CHAPTER ONE

INTRODUCTION

1.1 Introduction

One of the sad features of urbanization in Zambia, as elsewhere in the developing world, has been the failure of responsible agencies to supply and maintain urban services effectively to all citizens through effective means. Solid Waste Management is an important environmental health service, and is an integral part of basic urban services. Comprehensive solid waste management still represents itself as one of the most important challenges that national and municipal governments as well as service providers and the community in general face. This difficulty has manifested itself in perennial outbreak of diseases such as cholera, dysentery and pollution of water sources, air, and soil or land contamination, proliferation of pests and vermin, and loss of aesthetic beauty. Uncollected decomposing garbage, which often is responsible for poor drainage, is at the root of the spread of diseases like malaria, tuberculosis, jaundice, enteric diseases and respiratory ailments (ECZ, 2004). Another important effect of poor provision of public services on the environmental health issue is urban air pollution caused by, for example, biomass burning in waste incinerators, the open burning of garbage on the streets and landfill fires, and contaminated ground water seepages which are due to inadequate road maintenance and lack of street sweeping. The largest effect of environmental pollutants is premature mortality and ill health on country citizens. In addition to the economic and social impoverishment present in these

settlements, it takes many families, mainly women and children, to find in garbage, an unhealthy livelihood as can be seen by the alarming environmental deterioration and the sanitary problems related to unsafe solid waste management. (Holloway, 1995).

A study done in 2000 by Zambia Environmental Management Agency (ZEMA) formally, Environmental Council of Zambia, concluded that the annual average increase of waste in Lusaka alone was expected to grow from 220,000 tons in 2000, to 530,000 tons in 2011, an increase of 141% (ECZ, 2000). The type of waste included domestic and commercial waste. This meant that Lusaka residents produced 1 litre (0.3 kg) of garbage per person per day and average density of 0.225 ton/m^3. The waste generation was about 650m^3/day (LCC, 2010). In addition to this, it was also estimated that 30% (approximately 300 m^3/day) extra waste was also generated from daytime population and commercial districts. Lusaka's waste was mainly organic in nature, although content may vary depending on the location of waste generation and the season. The rest of the waste consisted of paper, plastic, glass, inert materials (dirt, bricks, stones etc.) and various other components. The main source of waste in Lusaka is domestic waste. The other source is hazardous waste from hospitals and nursing homes. Most of the medical waste was discarded along with normal municipal waste. It was estimated that only about 15% of all waste generated in Lusaka is collected and even a smaller share is disposed of at the only licensed dumpsite in Chunga. The remaining, uncollected waste accumulates in the streets and on vacant plots and is often burned in the open (LCC, 2003).

In this regard, and in order to improve the situation and be able to accomplish waste management that was truly effective, the Lusaka city Council enacted deliberate policies that tended to move towards privatisation of public service provision. On the basis of the Public Health Act, the Lusaka City Council is obliged to take all lawful, necessary and reasonable practicable measures for maintaining its district at all times in a clean and sanitary condition. Furthermore, the Local Government Act section 70 (1) (b) empowers the Council to impose fees and charges for services, including waste collection, provided within their area. On the basis of the above provisions, the Lusaka City Council had established the new waste collection services as well as a fee for these services. In order to mitigate the non-collection of garbage the Government launched a 'Keep Zambia Clean' campaign as a short-term action plan, which also included the private sector, comprising collection and disposal of garbage. Longer-term solutions were implemented in 2004 which involved cleaning up the city on a permanent basis. Later on, the city was divided into twelve zones, and a meticulous ward planning was completed for garbage collection and disposal. Households and industries were given individual cleanliness instructions, and field employees issued regular instructions and information to householders on how to dispose of garbage. Garbage was no longer collected by the council but was expected to be collected on designated days and disposed off at the dumpsite by private contractors. Use of and payment for the services was made mandatory (Municipal Solid Waste) By-laws, 2004.

1.2 Background

1.2.1 Overview of Lusaka

Lusaka is the capital of the Republic of Zambia. Average midday temperatures vary from a maximum of 31degrees Celsius in October to a minimum of 10 degrees in June. The average annual rainfall is 83 cm falling mainly between November and March. It is located about 15° 25' S, 28° 17' E of this land-locked country. It spans an approximate total surface area of 380 square kilometres. (UNDP, 2001). The city is built on flat terrain, which geologically comprises schist and quartzite dominated by thick sequences of marbles, in which differential dissolution has created a rugged terrain. The dominant economic activities are manufacturing, trading and construction. Currently, the city hosts an estimated population of about two million people, which represents about 17% of the country's total population. This rapid population growth is driven by a number of factors, among them, a rural-urban and intra-urban/city migration in search of a better life (Chileshe, 2004). This was influenced by the overall economic malaise that began to affect other towns on the Copperbelt Province after the closure of most of the mines and the collapse of auxiliary industries supporting those mines. In turn, this led to Lusaka becoming one of the most urbanised cities in the Southern Africa Sub Region. Since it is the capital of the country, all the embassies are concentrated in the City. However, in the recent past, major industries and mining activities have moved to the secondary cities due to development in transportation.

