained majorities in the Municipal Assembly

⁶ Mozambique was embroiled in internal conflict from 1975 to 1992. Following Independence in 1975, the opposition force *Resistencia Nacional de Moçambique* (Renamo)--funded and supported by Rhodesia and South Africa--took up arms against the Frelimo government, engaging in acts of terrorism including burning villages and targeting infrastructure. Over one million people were killed in the war.

⁷ Rural provinces are still under the control of centrally appointed governors.

and retained the seat of Mayor in both elections since 1998 (see Chapter 4 for more detail).

Once elected, the mayor appoints Municipal Councilors to oversee various administrative posts, such as the Office of Environmental and Public Health, the Office of Public Works, the Office of Environment, and so on. The Mayor retains the discretion to hire or fire a Municipal Councilor at any time during his administration. The Municipal Councilors in turn appoint city managers who direct municipal departments. Since city managers are appointed, they remain politically tied to the Mayor and the party.

2.3. Fiscal Decentralization

The Municipal Council prepares a budget each year, which is submitted by the Mayor to the Municipal Assembly for approval. Public information on the municipal budget is very sparse, and the few sources available often offer contradictory accounts. Unless otherwise noted, the information presented in this section is drawn from the 2006 Municipal Budget document prepared by the Municipal Council.⁸ Even within this official document, a coherent picture of municipal finance does not emerge; data is missing and in a number of instances figures presented did not add up to appropriate totals. The information presented here should therefore be considered rough estimates.

In 2005, the city's total budget was approximately \$11 million USD, of which only \$5.6 million were actually raised and spent—an execution rate of roughly 50%. Local taxes and fees made up about 25% of the municipal budget in 2005. These

⁸ Conselho Municipal de Cidade de Maputo. “*Orçamento para o Ano Económico 2006.*” Maputo Mozambique, December 2005.

included: a local property tax (a percentage of the national property tax collected by the national housing authority), an “economic activity” tax on local business, market rental fees, parking and vehicle registration fees, and the garbage tax (discussed in detail in following chapters).

TABLE 1: MAPUTO CITY BUDGET AT A GLANCE

Revenue Source	% Budget*
Principal Local Taxes & Fees**	30
Property Tax	8
Income Tax	1
"Economic Activity" Taxes	2
Market License Fees	3
Publicity Fees	6
"Garbage/City Cleaning" Tax	7
Vehicle Parking Fees	3
Intergovernmental Transfers	57
Total Projected Revenue, 2005	11 million USD
Total Revenue Received, 2005	5.6 million
Budget Shortfall, 2005	5.4 million USD
% Target Collected	51

Source: Conselho Municipal de Cidade de Maputo. “*Orçamento para o Ano Económico 2006.*” *Maputo Mozambique, December 2005.*

* Total does not equal 100% due to discrepancies in budget report

** Other fees and taxes exist, but are not reported in the 2006 budget.

According to projections for the 2006 budget in Maputo, 56% of municipal receipts are expected to come from the central state. This level of dependency on the central government is not atypical of cities in the developing world and, in fact, reflects somewhat better performance in raising local sources of revenue than a number of other African cities (Ribot and Oyono 2005). Kenyan local governments, for example, are almost entirely dependent in fiscal terms on the center. Ethiopian cities depend on the central state for almost 60 percent of revenue (Smoke 2001).

Yet the 2006 estimate that 56 percent of revenue is channeled from the central government may represent optimism on the part of the Municipal Council concerning

their ability to raise local revenue. In 2005, for example, almost two-thirds of collected revenue (including both current receipts and capital investment) came to the municipality in the form of intergovernmental transfers. Spending for key sectors such as education and health do not appear as lines in the municipal budget as they continue to be financed through central government ministries. The additional support of donors and NGOs, whether through loans, grants, or in-kind support, also do not appear in the budget. Further, the central government may bail out the municipal government during times of crisis. For example, the central state intervened in 2001 in the midst of a “garbage crisis” (described below), allocating additional central state funds for emergency clean up measures (*Noticias*, 11 November 2001).

The possibility of emergency transfers from the central state as well as spending by donors and NGOs softens the city’s budget constraint. As the capital city, Maputo attracts considerable attention, both from the central government and from donors and NGOs headquartered there. A “soft” budget constraint of this type may reduce pressure on local politicians to produce a balanced budget. Where the city can rely on outside sources of funding, the incentives to politicians to raise local taxes are diminished (Moore 1998). This makes the city’s commitment to the garbage tax (discussed in following chapters) particularly remarkable.

2.4. A City of Contrasts: Poverty and Access to Services

A coastal city located in the relatively prosperous and developed south of Mozambique, Maputo is the political and business capital of the country. Yet over half of

the city’s 1.3 million residents live below the nationally defined poverty line⁹ (World Bank Maputo City Statistics 2005), with one-third living in absolute poverty¹⁰ (Jenkins 2000a). Poverty is concentrated in the suburban and peri-urban neighborhoods (*bairros*) that radiate from the old, colonial center or “cement city,” so called because of the prevalence of colonial era architecture and high-rise buildings.

TABLE 2: CHARACTERIZATION OF MAPUTO NEIGHBORHOODS

	Total	Cement City (Urban) (District 1)	Suburban (Districts 2 and 3)	Peri-Urban (Districts 4 and 5)
Population	1.3 million	250,000	750-950,000	195,000
%	100	20	65	15
Characteristics		Colonial center, concrete buildings, commercial & government center, high rise apartments.	High density, single story residential housing, primarily tin and concrete.	Low-density, single story housing, a mixture of tin, concrete and thatch. Prevalence of mixed land use, including urban agriculture.
Water & Sanitation		Most homes (approaching 100%) have household water connections, and connect to the sewer system.	Less than 1/3 of residents have household water connections and none have sewer connections. Majorities rely on public taps or shared connections and use improved pit latrines or septic tanks.	Less than one % of households access municipal water connections and none have sewer connections. Majorities rely on private standpipes or wells, and improved or traditional latrines.
Solid Waste Management		Municipal dumpsters placed every block (less than 300 m), emptied by the city on a daily basis. In one neighborhood (Somersfield), the city provides door-to-door service.	Municipal dumpsters placed at outskirts of bairros, often exceeding 300 m distance from homes, emptied 1-2 times per week. In two neighborhoods, Urbanização and Maxaquene, the city contracts private providers to carry out door-to-door primary collection.	Municipal dumpsters are few and far between. The majority of residents bury or burn their solid waste.

The more affluent cement city is home to approximately 250,000 people or roughly 20% of the population. The densely populated suburbs that lie just beyond the limits of the cement city are home to an estimated 750,000 - 950,000 people, or 65% of the

⁹ The national poverty line is defined as one and half times the monthly minimum wage, which works out to approximately \$3USD per day.

¹⁰ Absolute poverty is defined as income of less than \$1 USD per day (United Nations).

population. The remaining 15% of the population resides in peripheral, peri-urban communities.

The Portuguese built most of the city’s present-day infrastructure, which was designed to meet the needs of a city less than half its present-day size. Before Independence in 1975, Maputo (originally named Lourenço Marques) was a small colonial center. Following Independence, the black population (the majority of whom had been barred from the city by the colonial administration) flooded the newly liberated city. From 1970-1980, Maputo’s population grew by an average annual rate of 22%, from approximately 400,000 to roughly 755,000 (Araujo 2003). Two decades of war, followed by a period of structural adjustment and accumulation of international debt, left little in the national coffers for investment in urban infrastructure. As a result, many of Maputo’s basic infrastructure systems have not received significant investment or improvements in thirty years of Independence, nor have systems been expanded to meet the needs of the growing population.

TABLE 3: CITYWIDE ACCESS TO BASIC INFRASTRUCTURE

Infrastructure	Access (% population)			
	Total City	Cement City (Urban)	Suburban	Peri-Urban
Networked Water (municipal)	32	88	33	0.1
Networked Sewers	20	100	0	0
Networked Electricity	58	95	52	38.5

Compiled from: Hydroconseil/Sureca 2005, GOM Strategic Sanitation Plan, Maputo 2004

As Table 3 indicates, access to basic infrastructure and services varies a great deal by neighborhood type. The overwhelming majority of cement city residents receive full, networked water and sanitation services. Less than one-third of suburban residents, by comparison, are connected to the municipality’s piped water network. Access to services

and infrastructure diminishes the farther one moves out from the city center towards the peri-urban *bairros* (Hydroconseil/Sureca 2005).

Case Studies: Urbanização and Maxaquene:

Urbanização and Maxaquene are suburban neighborhoods that lie on either side of the main road to the international airport. Together these two *bairros* represent approximately three percent of the total city population, or just over five percent of the “suburban” population. An estimated 62% of households in these *bairros* live in absolute poverty (Selvester 2006). Maxaquene is home to roughly 25,000 people, and is one of the oldest, most densely populated of Maputo’s neighborhoods. Urbanização has a population of roughly 14,000 people. It is a younger *bairro* than Maxaquene; it was settled in the early days following Independence by new migrants to the city, and was built up around small industrial yards. Urbanização is also less densely populated than Maxaquene and was developed in a more planned fashion according to a grid. Maxaquene, by contrast, was an unplanned community, and filled with small path and alleyways.

CHAPTER 3: GARBAGE CRISES AND LOCAL RESPONSE

Two watershed (or garbage-shed) events highlighted the acute problems of garbage management in Maputo and acted as drivers of change that resulted, several years later, in the upgrading of SWM in Urbanização and Maxaquene. The 2000 floods, described in Chapter 1, accentuated the problem of solid waste management in the poor, suburban *bairros*. Maputo faced a second garbage crisis, coming on the heels of the floods, when in 2001 a private company contracted by the municipality to collect and transport solid waste walked off the job following non-payment by the city. Garbage piled up across the city in rich and poor communities alike, prompting one news service to dub Maputo the “*capital do lixo*” (“garbage capital”) (*Notícias*, 10 Nov. 2001). The 2000 floods and 2001 garbage crisis merely focused attention on longstanding problems of solid waste management in Maputo, where estimates of the solid waste collected range from 20% (Cuna 2004, an independent academic), to 27% (World Bank 2001), to 35% (GOM, Strategic Sanitation Plan 2004). As point of comparison, a World Bank Survey of local governments across the developing world found that municipal governments collect anywhere from 50 to 70 percent of solid waste generated (Cointreau-Levine 1994).¹¹

This chapter explores the reaction to these garbage crises by groups of residents in Urbanização and Maxaquene who formed organizations (in the first instance an association and in the second a micro-enterprise) to carry out primary garbage collection services. Section 1 briefly describes the organization of the solid waste management sector in Maputo, while section 2 explores the constraints and challenges to the sector.

¹¹ In Nairobi, Kenya, just 25% of solid waste generated is collected by the city (UNEP 2005). In Accra, Ghana, the city government collects approximately 60% (Obirih-Opareh and Post 2002).

Section 3 described the negative externalities and health effects associated with poor solid waste management. Section 4 places the sector in historical context, describing how practices have changed over time. Section 5 assesses the scope of private sector participation in solid waste management, both in Maputo and other developing world cities. Section 6 introduces the small-scale private service providers in Urbanização and Maxaquene.

3.1. Organization of the SWM Sector

Solid waste management accounts for 23% of the municipality's projected expenses for 2006—the single largest item in the city's budget.¹² Maputo is not atypical in this regard. In cities across the developing world, solid waste management typically takes up from 20 to 50% of municipal expenditures (Cointreau-Levine 1994). In Maputo, the only guaranteed source of revenue earmarked for SWM is the garbage tax, which raises enough to cover just 40-45% of the sector's operating costs. The sector therefore operates with a 55-60% shortfall, and must “borrow” funds from the city budget from the next year. As discussed above, the city itself operates with a 50% shortfall between expected and collected revenue, making the transfer of additional funds to the SWM sector far from guaranteed.

Solid waste management in Maputo is the purview of the Municipal Councilor for Public and Environmental Health (*Vereador para Saúde e Salubridade*), who is appointed by the Mayor. The Municipal Councilor in turn appoints the director of the

¹² As point of comparison, the Municipal Department of Infrastructure—which includes roads and bridges, water and sanitation, and public works—accounts for just 12% of municipal spending. This is due in large part to the fact that most capital investment is funded by the central government.

Municipal Directorate for Environmental Sanitation and Cemeteries (DMSC).¹³ DMSC has a staff of almost 800 employees. About 600 work in solid waste management, including truck drivers, garbage collectors, street cleaners, dumpsite managers, and administrative staff.

The city’s performance in garbage collection varies across different neighborhoods. DMSC reports that it removes 64-78% of solid waste from the cement city, and 27-50% of waste from the suburban neighborhood. The National Directorate of Water and Ministry of Public Works and Housing estimate that the city picks up 50-80% of solid waste in the cement city, and just 20% in the suburbs, a figure that is supported by estimates from GTZ (Table 4). Municipal solid waste collection management in the peripheral, peri-urban areas of the city is negligible, and is not discussed here.

TABLE 4: MUNICIPAL SOLID WASTE COLLECTION, BY AREA OF CITY

	Total	Cement City	Suburbs	Urbanização*	Maxaquene*
Population	1.3 million	250,000	750-950,000	14,000	25,000
% SW Collected by Municipality	35	50-80	20	40-75	40-75

Sources: GOM, Strategic Sanitation Plan 2004; author interviews, GTZ

* Includes door-to-door primary collection by private operators.

In the vast majority of neighborhoods (rich and poor alike), the city makes no provision for “primary” or household level collection, but rather concentrates its efforts on “secondary” collection—the process of emptying or up-loading the dumpsters and carting the waste to the municipal dump. Residents must carry their waste to municipal dumpsters located at central collection points. International “best practice” standards suggest that no resident should be required to walk more than 300 meters from their home to reach a deposit point (author interview, GTZ).

¹³ *Direcção Municipal para Salubridade e Cimentários*

In the cement city municipal dumpsters of 1m³ volume are placed every few blocks, well within 300 meters distance from one another. DMSC empties these dumpsters on a daily basis, using a fleet of ten compactor trucks. In the suburban *bairros*, large municipal dumpsters ranging from 6m³ to 10m³ in volume are located on main roads that divide the neighborhoods. The distance from the center of a *bairro* to a municipal dumpster often exceeds 300 meters. DMSC services these dumpsters on average once or twice per week, using a fleet of seven trucks (four of which service dumpsters of 6m³ and three which service dumpsters of 10m³). Service in all areas of the city declines when the trucks fall into disrepair.

Only three neighborhoods in Maputo receive door-to-door primary collection of solid waste. The first is Somersfield, an affluent neighborhood home to many foreign embassies. In this area, residents place their garbage outside their doors in plastic bags and DMSC staff pick it up daily. The other two neighborhoods are Urbanização and Maxaquene. GTZ estimates that 40 to 75% of the solid waste generated in these two neighborhoods gets collected, representing a significant improvement over other suburban *bairros* where the average rate of collection is 20%. (See Table 4.)

3.2. Constraints on the SWM Sector

Maputo's solid waste management problems can be attributed to both limited and poorly distributed resources. The majority of city trucks and dumpsters are located in the cement city (home to just 20% of the population), while the remaining dumpsters are dispersed in the suburban *bairros* (home to more than 65%).¹⁴ Such uneven distribution is due, in large part, to the physical nature of the *bairros*. The roads in the cement city are in

¹⁴ The remaining 15 percent who occupy the peripheral, peri-urban *bairros* receive no municipal service.

good repair, making it possible for garbage trucks to pass through most streets on a daily basis. The suburban *bairros*, in contrast, are largely vehicle inaccessible. It is impossible for the city government to locate dumpsters every 300 meters within these densely populated neighborhoods, largely because the city trucks cannot enter to collect the waste. The trucks have been donated from a number of sources, and require expensive foreign parts and complex repair procedures. The role of international donors in providing these trucks and the constraints their behavior places on the ability of the city to carry out is discussed in detail in Chapter 5.

Maputo's suburban *bairros* suffer from a classic collective action problem in the management of its solid waste. The incentives to an individual household to properly dispose of its garbage are quite low; it is easy enough to toss one's garbage over the fence or into a drainage ditch where it is "out of sight and out of mind." This is particularly true when residents must walk long distances to the dumpsters; many residents reported that they do not have time to carry their waste to the dumpsters each day (author interviews). The negative externalities of improper waste management for the community at large, however, are considerable—as discussed below.

3.3. The Health Connection

Improper management of solid waste carries serious public health consequences, particularly in conjunction with poor sanitation and inadequate drainage. Garbage blocks drains, increasing the risk of flooding and creating pools of standing water that attract malaria or dengue-transmitting mosquitoes (Parkinson 2003). In situations of poor sanitation, fecal matter may become mixed with household solid waste which, when improperly disposed, spreads pathogens throughout the community and increases the risk

of diseases such as cholera and diarrhea (World Health Organization 2006).

Accumulations of garbage attract flies and vermin that can act as vectors for disease.

Further, solid waste itself may be hazardous, particularly in neighborhoods where medical and toxic wastes are not properly managed (GOM 2004). Improvements to solid waste management bring positive health benefits to a community, but only if improvements are made at scale, and not on an ad hoc, house-by-house basis.