1.2.2 Lusaka City Council

Lusaka District provides the physical setting for Lusaka City Council (LCC). Councillors are elected every five years to run the affairs of the city through the Lusaka City

Council, on behalf of the residents of the city. Like all Councillors in Zambia, Lusaka City Councillors are part-time officials. Full time employees of the council headed by a Town Clerk, assist Councillors with the daily management of the affairs of the city. The Councillors, however, approve all development projects for the city. The Lusaka City Council also serves as the planning authority for the city. It therefore grants planning permission for all projects that would alter the land use permanently.

Although LCC is a corporate body, and is expected to manage the affairs of the city independently, it merely operates as an agent of the central government, which has delegated functions relating to provision of services to the residents of the city under the Local Government. Lusaka City Council consists of various departments including Environment Department which, is divided into three sections; Solid Waste Management section, Mechanical Section, and Urban Environment Section. Overall, LCC's Environment Department is responsible for managing the various types of waste generated in Lusaka. The management of various types of waste in Lusaka has over the years been a very difficult and challenging issue.

1.2.3 The Waste Collection Systems

Different waste collection systems operate in the informal settlements. The Waste Management Unit (WMU) at Lusaka City Council partnered with community based organizations (CBOs) and community based enterprises to form a Waste Management Committee responsible for the day-to-day management of the waste system in the unplanned settlements. The Waste Management Unit is

responsible for secondary waste collection from containers, or from the main streets in case a tractor-trailer was used, and its subsequent transportation to the waste disposal site. The Waste Management Unit uses its' own equipment or could organize collection by contracting a private company. In the latter case the Waste Management Unit is responsible for supervising the contractors. The Waste Management Unit is further responsible for the enforcement of waste management regulations in order to ensure that all waste generators participate in the waste management system, in other words, that everybody used the containers or tractor-trailer and paid for the services provided. For that purpose the Waste Management Unit employed a number of waste management inspectors. The Waste Management Unit is, in case a private company has been contracted, also responsible for timely payment of that contractor by the service end users. To achieve the mammoth task, the WMU was supposed to work through the Waste Management Committees based at community level.

The community-based waste management committees work in liaison with other community-based organizations such as the Neighbourhood Health Committee and/or the Residents Development Committees. They are supposed to conduct community awareness and education programmes on solid waste management on a regular basis. At all times, they are to ensure the settlements they operate in are clean and all waste generators are part of the solid waste management scheme. They are tasked with the collection of solid waste fees and ensure the service is paid for at the secondary level. The activities of the waste management committees are monitored by the Waste Management Unit as well as by area based organizations. In several areas,

the Waste Management Committee is monitored by the Resident Development Committee, and in other areas, by the Neighbourhood Health Committee. The monitoring of the Waste Management Committee is aimed at ensuring transparency and accountability.

Sustainability of the solid waste management system depends on good management and financial viability. Taking this into account, all waste generators are expected to pay for waste collection and disposal. In unplanned settlements, fees have been kept at the minimum per household per month. Business houses, institutions and markets pay considerably more because they generate far more waste than households. (Municipal Solid Waste By-Laws, 2004.) The fees collected are supposed to be used to pay for secondary waste collection, the costs of which include expenditure on fuel and lubricants, wages, vehicle maintenance, insurance and general overhead. The fees also cover the operations of the Waste Management Committees, including wages for sweepers, equipment for street cleaning and administration. The sweepers sweep the streets and collect the garbage dumped by residents in certain locations. The garbage is loaded on to a tractor or tipper and brought to a transfer station. Garbage is also collected from 4 and 6 m^3 containers and Street Corner Bins, which are placed in different locations and are major sources of solid waste. Waste disposal, as well as investments in waste collection equipment are covered by subsidies and are not included in the waste fees levied in informal settlements. Waste minimization is supposed to be encouraged through re-use of materials and separation of waste from non-waste. Waste re-cycling is encouraged as a means of creating self-employment. Separating waste

that can be re-sold is also an income-generating option.

1.3 Statement of the Problem

Although it is widely viewed that the private sector's increased involvement in the provision of urban sanitation services improves service delivery, what has not been clarified is the impact of this programme in terms of expected social welfare gains to the targeted group. The Researcher, therefore, intended to find out the extent to which the residents of Lusaka had effectively benefited from the programme of contracting out of solid waste management. There were still a lot of pertinent questions that had to be addressed, such as, whether the city of Lusaka was cleaner than it was before the local authorities contracted out solid waste management to the private sector; and whether the policy makers, private contractors and the end users had benefited from the privatisation programme in terms of service delivery.