3.4. The Changing Nature of Waste and Increasing Burden of SWM

The problem of solid waste management is not new in Maputo, but it has intensified in recent years. Under the Portuguese, garbage collection was the responsibility of the central colonial administration. In the colonial cement city, private firms carried out “bucket service,” removing both solid and human waste (Penvenne 1995). Beyond the cement city, where the African population lived in shantytowns (today’s *bairros*), residents mainly buried or burned their waste and received no municipal service. Even so, solid waste did not pose a significant problem in the *bairros* until fairly recently. During the colonial administration the city was much smaller and neighborhoods were less densely populated; this made it more feasible to burn or bury waste and meant less garbage was left lying in unprotected piles.

Under Frelimo, the centrally administered city council took on responsibility for garbage collection in the cement city. In some areas the City Council carried out door-to-door garbage collection, while in others residents used central dumpsters—much like today. In the *bairros*, municipal solid waste collection was limited. The City Council would occasionally organize tractors to cart waste from the *bairros*, usually following a

community-cleaning campaign organized by local Frelimo representatives. Even as the city's population grew during the war, solid waste remained manageable. This was due, in large part, to acute shortages during the war resulting in far less garbage and a much lower percentage of plastics, metals, or anything else that could be recycled.

Following the peace accords in 1992 and the rapid economic growth of the 1990s, both the city population and the amount of waste (including plastic disposables) increased. These changes present a challenge for SWM. Since decentralization in 1998, DMSC is responsible for running the trucks and emptying the dumpsters. DMSC has experimented with private sector participation, contracting a private enterprise to collect solid waste in the cement city, resulting in crisis in 2001 when the private contractor walked off the job (as noted above). This experience of "privatization" and the garbage crisis that followed left a bad taste in the mouths of many residents, city officials, and Assembly members, and new proposals by City Council members for privatization of the garbage trucks has met considerable skepticism and resistance (author interviews). Granting contracts to small-scale private providers in Urbanização and Maxaquene marked the first new try at incorporating the private sector since the failed experience of privatization in 2001. The "light" nature of PSP in this case (in contrast to other "deeper" and more controversial forms of privatization such as long-term lease and concession arrangements) and the local, small-scale nature of the private providers made granting service contracts to SSPPs in Urbanização and Maxaquene politically palatable among the more skeptical members of the Municipal Council.

3.5. Private Sector Participation in SWM

The free-rider problems and externalities associated with solid waste management discussed above are often cited as reasons why SWM is traditionally perceived as a *public* service (Cointreau-Levine 1994, Crook and Ayee 2005). Yet private sector participation in solid waste management is spreading in cities around the world. A 2000 study by the Swiss Centre for Development Cooperation in Technology and Management (SKAT) listed examples from 16 countries across Latin America, Asia, and Africa in which local governments had extended contracts to private providers for various components of solid waste management, including secondary collection, dump site management, and recycling.

Informal private sector participation in primary collection is a widespread practice, carried out by small-scale private providers on a fee-for-service basis. However, the formal, public contracting of small-scale private providers for primary collection in Urbanização and Maxaquene is a relatively unique arrangement. How this arrangement came to pass is the detailed subject of the next section and Chapter 4. I begin, below, by describing the birth of primary service as a local response to the 2000 floods and 2001 garbage crisis. In Chapter 4, I tell the story of how and why the city government subsequently institutionalized these local initiatives.

3.6. Small-Scale Private Service Providers and Their NGO Partners

In what follows I introduce in detail the small-scale private service providers in Urbanização and Maxaquene, as well as the international NGOs working in these *bairros* that supported their work. I briefly assess the differences between the models these two

SSPPs employ, finding that—despite an apparent “natural experiment”—they are more similar than they are different. Table 5 (below) offers a quick overview of the various actors involved in this process. A detailed timeline of events is attached as Appendix 1.

ADASBU: birth of an association in Urbanização

In Urbanização beginning in 2000, the humanitarian assistance NGO *Médecins Sans Frontières* (MSF) initiated a three-year project focused on cholera prevention in the post flood environment. MSF selected to work in Urbanização because of its high incidence of cholera (among the top five out of more than 60 neighborhoods). Urbanização’s small size (14,000 people) also made the *bairro* manageable location for a pilot project (author interview). MSF’s objectives were to improve access to safe sources of water and sanitation, to promote hygiene education, to improve drainage systems in the *bairro*, and to create a local system for improved solid waste management.

Working through the local leadership (including the Neighborhood Secretary, a local authority figure with links to the city government), MSF organized meetings of representatives of all *bairro* associations, including the women’s organization, youth organization, and representatives of a traditional healer’s association and the churches. Together these leaders agreed upon and formed the “Association for the Development of Water and Sanitation in *Bairro* Urbanização” (ADASBU).¹⁵

MSF helped ADASBU to formalize, registering it with the state as a non-profit association. The leaders of ADASBU were, for the most part, hand selected by the Neighborhood Secretary. After three months of internal debate within ADASBU (with active participation by MSF), the association named five strategic priorities: water,

¹⁵ *Associação para o Desenvolvimento de Água e Saneamento de Bairro de Urbanização*

sanitation, hygiene education, drainage, and solid waste management. These priorities directly reflect MSF’s initial program design but, rather than being directly imposed upon ADASBU, were the result of months of back and forth discussion between ADASBU and MSF.¹⁶ As its first official activity, ADASBU organized a voluntary, *bairro*-wide clean-up campaign, focusing residents’ attention on the problem of solid waste management.

TABLE 5: PRIMARY ACTORS AT A GLANCE

Actor	Type	Origin	Location	Role in SWM
ADASBU	Private provider; community association	Formed through collaboration between MSF and <i>bairro</i> leaders	Urbanização	Operates handcarts for primary collection, reaching 40-75 % of households
UGSM	Private provider; micro-enterprise	Independent entrepreneur	Maxaquene	Operates handcarts for primary collection, reaching 40-75 % of households
MSF	INGO; flood response, cholera prevention	Privately funded NGO	Urbanização	Funded initial project in Urbanização. Intermediated between ADASBU and city government. Project Duration: 3 years, 2001-2004
CARE	INGO; local economic development and flood response	Privately funded NGO	District 3 (but primarily Maxaquene with respect to SWM)	Provided material assistance to UGSM. Assisted UGSM in formalizing micro-enterprise. Intermediated between UGSM and city government. Project Duration: 5 years, 2000-2004
GTZ	INGO, affiliated with German Government	Private NGO, primary source of funding is German government	Citywide	Technical assistance to Municipality, focused on citywide improvements to SWM sector. Intermediated between private providers and the city. Project Duration: 7 years, 2002-2008
Mayor's Office	City government	Directly elected in municipal elections every 5 years	Citywide	Oversees municipal budget, including implementation of taxes. Preparation of contracts for private providers.
DMSC	City Government; Municipal Department for Environmental Sanitation	City managers appointed by the Mayor	Citywide	Responsible for secondary collection. Prepares and manages SWM budget. Preparation of contracts for private providers.

¹⁶ An MSF representative reflected on this process, stating: “For three months we did nothing but talk. At the end of the three months, ADASBU’s priority list reflected just what we had written in our project design. Perhaps this could be seen as manipulation. But it was the result of intensive conversation in the *bairro*, so I see it as simply building on what was already there” (author interview).

The neighborhood clean-up campaign was a one-off event. In order to tackle the problem of SWM in a more sustainable fashion, ADASBU employed a team of six men (residents of the *bairro*) to operate handcarts small enough to access the paths and alleys. These men passed door-to-door collecting garbage from those households willing to pay a small fee of 2,000 *Meticais* (about \$0.08USD) for the service of transporting household solid waste to the municipal dumpsters. About fifty percent of households in the *bairro* participated in this scheme. MSF estimates that in order to cover the costs of the project (which included salary for the six operators, and the costs of maintaining the handcarts, which were donated by MSF) 70-80% of households would have to participate. MSF subsidized the difference. MSF also purchased two new dumpsters for the *bairro*.

UGSM: birth of a micro-enterprise in Maxaquene

Maxaquene, home to 25,000 people, lies just across the road from Urbanização and also suffers from poor drainage and high incidence of cholera. In 2000, a local schoolteacher from Maxaquene, having observed the success of ADASBU's efforts, began to offer fee-for-service garbage collection. This entrepreneur financed the start-up expenses from his own pocket, and employed a team of ten people (men and women) to operate handcarts, charging households 2,000 *Meticais*. In 2001, he approached the international NGO CARE, which ran an economic development and flood recovery project in a number of suburban *bairros* including Maxaquene. CARE agreed to provide material assistance such as carts, rubber boots, and protective equipment for the workers. UGSM's business slowly grew and, by late 2002, Paulino employed a team of 25 of people serving about 900 households in Maxaquene and other adjacent neighborhoods.