According to literature, lack of capacity has been one of the major problems that had been sighted for failure of the public sector to undertake solid waste management effectively and while a tremendous call is made for the private sector to play a leading role as service providers, few or no studies have been carried out before to establish the effectiveness of these private contractors in service delivery.

Uncollected garbage was usually seen along the roadside, drainages, over spillage of storage depots and dirty market

places. The study therefore intended to find out whether the private contractors had improved solid waste management in Lusaka.

1.4 Research Objectives

1.4.1 General Objective

To establish the effectiveness of contracting out solid waste management.

Specific Objectives

To find out the extent to which private companies have provided solid waste management services in Lusaka.

To find out how effective private companies have been in managing solid waste in Lusaka.

1.5 Research Questions

The study questions were as follows:

What are the advantages and disadvantages of contracting

out solid public services to private contractors?

What challenges do solid waste management companies face in Lusaka district?

Is the city of Lusaka now cleaner than it was before the advent of contract out solid waste management to private contractors?

1.6 Study Hypothesis

Contracting out of solid waste management is to private contractors in Lusaka City is neither effective nor efficient in terms of service delivery.

1.7 Significance of the Study

Experiences of unsuccessful involvement of the private sector could discourage officials from considering engaging the private sector once more. In such cases it would be useful to investigate why the private sector failed. The study was therefore significant to undertake before deciding whether to involve the private sector because it could be possible to take steps to prevent the repetition of the failure. Trade unions or other labour organizations may oppose private sector participation because of their political beliefs or because they fear the withdrawal or erosion of the benefits that their members enjoy, or because they oppose the more disciplined work habits that are expected of private sector workers. Consequently, municipal and political leaders may oppose private sector participation because they fear the protests, and strikes that the labour organisations would organise if private

enterprises were invited to bid for services.

The Researcher in this case, endeavoured to address the private sector phenomena from a comprehensive contracting out perspective, drawing on the relevant disciplinary knowledge. In addition, it offers a decision support model for practitioners that will shed light on the dynamics and cumulative effects of contracting out public services and should help understand the driving forces that control the observed development. Subsequently, the main intervention points that help steer the development in the desired direction can be identified. The purpose of this research is to spread a promising approach and different ways of thinking among new generations of managers of sustainable delivery of public services, add to the existing body of knowledge in Public Administration practitioners and to be submitted as in partial fulfilment in attaining a Master's degree by the researcher.

1.8 Definition of key terms

Solid Waste: Materials that are no longer needed and are thrown away, these may be household, often include paper, plastics, leaves, cloth and foodstuff.

Waste Management: Planning, controlling of appropriate method for dealing with materials that are no longer needed and are thrown away.

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1.7 Literature Review

The Researcher reviewed literature as it relates to the effectiveness of contracting out of solid waste management to private sector. The literature review commenced with a general consideration of conceptual approaches to solid

waste management and progressed with a review of previous studies. It further covered causes and expected benefits of contracting out of solid waste to the society in terms of the general service delivery. The literature also highlighted the problems that could arise with the involvement of the private sector in solid waste management. The study encompassed a literature review of municipal waste management privatisation in other countries and closed with the examination of the current options of waste management practices for mainly, African municipalities through relatively recent publications.

Actors in Solid Waste Management

Both public and private sectors are active in solid waste management. Typically, local governments are responsible for the collection and disposal of the waste generated within their jurisdiction. The private sector also tends to involve the informal sector who are mostly self employed to gain their own livelihood from solid waste.

1.7.1.1 Public Sector Agencies

Public sector agencies in SWM generally mean municipalities or city corporations. They operate under certain inherent limitations. For instance, rigid laws, under which they must work, make it difficult to bring change to operational matters. Moreover, since much of the work such as street sweeping, loading and unloading waste and drain cleaning are done manually, the public sector must employ a large number of people mostly women who may often be unfit to undertake such strenuous jobs. These women are usually forced to undertake such jobs in order to feed orphans who they keep mostly resulting from loss of their parents of productive age due to the HIV/AIDS

pandemic. For instance, over 20,000 women work as paper pickers in Ahmedabad city (Salahuddin & Shamim, 1992). Consequently, the positive effect of their labour input may not be felt as they often get to work exhausted after long hours of walk to get to their work stations and often leave before hours to attend to home chores. This sector also suffers from low productivity of staff, inadequate supervision and unsatisfactory equipment and lack of protective and safety clothing. Politicians who find the SWM service an important instrument to retain patronage and popularity, may exert influence on the management also.