Throughout this time, UGSM remained an informal enterprise. Later, when UGSM began to seek a municipal contract (for reasons discussed in Chapter 4), CARE helped UGSM's owner to formalize his business, registering as a for-profit, tax-paying enterprise.¹⁷

A Natural Experiment?

When I first began to investigate the arrangements for SWM in Urbanização and Maxaquene, I was struck by what appeared to be a natural experiment between the SSPPs in each *bairro*, which lie directly across the road from one another and were organized according to two very different models. (See Appendix 2 for a detailed comparison of the two.) Urbanização's association and Maxaquene micro-enterprise seemed to be night and day. One was non-profit, the other for-profit. One was founded with the support of a foreign NGO; the other was the private initiative of a *bairro* resident. One held elections every three years; the other was operated by a single "patrão" (boss). One worked on a range of water and sanitation issues, including solid waste, while the other focused exclusively on solid waste collection.

Upon further examination, however, I found that these two organizations have some striking similarities. Both have obtained formal service delivery contracts from the municipality. Both rely on these contracts for a significant portion of revenue. And both interact with the city government in very similar ways. Further, both (despite the non-profit/for-profit distinction) operate according to well-established business plans. Most importantly, the two organizations carry out an almost identical door-to-door primary collection service.

¹⁷ CARE gave the owner of UGSM a choice of whether he wanted to formalize as a micro-enterprise or as an association like ADASBU. He selected to formalize as a micro-enterprise.

The results of the “natural experiment” therefore revealed two organizations operating according to very different models under similar *bairro* conditions, yielding almost identical results. The nature of the SSPP organization therefore does not appear to influence outcomes in terms of the quality or type of service. Something else, then, must be driving these outcomes. That “something else” is the city government itself—the subject of the following chapter.

CHAPTER 4

GARBAGE POLITICS: VOICE AND ACCOUNTABILITY

The emergence of community-level responses to the garbage crises described in the previous chapter is not surprising in and of itself. Crises, to the extent that they threaten the interests of a group, often provide the impetus for local organization and collective action. What is surprising in this case, however, is that the city stepped in almost three years later to formalize contracts with ADASBU and UGSM, institutionalizing and publicly funding primary garbage collection in Urbanização and Maxaquene. This Chapter discusses how ADASBU and UGSM were able to successfully engage and “bring in” the city.

Section 1 introduces the various actors and agencies in the city. Sections 1 and 2 describe the implementation of the garbage tax and the reactions it provoked, including manifestations of citizen voice and protest. Sections 3 and 4 explore the city’s reaction to the backlash against the tax, which brought it to the negotiating table with UGSM and ADSBU and resulted in the extension of service contracts. Section 5 discusses the positioning of solid waste as an important issue in Maputo politics and the 2003 mayoral campaign. Section 6 describes the outcomes of the service contracts in terms of improvements to SWM in Urbanização and Maxaquene. I conclude in Section 7 with some reflections on the cycle of citizen voice and government response in Maputo as it relates to taxation.

4.1. Who Is the City?

The “city,” of course, is not a single entity but is comprised of a variety of actors and agencies responding to different signals and motivations. I focus in this thesis on actors within the executive branch of the city government. The current Mayor, Eneas Comiche, won the 2003 municipal elections running on the Frelimo ticket with over 76 percent of the vote¹⁸. He took the reigns from Artur Canana, another Frelimo party mayor.¹⁹ The details of this election, in which SWM featured as a campaign issue, are discussed below.

Day-to-day implementation of policy is carried out by appointed city managers, in this case the Municipal Councilor for Environmental and Public Health and the director of DMSC. As political appointees, these city managers are tied to the mayor. City managers are the face of the city at the *bairro* level; they are the first to receive criticism from residents and the media alike. They therefore have strong incentives to keep things running smoothly, to avoid political scandal that might reflect poorly on their job performance.

4.2. The Introduction of the Garbage Tax

In November 2001, at the height of the city’s garbage crisis, the German NGO *Gesellschaft für Technische Zusammenarbeit* (GTZ) initiated a project (AGRESU)²⁰ offering technical assistance to the city government of Maputo in the areas of municipal

¹⁸ Candidates serve without term limits, and are selected internally by their parties in closed-door sessions.

¹⁹ Frelimo also holds 51 out of 64 seats in the Municipal Assembly. Connections between the local Frelimo party and the national party are strong. The current mayor, for example, gave up a Frelimo seat in the national legislature in order to take up the post of mayor.

²⁰ *Apoio ao Gestão do Resíduos Sólidos Urbanos*, or “Assistance in the Management of Urban Solid Waste.”

finance and juridical reforms related to solid waste management. As part of a package of reforms, GTZ advocated for a local “*taxa de limpeza de cidade*” (a “city cleaning” tax), more colloquially referred to as the “*taxa de lixo*” or “garbage tax.” The Municipal Assembly approved this tax in November 2001 and it was implemented in February 2002.

The tax takes the form of a flat fee of 20,000 *Meticais*/month (just under \$1USD) levied upon electricity bills, which provides an easy vehicle for collection. Any household in the city paying for electricity (about 60% of the population) is required to pay the tax.²¹ The tax generates about \$900,000 USD per year, or the equivalent of about 43% of the SWM operating costs.

Why did the Mayor and Municipal Council approve the introduction of a potentially politically unpopular tax? The literature on taxation and accountability suggests that governments operating under “soft” budget constraints may have less incentive to raise local taxes and, because they do not rely on taxpayers, may be less accountable to citizen demands (Moore 1998, Moss et al 2006). It would appear that Maputo operates under such soft constraints; nearly two-thirds of the municipal budget is accounted for through inter-governmental transfers, with less than 30% of revenue raised at the local level (See Table 1 in Chapter 2). Further, support from donors and periodic “emergency assistance” from the central government have helped the city through times of crisis. The central government’s “bail out” of the municipality in the midst of the 2001 garbage crisis would appear to be a prime example. Yet, rather than producing a soft

²¹ Only one-half of residents in Urbanização and Maxaquene are paying users of electricity. The Municipal Council has proposed charging households that are non-users of electricity a small monthly fee of 5,000 *Meticais* (\$0.20USD) per month. However, this proposal has not been implemented, due in large part to the administrative burden of collecting this fee.

constraint, the bail out increased pressure on the Mayor and Municipal Council government to “get their house in order.” Intervention by the central government, just three years after decentralization, attracted a great deal of negative press and was a highly embarrassing episode for the Mayor and Municipal Council.

4.3. Voice and Protest: Unforeseen Consequences of the Garbage Tax

The garbage tax, once introduced, was a major driver of voice and protest, simultaneously angering citizens and instilling them with a sense of entitlement to better service. Citizen protest, in turn, pushed DMSC to improve performance in solid waste management and, ultimately, motivated the city to formalize its relationship with ADASBU and UGSM.

Voicing Anger Over Tax

The garbage tax was introduced in 2002 during some of the worst accumulations of solid waste. Residents of Maputo suddenly saw new charges for “city cleaning” levied on their electricity bills, but did not receive any explanation of the tax and did not see any immediate improvement in service. Many residents therefore refused to pay this portion of their electricity bills. An NGO representative recalled the prevailing sentiment, where residents asked: “Why should we pay this tax when the city is full of garbage?” (author interview). Residents complained vocally to Municipal Council. After about five months, the city was forced to suspend the tax for almost a year, during which time the city (with assistance from GTZ) carried out an extensive publicity campaign explaining the need and the uses of the tax. The city also introduced changes to the tax, charging “big

producers”²² of solid waste according to a scale, rather than a flat fee, in an effort to make the structure of the tax less regressive.

Voicing Demand for Better Service

The most dramatic demonstration of citizen voice was a series of protests, also following the city’s introduction of the garbage tax, in which residents blocked city roads with garbage to dramatize the accumulation of waste in their communities. This took place in rich and poor neighborhoods alike. In the cement city, residents blocked a major intersection in the affluent area of Central/Alto Mãe. Residents in Urbanização and Maxaquene also blocked the road to the airport. The city did not react to these protests in a punitive fashion, but doubled efforts to improve garbage collection following the protests. While not a common occurrence, protest of this type continues to manifest itself periodically, particularly in the suburban *bairros*. Most recently in July 2005, residents of Urbanização, angry that the dumpsters near their homes had not been emptied, again blocked the road with garbage. Residents involved with the protest report that, “The city came the next day to clean things up. Things were better after that for a time” (author interviews). Residents and city officials in this case are engaged in a cycle of voice and response, where periodic protests push the city to improve service, followed by periods of “slack” when service again deteriorates (Hirschman 1970). This pattern of voice and the city’s response is important to understanding the non-linear path that service improvements often take, moving forward in fits and starts.