1.7.1.2 Informal Private Sector

Outside the formal public sector, exists a vibrant informal private sector in almost all compounds of the city setting, playing a significant role in SWM. All people not engaged by the public sector whose livelihood solely or partially depends on solid waste may be grouped as the informal private sector. Most of the private operators are informal workers. The term informal sector is used to refer to the economic activities which have the following characteristics of non-permanence and casualness, outside the scope of the existing company law or government regulations, carried on in small-scale by less capitalized establishments mostly relying on household labour (Salahuddin &Shamim, 1992). Informal sector activities are not regulated or controlled by government agencies; they exist and operate because of market forces or other socio-economic factors (Ali, 1999). The above definition very

well describes the activities carried out by the multitude of people who depend on solid waste to earn or supplement their income. In low-income countries like Zambia, the size of the informal sector is significant because of poverty, unemployment or underemployment. There are also comparatively formal entities active in the sector. These are community-based organizations and small business enterprises. Private sector operators may be grouped in the following way:

(a) Waste pickers - Millions of poor people in the cities of the developing countries support themselves and their families by directly or indirectly participating in waste collection and recycling. It has been estimated that up to 150,000 waste pickers are active in Municipal Corporation of Delhi area (Chaturvedi, 1998). In fact, all cities in the developing world have a sizeable population that ekes out a living from picking waste generated by their wealthier neighbours. This is the most vulnerable and marginalized group that comprises mostly of women and children and are often at risk of contracting diseases or cutting their bodies with sharp objects since the picking is usually done without any form of protective clothing. The waste picked by this group is usually insignificant to reduce the large quantities of waste generated and heaped on rubbish pits by wealthier communities. This type of waste picking generates other problems of further scattering since the waste pickers often run through heaps or bins without any care of not causing further litter. In any case their primary reasons for waste picking is to find anything of value and are never concerned about waste management in the first place.

(b) Itinerant/stationary waste buyers - Itinerant buyers are people who walk around the city to buy any

waste material that they can sell for a profit such as paper, plastic and glass bottles metal cans and clothing. There are also stationary buyers who operate shanty shops and often buy waste brought to them by others including waste pickers. These are very small-scale operations. Itinerant buying is a risk venture in that their intended buyers are undefined. The market is uncertain and often times they gamble on what would be acceptable by their would-be buyers. As a result, since they are often selective at the kind of waste they would buy from anyone who wishes to dispose of waste, their contribution to solid waste disposal is negligible.

(c) Small-scale recycling industry- Small businesses involved in SWM are mainly recyclers of waste material. They purchase items like glass, metal cans and plastics. Using these wastes as raw materials, they manufacture saleable products which may include crafts and children toys. Their suppliers may be waste pickers, itinerant and stationary waste buyers or even microenterprises. These are self-sustaining operations that remain in existence as long as the demand for their product remains. They may have informal linkage with the public sector as buyers of waste from the public sector SWM workers. Since they also depend on the above categories, their contribution to solid waste disposal is limited. As a matter of fact they in turn generate further waste during production that need to be as well disposed of before it adds to the existing problem.

(d) Large-scale recycling industry - Large factories are industrial establishments that buy suitable waste material in bulk to use in their manufacturing process. Compared to small industries they buy waste in large quantities. Their suppliers may be itinerant/stationary waste buyers or any operator who can store waste until a saleable quantity is

reached. These are profit-oriented operations whose sustainability depends on the market forces. However in a country like Zambia, they are currently non-existent. The few that may be in existence are often not very sure of their procedural operations in terms of the unit of measurement for the waste they buy for example the scrap metal dealers. In most cases their suppliers take long to be paid or are often too exploited to continue with their business. The other adverse effect often arising from such waste pickers is the vandalism and theft of cables. Furthermore, items like cars and roofing sheets may be vandalised in order to me the high grade scrap metals and fetch better profits from the sale of scrap metals. This has been evidenced adverse media reports of stolen telecommunication cables, power cables and the increase of car thefts to make scrap, leaving the real scrap still lying in the street.

(e) Community-based organisations (CBOs) – These are informal institutions that are formed by members of a community to address a need such as a park, sports facility or community centre. Sometimes these organisations respond to deplorable environmental conditions in their locality by initiating SWM operations, mainly primary collection and street cleaning. They are usually run by activist youths with support from the community. Providing a social service is usually the primary moving force in such operations. Breaking even financially is sought rather than making a profit. Sustainability of this type of initiative depends on the activists of the project to attract financing and remain accountable. Such groupings do not usually maintain their membership as the fall out to find much incentive providing ventures.

(f) Non-governmental organisations (NGOs) – NGOs may

enter into SWM related activities for a number of motives. The reasons would range from social concerns for waste pickers and therefore introducing new recycling technology (e.g. composting), extending micro-credit, concern for the poor environment in which their beneficiaries live, or simply because they are contracted by other agencies to implement project. They are driven mainly by the need to achieve their goal, and not to make profit. Their scope of work may include primary collection, rehabilitation of waste pickers, building awareness in the communities, dissemination of information, research and the introduction of new technology. NGOs traditionally work closely with communities and there is usually good cooperation from the community members. Sustainability of NGO initiated operations depends on the length of their 'interest in the project or on external source of funding. However, sometimes the initiatives may be picked up by entrepreneurs and developed into self-sustaining enterprises.

(g) Micro-enterprises - Micro-enterprises are for-profit business operations. These are run by entrepreneurs. Entrepreneurs are by definition innovators and agents of change. Their focus is on creativity, innovation and the constant search for new products or process ideas. They want to know what their customers want and strive to deliver that at the best competitive price (Carson, Cromie, McGowan, & Hill, 1995).Micro-enterprises enter into SWM activities because they see a gap in service delivery and existence of a demand for fulfilling that gap. They find this niche and charge for their services. For example, they may find a demand for house-to-house garbage collection (primary collection) that the municipality cannot provide, and seize the opportunity by

providing the service in a neighbourhood for small charges to the households. Hundreds of such micro-enterprises are now in operation in larger cities like Bangladees. Using tricycle vans, they provide house-to-house waste collection for a small monthly charge to households. Any item of value is salvaged and sold to small or large recycling industry to maximise profit.

The private sector, as described above, works alongside public sector in many developing countries. Their approach is very much demand responsive, and they keep close contact with their clients. As their operation is profit-oriented, there is good sustainability potential as evidenced by their existence for a good number of years in Bangladesh. The extent of private sector involvement therefore may be dependent on number factors including demand for the service, ability to pay, poverty and regulation.

1.7.2 Private Sector Participation in Solid Waste Management

Effective solid waste management depends upon an equitable distribution of responsibilities, authority, and revenue between national government and all local governments. However, local governments usually lack the necessary authority and resources to provide a satisfactory and economically viable service. Chinamo (2003) notes that local government administrations often suffer from a number of factors that reduce their effectiveness in organising, innovating and improving. According to him, the main obstacles to effectiveness are:

(a) Bureaucratic delays - This is often caused by the

limited authority of middle management to sanction spending and by the fear of corruption, so that many signatures are required, or the signature of the most senior official is required, for even routine matters. Public officials may be more inclined to be discouraged by setbacks and bureaucratic obstacles. Efficiency and effectiveness is most likely to be present in the private sector management because unlike local government, the private sector has shorter channels of communication and smaller organization structures. Added to the there is no political interference and corruption (Chinamo 2003). The other advantage of involving the private sector is that it may be more capable of making wise decisions regarding the selection and allocation of resources than the public.

(b) Lack of Expertise -The private company may have more specialised experience. The private sector already successfully plays a major role in waste management in many industrialized nations. (Altaf, Mir Anjam and J R Deshazo, 1996) In many industrialized countries, the solid waste management industry is one of the most important industrial sectors in economic terms. The proposal to increase private sector involvement in solid waste management came about as a result of benchmarking against the major role the private sector already successfully played in waste management in many industrialized nations (Altaf, Mir Anjam and J R Deshazo, 1996). For example in the United States, nearly 12,000 firms participate in the collection, transportation, treatment and final disposal of solid wastes. Small firms and a few large companies are the operators of approximately 80 percent of domestic, commercial, and industrial urban services (Sanchez, 2004). Private sector involvement is encouraged by many development agencies

and forms part of Government policy in many countries.

In many local government bodies, engineers and technical staff are moved quite frequently from one department to another (for example, after spending two years in the roads department, an engineer may be moved into water supply, and later be transferred to solid waste management for an unknown term). This means that they do not have long to gain experience in the topic and they may have little motivation to study about and investigate into solid waste management, because they expect to soon be transferred to a different department. In smaller municipalities, one engineer may be expected to cover many responsibilities, and so does not have time to acquire specialist knowledge of any of them.

In contrast, an engineer or manager in a Private sector involvement in solid waste management is likely to specialise in the aspect, and see his prospects of promotion as depending on the extent to which he develops expertise in solid waste management. For this reason, the technical and managerial decisions made by senior staff in a private company are likely to be better informed than those made by local government staff. The objectives of a waste management contractor are likely to be more clearly focused than those of a local government department. Since the performance of waste management tasks may be directly linked to payment and opportunities for expansion, private sector managers are likely to be more motivated towards solving problems that obstruct this performance.

(c) Political interference

Political leaders are elected to serve the interest of the citizens, but some use their authority for personal reasons or to disrupt processes that should be the responsibility of technical or accountancy staff. Private companies are likely to be less influenced by political factors, because their work and responsibilities are defined by a contract and so are less flexible and less likely to be modified by the personal requests of political leaders. In the case of long term contracts (of ten years or more, and which are protected by the judiciary from premature termination by political leaders), the private sector may have a longer-term view that local politicians (whose horizons may not stretch beyond the next election) and this can result in better planning (USAID, 2003). Chinamo (2003) adds that there are many cases in which private enterprises have been able to provide services at a lower cost than government operations. Higher efficiency requires the right working environment including legislation and support from the judiciary, contractual arrangements and monitoring and competition. Added to this, is also the advantage of the council earning some income from private sector involvement in solid waste management through bids Camacho (2001). Since the performance of waste management tasks may be directly linked to payment and opportunities for expansion, private sector managers are likely to be more motivated towards solving problems that obstruct this performance. Public officials may be more inclined to be discouraged by setbacks and bureaucratic obstacles. Private companies are likely to be less influenced by political factors, because their work and responsibilities are defined by a contract and so are less flexible and less likely to be modified by the personal requests of political leaders