²² More than 50 Kg or 100 liters per day

Finding Voice

Why did Maputo residents raise their voices to complain about poor SWM when they did, following years of inadequate SWM service in which protest did not occur? A history of protest against the government does not have deep roots in Mozambique, following Frelimo's central rule, the trauma of the civil war, and the relatively recent efforts at democratization. One of the directors of ADASBU explained: "Here in Maputo we are a passive people. We don't like to fight. We have been through the war, and no one wants to go back. People are scared of each other, scared of the police, scared of the government. People will not act." Yet, surprisingly, people did act in Maputo, registering their discontent through protest, blocking roads, and lack of compliance with the tax.

Albert Hirschman's discussion of "exit, voice, and loyalty" (1970) provides a framework in which to explore the reasons why residents came to express their demand for better service. Hirschman begins with the premise that the quality of a product or service offered by a firm or organization is likely to deteriorate over time. Consumers of this product or service have two choices: "exit" (choosing either to buy another product or to leave the organization) and "voice" (articulating dissatisfaction in the hopes of improving quality). Voice, Hirschman argues, is a residual of exit; when an exit option is unavailable, consumers of a good or service are more likely to exercise their voice. In Maputo, *bairro* residents depend entirely on the Municipality to carry out secondary collection and, as such, have no "exit" option. Further, while it is possible for individuals to "opt out" of the city's system by burying or illegally dumping solid waste (or, in the case of affluent residents, contracting a private company), no resident of Maputo can escape the negative externalities that result from poor solid waste management, including

health effects and increased risk of flooding. Without clear “exit” options and faced with these externalities, residents began to voice their outrage over the quality of service.

Yet an alternative to expressing voice is simply to acquiesce or show indifference. Why in this case did Maputo residents chose voice? First, the 2000 floods and the 2001 garbage crisis magnified the problem of solid waste to a level where it became difficult for individual households to ignore (accumulating “mountains of garbage” could not easily be put “out of sight and out of mind”). Second, and most interesting, the various protests and manifestations of voice all took place after the city introduced the garbage tax. A member of MSF’s staff observed: “Before the tax was introduced, no one would have said a peep. They did nothing. After the tax, people thought, ‘I am paying, so let me see some service’” (author interview). The tax, the first of its kind in Maputo earmarked for a particular service, reinforced a sense of entitlement among Maputo residents, leading to voice and demands for government accountability.

4.4. Bringing the City to the Negotiating Table

Another immediate effect of the tax was to galvanize ADASBU and UGSM to begin lobbying the city government for some contracts. Both ADASBU and UGSM operated on a fee-for-service basis, and the introduction of the tax threatened their projects since households in Urbanização and Maxaquene were essentially being charged twice for garbage service (once by the city in the form of the tax, and once by either ADASBU or UGSM). UGSM reports, for example, that its number of paying clients fell from about 900 to less than 100 after the introduction of the tax. Beginning in 2002,

ADASBU and UGSM (with support from MSF, CARE, and GTZ) began to pressure the city government to ensure that their work would not be threatened by the tax.

Facing public backlash to the tax, the city saw the contracts in Urbanização and Maxaquene as a public relations maneuver—a way to be seen acting to improve garbage collection in some of the city’s poorest neighborhoods. But why did Urbanização and Maxaquene, as opposed to other neighborhoods, receive the attention they did? The Municipal Councilor suggests that the city was responding to demand from *bairro* residents and from ADASBU and UGSM, explaining “*quem não chora, não mama*” (“he who doesn’t cry, doesn’t feed”). Yet other factors, perhaps less obvious than local demand, also motivated the Mayor to negotiate contracts in Urbanização and Maxaquene. First, the contracts represented a low-cost response to the problems of garbage in the *bairros*—just 1.5% of the total budget for SWM. Second, the city was able to build upon an established service, rather than start something new. Third, the location of Urbanização and Maxaquene is key; the two *bairros* lie on either side of the main road to the international airport and are highly visible to international visitors and a potential source of embarrassment to city and national officials if swimming in garbage.

In 2002, MSF, CARE, and GTZ established a Solid Waste Management Working Group in order to bring ADASBU and UGSM face-to-face with city officials in monthly meetings to discuss the formalization of a public-private partnership for solid waste management. Contracts were finalized and approved by the end of 2003, but were not implemented until early 2004, for reasons discussed below. These contracts spell out the responsibility of ADASBU and UGSM to keep the *bairros* of Urbanização and Maxaquene “in clean condition” and allocate funds (raised via the garbage tax) according

to *bairro* size, number of employees, and number of handcarts. The contracts for ADASBU and UGSM cost the city \$1000 and \$1500 USD/month respectively, or a total of \$30,000 USD per year.

4.5. The Ribbon Cutting Effect: Politicians Seeking Credit

Solid waste management is one of the few areas that is exclusively the purview of local government where municipal politicians have the jurisdiction to act and can take full credit (“cutting the ribbon”) for reforms. “Cleaning up the city” became a central focus of Mayor Canana’s administration (1998-2003), particularly following the embarrassing episode of the 2001 garbage crisis. But why did SWM receive such privileged attention, relative to other pressing issues in the city, such as the serious annual threat of cholera? The answer can be attributed in part to the desire of local politicians to be seen doing something to improve public health but acting with limited jurisdiction. Many of the sectors closely linked to disease control, such as water, sanitation, and drainage, do not fall under municipal control. Mozambique’s National Directorate for Water (DNA), for example, devises and enacts water and sanitation policy at the national level with only minimal input from the municipalities. Maputo’s municipal drainage cabinet is officially an office of the DNA. Solid waste management therefore received a privileged place on Maputo’s political agenda, first under Mayor Canana and subsequently under Comiche.

The contracts were completed by late 2003 before the mayoral elections. However, since a new mayor was to take office in early 2004, the Municipal Council decided to wait to implement the project. Despite the apparently seamless transition from

one Frelimo government to another, intra-party politics were at work. Many within the Municipal Council wanted to cast their lot in with the new candidate even before the old mayor had left office. This was due in part, to allegations of corruption and a general sense of having fallen from grace that surrounded out-going mayor Canana.²³ Comiche was widely perceived as a “reform” candidate, who campaigned vigorously on issues of corruption as well as solid waste management at the municipal level , and saw the contracts as a “quick win” for his new administration.

4.6. Assessing Progress: a Bumpy Path

Thus far I have described the nature of the relationship between the private providers and city agencies and between citizen-consumers and politicians. But what are the outcomes of these shifting relationships? What effect does all of this have on the quality of service delivered to residents of Urbanização and Maxaquene?

The impact of the primary collection in Urbanização and Maxaquene is difficult to assess in exact terms. GTZ, the only organization to have evaluated the performance of ADASBU and UGSM, estimates that they collect waste from 40-75% of households in the two *bairros*, transporting it to the city dumpsters. This variability is the result of the city’s mixed performance in secondary collection. When the city does not empty the dumpsters, ADASBU and UGSM have no place to deposit their garbage and therefore suspend their household collection until the city services the dumpster.

It is important to note that even when performing at the low end of GTZ’s estimate, ADASBU and UGSM continue to collect a higher percentage of garbage than

²³ Mayor Canana had become embroiled in accusations of corruption towards the end of his term; in 2002 members of the Municipal Assembly accused Canana of diverting funds, a claim that was never substantiated but which cast a cloud of mistrust over his administration (AIM, November 6, 2003).

the suburban average of 20%. Further, residents, officials, and NGO staff all observed that the garbage collection situation is much improved today compared to the garbage crisis of 2001.

4.7. Taxation, Voice, and Accountability

The introduction of the garbage tax drove the process that brought the city to the negotiating table and resulted in service contracts for ADSBU and UGSM. The manifestations of voice and protest that accompanied the tax, and the city's willingness to later make adjustments to the tax and engage in a public outreach campaign, dramatize the potential of local taxation to reinforce the relationship between elected officials and city residents, instilling in each a respective sense of accountability and entitlement. Mick Moore describes this as a "bargaining process" resulting in a "fiscal contract" between service-providing state and tax-paying citizens (Moore 1998, Center for the Future State/IDS 2005). The director of UGSM summed up the nature of this interaction nicely: "Before, people waited for a handout from the state. Today, things have a price. We pay our taxes, and we expect service." Through taxation and the responses it elicits, the city is beginning to demonstrate accountability and responsiveness to citizen demands. Citizens, in turn, are learning to be vocal self-advocates for service improvements.

CHAPTER 5: DONOR DYNAMICS: HELPING AND HINDERING

International INGOs and donors play a big role in Maputo’s solid waste sector. Bilateral donors have given equipment—primarily trucks—for garbage collection, multilateral agencies such as the World Bank support large-scale infrastructure improvements to Maputo’s dump, and the international NGOs discussed in preceding chapters have, in different ways, supported facets of the upgrading process in Urbanização and Maxaquene. This chapter explores the role of various donors and INGOs in this case, asking how—in one of the world’s most aid dependent countries—some international agencies have come to play positive roles that build the city’s capacity for service delivery. At the same time, this chapter explores a more negative manifestation of donors’ power that has undermined the city’s capacity. Taken together, the picture of the donor/INGO role is highly mixed. While the literature on donor agencies holds up the ideal of “good donorship” or laments the “bad behavior” of donors, this case presents a more complex picture where—in one city and one sector—donors have both helped and hindered the city’s attempts at service improvement.

Sections 1 and 2 place the case in context by reflecting on the history of donor-state relations in Mozambique. Sections 3 through 5 demonstrate how the case presented here cuts across the categories of “good” and “bad” donors. Three examples of donor or INGO involvement in the SWM sector highlight the mixed role of external actors, ranging from positive to negative. The first (most positive) case is that of the garbage tax, where GTZ provided technical assistance that resulted in lasting changes to policy and increased the city’s capacity for local taxation (section 3). The second story describes the

mixed results of INGO intermediation between the city government and ADASBU and UGSM (section 4). The third (and most negative) is the story of the donated trucks (section 5). Section 6 reflects upon the lack of donor accountability in the case of the trucks, contrasting it with the dynamics of voice and accountability between citizens and city government described in Chapter 4.

Before proceeding, a clarifying note is necessary on the term “donor, ” by which I refer both to multi- and bi-lateral institutions that make fiscal and material donations to the city government, and also to international INGOs, which offer in-kind support and technical assistance. While it is in some ways an oversimplification to lump these actors together, they have at least one important characteristic in common: none are directly accountable to the city government of Maputo or its citizens, but respond to pressures in their home countries. Donors representing foreign governments often work according to annual procurement cycles, and must answer to myriad political pressures in their home countries. INGOs are also constrained by budget cycles, often pursuing short projects timetables. There are, however, important differences between these types of external actors, as the examples below will demonstrate. I therefore use “donor” in a general sense to denote the presence of an external actor, but disaggregate between and within bilateral donors, multilaterals, and international INGOs.

5.1. State-Donor Relations in Mozambique and Maputo

Donor-state and INGO-state relationships in Mozambique in 1970s and early 80s were highly conflictual, as the Frelimo government strictly regulated the presence and activities of foreign agencies. Large multilateral donors such as the World Bank were not

welcomed. Since the late 1980s, however, the balance of power between the state and donors shifted as Mozambique, its economy crippled, opened its doors to an influx of donors, agencies, and INGOs—what Hanlon (1991) has called an “aid invasion.” In 1987, President Chissano introduced a structural adjustment reform package and, for the first time, signed an agreement with the IMF and World Bank. The number of NGOs active in Mozambique jumped from just seven in 1980 to nearly two hundred in 1990 (Hanlon 1991). By the 1990s Mozambique was the most highly indebted country in the world.²⁴ Today, Mozambique remains one of the world’s most donor dependent countries, with an aid/GDP ratio of 15% (two times the average for sub-Saharan Africa), receiving an average of US \$58 per inhabitant each year, compared to a sub-Saharan average of just \$26 (Hodges and Tibana 2005). Over one-half of public expenditures are financed through foreign aid (World Bank 2005).

In addition to massive inflows of official development assistance, Mozambique has seen a proliferation of INGOs acting as private service providers at the local level, providing in-kind support including materials and equipment (such as medicines, text books, materials for latrine construction). International NGOs often partner with local private organizations—ranging from churches, to community associations and “self-help” groups, to for-profit enterprises including small-scale entrepreneurs—in developing projects for service delivery (dos Anjos Rosario 1999).

²⁴ Mozambique has benefited from the World Bank/IMF coordinated Highly Indebted Poor Country (HIPC) Initiative, qualifying for debt relief beginning in 2001.

Aid and Accountability

Too much aid delivered in an uncoordinated fashion can weaken the accountability links between governments and citizens, and may undermine government capacity, including the ability to plan, rationalize resources across sectors, and deliver services. At both the national and municipal levels in Mozambique, high reliance on non-public sources of revenue (the ability to spend “other people’s money”) weakens the links of accountability between the government and its citizens, and undermines incentives to make efficient and rational decisions regarding public spending (Moore 1998). At the level of Maputo, “other people’s money” includes transfers from the central state and support from INGOs that, because this revenue (or in-kind support) is not locally raised, fail to reinforce the accountability links between local politicians and citizen-consumers of services.

Unable to Plan

A heavy presence of international donors also undermines the ability of both local and national governments to plan. In Mozambique, more than two-thirds of foreign assistance takes the form of project aid earmarked for a particular sector or activity (Killick et al 2005). This undermines the government’s ability to plan at a regional level or to reallocate resources across sectors or regions. The GOM therefore functions without a hard budget constraint, making it difficult to rationalize expenditures across an array of services and needs. Further, a multitude of donors with different agendas and reporting requirements make it difficult for the government to coordinate, and places a heavy administrative burden on the state.

At the national level, efforts are underway to coordinate the lending and reporting requirements of donors through the formation of the “Programme Aid Partnership” (representing donor agencies from 16 countries and the World Bank, the European Commission, and African Development Bank).²⁵ However, no parallel body currently exists at the city level to coordinate the activities of INGOs and donors in Maputo. Following the 2000 floods, INGOs and the city government of Maputo held weekly meetings to coordinate the influx of aid. Coming out of this experience, some INGOs (CARE among them) proposed that the city form an office to coordinate INGO activities. This proposal, however, fell by the wayside in the transition from the Canana to the Comiche administration. The experience of collaboration between INGOs and the city in the context of the floods did, however, have some lasting spillover effects, described below.

5.2. “Hollowing Out” the State?

The various criticisms of donors and INGOs presented above paint a picture in which external aid and development agencies have the unintended effect of “hollowing out” the state—creating donor dependency, undermining government planning capacity, and weakening the incentives for government accountability to citizens (Hanlon 1991, Ribot and Oyono 2005). Given this portrayal of donors and INGOs, it is surprising to find that, in the case of Maputo’s solid waste management sector, some INGOs have played a

²⁵ The “Programme Aid Partnership” includes 18 donor agencies (African Development Bank, Belgium, Canada, Denmark, European Commission, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and the World Bank) that provide budget support to Mozambique. This group is also referred to as “G-18.” NGOs do not participate in the G-18, and their activities and spending are therefore not included in national accounts of development assistance.

highly positive role—one that *builds* rather than undermines the capacity of the city government.

In what follows I present two examples in which INGOs have, in different ways, motivated and supported the efforts by the Maputo city government to improve solid waste management both citywide and in Urbanização and Maxaquene. In contrast, I follow with a third example in which a group of donors acted in way that undermined the city’s ability to improve its performance in garbage collection.

5.3. A Capacity Building Approach: GTZ and the Garbage Tax

Through its AGRESU project, GTZ has worked with the municipality of Maputo on a range of reforms aimed to improve the city’s capacity to carry out solid waste management. While other INGOs have projects at the *bairro*-level, AGRESU is one of the very few organizations in Maputo whose primary client is the city government itself. Further, GTZ is one of the few INGOs to formally partner with the Municipal Council by signing a memorandum of understanding (MoU).²⁶

GTZ/AGRESU has worked with the city to shape the legal and fiscal context for solid waste management. This has included drafting new city by-laws to allow for private sector participation in solid waste management in the *bairros*, as well as working with the city to craft the service contracts for ADASBU and UGSM. Perhaps the most impressive of GTZ’s contributions has been to work with the Mayor, the Municipal Councilor, and the director of DMSC to develop and implement the garbage tax. This tax has not only increased the city’s fiscal capacity for solid waste management (generating revenue for

²⁶ CARE also signed a MoU with the Municipal Council in the context of its five-year “Kuyakana” project, concentrated on economic development and flood recovery in the suburban bairros.

about 43% of SWM operating costs), but has also provided the city with important experience in crafting and implementing new local taxes. Through this, the Municipal Councilor and others in the city have gained experience in designing and implementing local taxes—an important development in the context of fiscal decentralization where local governments are expected to self-raise increasing amounts of revenue. Introducing the garbage tax, and subsequently responding to the protest it sparked by carrying out public outreach, has been a significant learning experience for the city government. GTZ's role has to be to accompany the city through this process, learning alongside the city.