(d) Insufficient financial resources and lack interdepartmental co-ordination

The other problems local government could have are insufficient financial resources, lack of interdepartmental co-ordination, particularly in issues relating to staffing, planning, operations and maintenance (Lombard, 2003; Chinamo, 2003). A limited financial resource is also a factor that may cause a council to contract out waste management. According to Lombard, the access to capital makes private sector favoured in that they may have access to capital. Local government agencies may have a regular budget allocation for wages and operating costs, but may not be able to obtain funds for large capital projects, such as the replacement of a vehicle fleet or the construction of a sanitary landfill. For such capital expenditures they may depend on unpredictable grants from central government or official development assistance from another country. In contrast, a large private enterprise can get loans or use its own capital for large investments and repay the loan from user fees or monthly payments from the client. Coad (2003) adds that the difference in approach between the public and private sectors can often be seen by visiting the vehicle depots of local government and private sector service providers. Local government depots are often littered with wrecks that are of no further use but are left in the depot because of the bureaucratic difficulties associated with getting rid of them. The depots of private companies are often clean and well-organised. Finances whether for capital or recurrent expenditure, and the taking for other municipal purposes - of budget allocations intended for waste management.

(e) Wide Employment Opportunities

It is even possible for the private sector to provide services at a lower cost than government operations while enabling the council to earn some income from private sector involvement in solid waste management through bids Camacho (2001). Competition must always be encouraged among contractors so that the end user can enjoy an efficient service.

The private sector also provides opportunities for upgrading the skills of local personnel, but if this is one of the objectives it should be considered in the preparation of contractual arrangements (Dohrman 2004). National professionals who work with the private sector partner may learn much, both formally and informally, but in Zambia pay scales are low and a strict hierarchy frustrates the initiative of middle managers who may not be willing at a later stage to return to the public sector. Consideration should also be given to developing the skills and knowledge of public sector staff that will be responsible for monitoring the operation of sanitary issues or other new procedures.

(f) Income Generation and Charges Introduction

Local government agencies may invite the private sector to take over some of its functions in order to simplify or reduce its administrative and operational duties. Thus the introduction of a private sector service may be used to provide a reason for the introduction of a solid waste management charge in cases where there is a shortage of revenue. If the general public considers that no payment should be made for services provided by local government, it may be possible to justify the introduction of a fee by

arguing that a private sector contractor must be paid.

(g) Motivation of staff

Coad (2003) further argues that in the case of local government services, there is often little motivation or support for engineers or technicians to develop their knowledge regarding good practice in solid waste management. A municipal engineer, with a desire to improve waste management standards, and the knowledge of how this might be done, may not be able to convince his superiors of his ability and of the need to allocate resources for this purpose. So contracting a company that has been successful in providing services under similar conditions is seen as a way of improving operational standards. This applies particularly to sanitary issues in countries where there is no experience of this method of waste disposal, but there are many other aspects of waste management for which external expertise may be beneficial. A large company may have experts with a range of specialties who can be moved from one site to another as required.

However sustainability may be therefore a further problem acknowledged even in the advocacy literature (Tennyson 1994; USAID 1997; Fiszbein 2000). As pointed out by Fiszbein (2000), the circumstances under which a contract is created tend to be idiosyncratic (and hard to predict) and are largely episodic outcomes from temporary alliances rather than more enduring arrangement. Furthermore, public-private arrangements appear to be vulnerable to changing political circumstances affecting the survival of the alliances that supported them in the first

place (Fosler and Berger 1982; Fiszbein 2000).

1.7.3 Case Country Review on Contracting Out Solid Waste Management

1.7.3.1 Cairo, Egypt

Waste management services have already been privatized in Cairo city. The Governorate of Cairo is divided into four districts and waste management private contractors operate each of the areas. In Egypt approximately 10 to 15 million tons of solid waste is generated annually with Cairo alone contributing more than 3 million tons. Waste collection and transportation efficiency ranges between 15% and 65 %.(Corrado, 2008). Approximately one third of solid waste is not collected. Cairo has well developed; modern composting plants established by the government and rented out to the private sector. There are less than 10 composting plants in Cairo and 25 plants nationwide. Composting plants, designed and equipped by Egyptian companies, have a chance to become a model for other African countries as a result of their modern design, low cost, high efficiency and satisfactory operation records.

A large scale innovative and efficient waste recovery, reuse and recycling operation is run by the Zabbaleen, a group of over 50,000 people traditionally involved in the business of waste collection and processing. They recover and/or recycle between 70% and 80% of all collected plastics, metals, glass, paper and other components of the waste stream. In addition, they produce fertilizer in the process of organic waste composting and raise pigs which are fed on garbage on a commercial scale. To support their waste processing operation, the Zabbaleen design and

manufacture various types of machinery at their own production facilities. Other African countries could profit from the Zabbaleen experience by importing their know-how and competitively priced waste processing equipment (Corrado, 2008).

1.7.3.2 Nairobi, Kenya

The current daily rate of solid waste generation in Nairobi is in the range from 800 to 1000 tons. Daily disposal capacity of the Nairobi City Council (the municipality), which is in charge of waste collection, is about 400 tonnes. Waste collected by the municipality on a regular basis amounts to one third and periodic collection deals with the remaining two thirds of waste. Approximately 70% to 80% of solid waste remains uncollected. The Nairobi City Council (NCC) operates 15 to 19 waste collection vehicles daily. There is a high vehicle immobility rate, up to 70%, due to shortage of spare parts and an insufficient operating budget. The municipal staff carries out manual street sweeping. Mechanical street sweeping is not offered at this time. The private sector is involved in waste collection and disposal in Nairobi. Approximately 50 tons of municipal solid waste is removed daily by such private operators as BINS (Nairobi) Services Limited and Kenya Refuse Handlers. The companies generate income from collection fees and contracts with the NCC.

Solid waste private service is carried out by many of Nairobi's poor who engage in waste picking as a means of income generation. The estimated quantity of recovered and recycled items ranges from 20 to 30 tons per day. The NCC does not operate any transfer station or composting

plant where commercial waste recovery / recycling could be implemented. All solid waste, except medical refuse, is disposed at the Dandora dumpsite. The site is managed by the NCC and is provided with heavy equipment to manage waste disposal. The Dandora site is not fenced and is therefore accessible to scavengers, recovery operators and cattle growers. Waste recovery is not implemented and neither is landfill gas recovery or flaring.

Several community based organizations and non-government organizations in Nairobi's low-income areas were found to be undertaking composting as an income generating and environmental management strategy. In cooperation with the UNDP, the Dandora Kuku Women's Group runs compost-making operations. They produce up to 10 tons of compost per year and sell it mainly to urban farmers within the City of Nairobi. Waste management stakeholders in Nairobi include various NGOs, CBOs, the private sector, the NCC, the Department of Environment and its Cleansing Section, the Ministry of the Environment and Natural Resources, and the Ministry of Local Government.

1.7.3.3 Accra, Ghana

The average waste quantity generated in Accra in the year 1999 was 1,500 tons per day. Approximately 200 tons of organic waste was directed into Accra's composting plant and 300 tons was left uncollected. The remaining 1,000 tons was transferred to the Malami dumpsite (Corrado, 2008).

Solid waste collection and disposal in Accra is in the hands of one company, City & Country Waste Limited (CCWL). In

1999, Accra Municipal Assembly (AMA) awarded exclusive Study on Solid Waste Management Options for Africa rights for waste management to CCWL, initially for five years, with the possibility of a further five year extension. CCWL subcontracted services to 11 private operators. Malami is Accra's regional dumpsite which is supervised, well maintained and organized (Chinamo, 2003).

According to Chinamo (2003) about 20 employees of CCWL maintain the site, supervise refuse discharge from trucks and the compacting process, organize scavenging activities for up to 50 waste pickers and control vehicle movement. The site will be covered by earth and closed in the near future. An efficient and well managed Malami dumpsite could be used as a demonstration site for landfill/dumpsite managers from other West African countries.

The new, properly designed and constructed landfill was to be commissioned prior to the closure of the Malami dumpsite. The new landfill is designed for up to 15 years of operation. A number of private waste management companies are registered in Accra. They would like to have better access to waste removal services and are apprehensive with the exclusive rights of refuse collection given by AMA to CCWL. (Corrado 2008)

There was an old composting plant in Accra with the processing capacity of 300 tons per day. Because of a limited market demand for compost and deteriorating equipment, the plant is not operating at its full capacity.

No significant waste recovery and reuse activities exist in

Accra. Waste pickers are involved in a small-scale recovery and reuse operation. To improve waste management in Accra, the National Environmental Sanitation Policy was prepared by the Ministry for Local Government and Rural Development and approved by the Cabinet on April 8, 1999. By adopting the strategic objectives for environmental sanitation it is expected that by the year 2020, all solid waste generated in urban areas will be regularly collected and disposed of in adequately controlled landfills or by other environmentally acceptable means. Waste collection in Tema (near Accra) was organized within the Urban IV Project financed by the World Bank. In contrary to waste management in Accra, contract awards to the private sector are transparent and executed in an open-bidding process. However, the dumpsite serving Tema is not as well organized and maintained as the one in Accra. As well, maintenance and repair of the waste handling equipment (including trucks) by the Tema Waste Management Department is inferior to the CCWL operations.