5.4. The Intermediary Role of International NGOs

As a group, the MSF, CARE and GTZ played an important intermediary role in linking ADASBU and UGSM and the representatives of city. This kind of role for INGOs was unprecedented in Maputo before the floods. Building on the climate of post-flood collaboration, the INGOs established the Solid Waste Management Working Group to bring the small-scale private providers (ADASBU and UGSM) face-to-face with city government (a practice that does not have deep roots in Maputo, given the long history of central government and the general perception that ideas and projects come from the state above and not from the community below.) The floods forced the INGOs and the municipality to collaborate—a practice subsequently carried over to the SWM sector.

The INGOs not only created the Working Group as a mechanism to bring the SSPPs and the city together, but also provided ADASBU and UGSM with backing and support during the negotiations, acting as advocates on their behalf. However, since the

contracts were signed into effect, the Working Group has ceased to meet. Further, both MSF and CARE have since completed scheduled projects in Urbanização and Maxaquene and are no longer present in these *bairros*. Without the advocacy and backing of the INGOs, ADASBU and UGSM have not found strong voices with which to lobby the city government with complaints about the quality or regularity of secondary collection.

The impact of the INGOs in this case was mixed. On the one hand they played an essential facilitator's role, bringing public and private actors to the negotiating table and providing ADASBU and UGSM with support throughout the negotiations. However, the short timeline of the INGOs projects, meant that the INGOs left ADASBU and UGSM to fend for themselves far before enduring relationships between the SSPPs and the city government could take root.

5.5. Undermining Capacity: Truck Donors

Despite formal contracts that lay out the responsibility of DMSC to carry out secondary collection, ADASBU and UGSM complain that there are periods in which the DMSC does not empty the *bairro* dumpsters. This problem is not confined to Urbanização and Maxaquene, but plagues neighborhoods (rich and poor) across the city. One of the primary causes of the city's poor performance in secondary collection is its inability to keep a working fleet of garbage trucks on the road. The problem of the trucks is largely due to uncoordinated and top-down behavior by donors.

The city operates a fleet of 18 trucks, including four types and five different brands, which each require different parts and different maintenance techniques. The

biggest donors of trucks are Italian Cooperation and the government of Switzerland. The most recent donations in 2001 and 2004 were from Italian Cooperation. By 2006, the majority of these trucks were already experiencing serious mechanical difficulties and breakdowns. The majority of the trucks are European makes, including Ivecos (a subsidiary of the Italian Fiat Group, one of the world's largest transport sector manufacturers), Mercedes Benz, and MAN Diesel. The Indian company TATA makes another truck. The diversity of trucks (and their different technical requirements) makes maintenance and repair particularly challenging. DMSC does not have a staff of mechanics with sufficient skill to learn the myriad procedures needed to keep these different trucks in working order. Further, it is difficult and costly for the city to obtain spare parts for European brands of truck.

The result is a hodgepodge collection of makes of trucks without a coherent strategy for maintenance or repairs. A representative of an INGO who observed the process by which Italian trucks were donated in 2004 recalls that the director of DMSC specifically asked to be allowed to choose makes of truck for which spare parts are locally or regionally available. This request was flatly refused by Italian Cooperation, which instead offered Italian IVECOS trucks (author interview). In part this situation reflects the desire of donors to give easily quantifiable material assistance and equipment over other kinds of aid. Bilateral donors also respond to pressure from their home governments; the Italian Fiat company, for example, has a lot to gain if Italian Cooperation pushes Ivecos worldwide.²⁷ Through these practices, the donors put the city

²⁷ This behavior has a long history. In the 1980s, Italy was one of the biggest donors to Mozambique. It also had a reputation for giving the most "tied aid." For example, Italian-funded emergency airlifts were only allowed to carry Italian products (Hanlon 1991). Italy currently ranks second to last out of 21 countries ranked in terms of the amount of "tied aid" on the Center for Global Development's

of Maputo on a path in which broken down trucks and lack of maintenance capacity are inevitable.

5.6. Donor Accountability?

When I asked a number of INGO staff and city officials about the problem of the trucks, I inevitably received a rueful shrugging of shoulders in response. In the words of one INGO representative: “Although everyone knows that such donations—without maintenance funds or agreement about the make of vehicles in order to guarantee spare parts locally—are a problem, this has not been respected by the donors” (author interview). Giving equipment without regard to maintenance is a classic development project pitfall, and the donor community has been aware of these shortcomings for many decades (Tendler 1975). Why, then, does this problem persist in Maputo, despite the fact that everyone (from INGOs, to donors, to city officials) is acutely aware of the problem? Why did the Municipal Councilor’s plea to Italian Cooperation to be allowed to purchase trucks for which spare parts would be easily available go unheard? The answer, at least in part, is that there are no clear accountability mechanisms to check the donors’ behavior. Motivated by political mandates from their home countries (for example, to buy Italian equipment), bilateral aid agencies respond much more to signals and pressures from their home countries, as well as yearly budget appropriate cycles, than they do to complaints or demands from the Maputo city government.

In Chapter 4, I described a cycle of citizen protest (voice) and government response that, in an incipient form, has produced greater accountability to citizen-

“Commitment to Development Index” (The index penalizes “tied” aid, which recipients are required to spend on products from the donor nation.)

consumer demands on the part of city officials in Maputo. Residents and taxpayers, through a combination of protest (blocking the roads) and resistance (refusing to pay the garbage tax) were able to “hold the city’s feet to the fire.” The city’s ability to improve its performance in garbage collection, however, is constrained by the poor condition of the garbage trucks and the inability to make repairs. The city’s complaints to the donors of trucks have fallen on deaf ears, and many observing this process in Maputo simply shrug their shoulders as if to say, “that’s just how donors are.” No one holds the donor’s feet to the fire. Whereas residents of Maputo reacted to a lack of “exit” by exercising their voice, officials in the city government adopt a “beggars can’t be choosers” mentality when faced with an apparent lack of “exit” regarding donor aid. Given the pervasive climate of donor dependency at both the national and local levels, politicians in the Maputo government feel they have little negotiating power or room to maneuver *vis a vis* the donors.

The picture of city-donor relationships, however, is not entirely bleak, as the examples of INGO intermediation and capacity building around the garbage tax have demonstrated. In what follows, I draw out three elements from this case in an attempt to reflect on why donors and INGOs took such different approaches, yielding such different results.

First, INGOs acted in a more responsible fashion than bilateral donors.

It would seem that bilateral donors, who respond to elected governments and (by extension) taxpayers in their home countries, would act in a more accountable fashion than private INGOs. In this case, however, home-country politics led to bad, not good, donor behavior. It is not entirely accurate to say that the bilateral donors are

“unaccountable”; the questions is: *who* are they accountable to? In the Italian, example, the donor agency is accountable to the Italian government with the interests of one of its major companies at heart. The INGOs also respond to external pressures and objectives but, in this case, were able to pursue their work relatively free from the same political and economic pressures as the bilateral donors.

Second, unquantifiable “deliverables” generated positive results.

GTZ’s rather amorphous goals of “capacity building” and “technical assistance” produced more lasting and positive results than the bilateral donors’ concrete deliverable of trucks. To donors, giving equipment is appealing; it is easy to quantify, whereas something like “capacity building” is elusive. In this case, GTZ partnered with the city to muddle through complex policy reform issues. The result was significant learning on the part of city officials who gained new experience in the art of crafting, implementing, and politically managing a tax. Because GTZ’s mandate was broad, it had the flexibility to accompany the city along a long and bumpy road of policy reform.

Third, the challenge of short time horizons affects donors and INGOs alike.

Bilateral Donors, operating on short annual budget cycles, give trucks without forethought to questions of maintenance and sustainability. INGOs also operate according short-term funding timelines. GTZ’s presence in the solid waste sector has been somewhat longer than that of the other INGOs and donors, involving a six year commitment. MSF’s and CARE’s involvement in the project last just three years (2001-2004). The limitations of short time horizons are summed up in a CARE reflection document: “One of the frustrations...has been the impossibility to commit to long term initiatives because of funding uncertainty, whilst recognising that only a long-term

engagement will begin to change relationships within the city, and bring about sustainable improvements.” (Selvester 2003).

CHAPTER 6: CONCLUDING THOUGHTS

The preceding chapters have described the birth, implementation, and development of an innovation in solid waste collection in two poor neighborhoods of Maputo. Through the cooperation of public agencies and private providers, the residents of Urbanização and Maxaquene receive a level of garbage service unparalleled in other suburban *bairros*. While the average rate of collection in Maputo's suburbs is just 20%, in Urbanização and Maxaquene 40 to 75% of solid waste generated is gathered through an unique combination of private primary collection and public secondary collection. Yet the success of these projects may be undermined by the city's ability to carry out secondary collection due to the poor repair of the city's trucks. The behavior of foreign donors in the solid waste sector who have given trucks in a top-down fashion without thought to maintenance and repair, inhibits the city's ability to make sustained improvements to solid waste management. Reflecting upon this case, four main findings emerge that cast some light on this, and potentially other, service-upgrading processes.

1. The city government adopted, expanded, and sustained, an initiative born in the private sector.

Primary garbage collection in Urbanização and Maxaquene was born out of crisis when private organizations began to offer door-to-door collection following the floods in 2000. The nature of solid waste management, however, presents a collective action problem. The public health benefits associated with solid waste management only take effect at scale; the majority of residents must properly dispose of their garbage in order to

reduce health and flood risks for the community at large. Operating on a fee-for-service basis, UGSM reached just 900 households (less than four percent of Maxaquene's population), while ADASBU serviced about 50 percent of households in Urbanização, (but was subsidized by MSF). These arrangements were not sustainable, and did not have sufficient reach to generate the desired health benefits. Government intervention overcame this collective action problem by funding ADASBU and UGSM to offer primary collection free of charge to all *bairro* residents, financed instead through the garbage tax.

In this case, the private sector provided an innovation while the public sector expanded and sustained the practice, leading to significant improvements in garbage collection in Urbanização and Maxaquene. This case stands in vivid contrast to the vast literature on “privatization” in which public services are contracted out or devolved to the private sector. Rather, the city government stepped in to institutionalize and formalize what had been a private service.

2. User “voice” was essential in motivating and sustaining service reforms.

City residents and representatives of the city government have engaged in a cycle of voice and response related to the garbage tax that has helped to improve both garbage collection and (in an incipient form) government accountability. Citywide, numerous residents expressed their dissatisfaction with the quality of SWM service by refusing to pay the garbage tax. In some areas of the city, residents also used their voice to indicate displeasure with the quality of service, blocking the roads with garbage to dramatize their plight. “Voice” in this case took the form of resistance and protest (blocking the streets).

The literature on service-upgrading places a heavy emphasis on “participation” (Zuin 2005), but does not often recognize the role of protest (seen as a negative manifestation of politics) in pushing forward a reform agenda.

3. Local taxation drove citizen voice and government accountability.

The introduction of the garbage tax drove forward the process that brought the city to the negotiating table and resulted in service contracts for ADSBU and UGSM. The manifestations of voice and protest that accompanied the tax, and the city’s later willingness to make adjustments, dramatize the potential of local taxation to reinforce the relationship between elected officials and city residents, instilling in each respectively a sense of accountability and entitlement.

The garbage tax is the first of its kind earmarked for a particular service. The fact that citizens are now (following a public outreach campaign) willing to pay the tax has implications for other public goods provision; it demonstrates willingness to pay and acceptance of taxation for services provided.

4. Where the city sees no “exit” and does not exercise its “voice,” there is a lack of donor accountability.

Bilateral donors have acted in an uncoordinated and top-down fashion that undermines the city’s ability to keep a working fleet of garbage trucks on the road. In particular, donors have required that the city purchase specific brands of truck, highlighting the problems of “tied aid.” This case illustrates in stark terms that the problem of “tied aid” is still alive and kicking, despite self-congratulation in policy

circles for having successfully tackled the issue (Center for Global Development, 2006). In one instance, the Municipal Councilor expressed a desire to purchase trucks for which spare parts would be locally available, but his concerns were summarily dismissed by the donor. In contrast to Maputo residents, who reacted to a lack of “exit” by engaging in protest and resistance, the city government has adopted a “beggars can’t be choosers” mentality when faced with an apparent lack of “exit”.

A Final Thought: bias for hope²⁸

Through the fog of donor dependency, politicians in Maputo may not be able to see room to maneuver in their interactions with donors. Yet it is possible that Maputo’s politicians have more leverage than they presently think they do when dealing with donors. Donor agencies have the political and organizational imperative to make grants and loans (to “move money”) in order to justify their existence and defend their budgets (Tendler 1975). Further, Mozambique is considered one of the few “African success stories,” making it “fashionable” with donors (Hanlon 2004). Donors therefore want, indeed *need*, to have projects in Mozambique, and in Maputo in particular. While to date Maputo’s politicians have not fully recognized this fact, they are in a position to be much more demanding of donors and, as such, may be able to “hold the donors’ feet to the fire.” For example, the Center for Global Development’s “Commitment to Development Index” penalizes tied aid. To the extent that donor governments care about ratings like these, publicity around the “tied aid” issue could become an important source of “voice” for Maputo’s municipal government.

²⁸ The phrase “bias for hope” is borrowed from Albert Hirschman, *A bias for hope: Essays on development and Latin America*, 1971.

APPENDIX 1: TIMELINE OF EVENTS

1975	Independence
1992	Peace Accords
1994	First Multiparty elections
1997	Ley de Autarquias establishes the framework for political and fiscal decentralization
	Maputo is one of 33 municipalities recognized
1998	First Multiparty elections
	Mayor Canana is elected
1999	CARE initiates economic development project in Maputo suburban <i>bairros</i>
2000	Jan./Feb. A series of cyclones and tropical storms produce worst flooding in 100 years
	MSF initiates flood recovery/cholera prevention project in Urbanização
	ADASBU formed, begins to carry out primary SW collection
	Private entrepreneur in Maxaquene begins carrying out SW collection
2001	CARE assists Maxaquene micro-enterprise to purchase equipment
	Nov. Citywide "garbage crisis" when private contractor walks off job in cement city
	Nov. Central Government "bail out" to Municipality for emergency cleaning of city
	GTZ proposes "garbage tax"
	Nov. Municipal Assembly approves tax
2002	Feb, Garbage tax introduced as levy on electricity bills
	Solid Waste Management Working Group begins to meet (includes ADASBU, Maxaquene entrepreneur, MSF, GTZ, CARE and city representatives)
	CARE assists Maxaquene micro-enterprise to formalize business, under name UGSM
	Public outcry over garbage tax; citizen refusal to pay
	Protests in cement city and <i>bairros</i> ; residents block streets with garbage
	June. Garbage tax repealed (after five months)
	Municipal Council begins public outreach/education campaign on the tax
2003	June. The garbage tax is reintroduced
	Nov. Second Municipal elections; Mayor Comiche is elected
2004	Jan. Comixhe takes office
	April. SWM service contracts extended by the city to ADASBU and UGSM
	MSF and CARE terminate projects in the <i>bairros</i>
2005	June-Aug. First dates of fieldwork
	August. City initiates plans to expand pilot project to other <i>bairros</i>
	Sept. Changes to garbage tax (introducing differentiated rates for "big" producers of SW)
2006	March. Second period of fieldwork.

**APPENDIX 2:
COMPARISON OF ADASBU AND UGSM**

	ADASBU	UGSM
Bairro	Urbanização	Maxaquene A
Population	14,000	25,000
Model	Association (not-for-profit)	Micro-enterprise (for-profit)
NGO Support	initial funding and program design assistance from MSF (2000-2003). Current funding from WaterAid.	Initial non-monetary support from CARE (materials and assistance formalizing business).
Program Areas	Water, Sanitation, Drainage, Hygiene Education, Solid Waste Management	Solid Waste Management
Structure	Elections open to all bairro residents every 3 years. Yearly Assembly meetings open to public. Elected Director, Secretary, Treasurer (paid "subsidy"). Program Area "Socios" (paid "subsidy").	One business owner (the "patron"). He employees field supervisors and garbage workers.
Revenue	Municipal Contract for SWM. Donations of equipment for sanitation work from UNHabitat. General program support donations from WaterAid (2003- present). Household user fees for latrine construction and for latrine and septic tank cleaning services.	Municipal Contract for SWM. Paying customers in neighboring bairros outside of Contract's reach. Operates a small telephone business.
SW Collection	Hand-cart system. Service 2 times/week per household (according to contract). Deposits SW in municipal dumpsters.	Hand-cart system. Use of one donkey to pull carts. Service 2 times/week per household (according to contract). Deposits SW in municipal dumpsters.
SW Employees	6	25
Salaries	reported minimum wage	reported minimum wage
Claims	"We work in the defense of the people, whereas UGSM's bottom line is profit" "We are a participatory, community-based association"	"My business is more sustainable than ADASBU, because there is clear ownership and responsibility" "I am a business man, but my heart is in improving my bairro."

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