1.7.3.4 Cape Town, South Africa

The total amount of waste accounted for disposal in Cape Town is around two million tons per annum. Estimates of waste quantities per capita can vary considerably across the Metropolitan area, depending on the concentration of commercial activities and the type of community. The major concern is that waste generation rates could rise with economic growth and rising standards of living and quickly exceeds the capacity of existing and planned waste facilities in Cape Town. It was anticipated that the overall waste generation rate will increase by nearly 20% to 1.98 kg per capita per day over the 30-year planning period, with most of the increase occurring in domestic waste

generation.

More than 95% of domestic, trade, industrial and hazardous waste is land filled which remains the most widely used method in South Africa and is still the cheapest option. The total amount of available space in existing landfills within the Cape Metropolitan Area (CMA) is estimated to be 19.6 million. A system of transfer stations was proposed to serve the entire CMA. These stations are designed at locations close to major roads and rail, as well as the collection areas that each station will be serving. A total of 13 transfer stations are anticipated to handle the futures wastes for disposal. Of these, 12 transfer stations will be new.

There are privately owned landfills in South Africa. Many are associated with industrial and hazardous waste. However, a few are owned by private collection services. In general, however, private ownership and/or operation of SWM facilities are rare in South Africa. It is apparent that the most practical means for future landfill development is likely through the private sector. National waste management companies that have the capability to develop such a regional landfill exist.

Recycling of materials from domestic, commercial and industrial wastes, such as metal, plastic, glass, and paper, composting of domestic waste, and the beneficial reuse of wastewater treatment plant sludge, account for approximately 24% of the total solid waste stream in Cape Town. Most of the recycling occurs in the industrial sector.

Of the total residential and commercial waste stream only an estimated 6.5% of the waste is recycled Composting is a small-scale activity in South Africa, performed mostly by private entrepreneurs. There is only a limited market for compost material, as the industry is still in a primary stage. Although expansion is taking place in this area, it is not seen as a major waste reduction or resource recovery option. Approximately 41,000 tons per year of collected domestic and commercial solid wastes are composted at several composting facilities in the CMA (Corrado, 2008).

Waste stakeholders in Cape Town include the governments, private sector, NGOs and the general public. The government enacted a legislative body, the Consultative National Environment Policy Process (CONEPP), to address integrated waste management. In addition, the South African Department of Water Affairs and Forestry and the country's Department of Environmental Affairs and Tourism are jointly involved in the process of developing a comprehensive waste management strategy. South Africa has a well-developed waste management industry able to serve the needs of the country. A new, modern approach to integrated waste management policy is demonstrated in the White Paper on Integrated Pollution and Waste Management for South Africa.

1.7.3.4 Dar es Salaam, Tanzania

It was estimated that, in Dar es Salaam, Tanzania in 1992, the City Council was capable of collecting only 4% of the total waste generated in the City. In 1994 private sector operators were invited to participate in waste collection. It was estimated that, by 2002, the percentage of waste

collected had risen to an average of over 30%, the collection being carried out by more than 50 enterprises, many of them small and based in the communities they served. While much remains to be done, this is a clear example of how private sector involvement can increase the coverage of the collection service. (Chinamo, 2003).

Theoretical and practical considerations indicate that there is a good potential for public-private partnerships in the SWM sector in developing countries. However, the conventional approach to contracting out public services in the developed countries, where large conglomerates and government agencies form alliances, may need to be modified for developing countries. Much as the cases reviewed indicate that there is an improvement in the percentage quantity of solid waste that reaches the landfills, under the new arrangements of privatisation, what has not been explained is whether cities under review are cleaner than they were before the private sector was contracted. The increase in the quantity of waste that reaches the landfills could be as a result of increase in generation and not as a result of improved waste management. A vertical integration of SWM services between small-scale operators and the public sector may offer a better choice in these countries. Such arrangements could improve the efficiency of the entire sector. Theories suggest that under proper conditions partnerships can thrive. To create conducive conditions, the design and approach for this partnership must be carefully constructed. Poorly designed attempts for partnership may actually worsen the situation by opening new avenues for inefficiency and corruption, hitting hard the livelihoods of the most vulnerable people. Partnerships will not be

effective and sustainable unless there is incentive for both public and private agencies to enter into it. Beneficiaries of the present mode of service will resist any change.

Methodology and Research Design

So far, the different fields of research and main insights from different disciplines on privatisation, solid waste management and environmental policy were presented. It was highlighted that this study draws on existing theoretical concepts in order to gain complementary insights about contracting out and explaining urban sanitation services and solid waste management. In the following section, some basic aspects of the applied methods are discussed and the research process is described which provides a better understanding of how to position, evaluate and relate the outcome of this study.

1.8.1Study design

The research design which was employed was a case study. This was done in order to allow the researcher to get information on a particular phenomenon at comparably lower costs and time. A case study also has strong internal validity which allowed the researcher to get real and factual insights on that particular phenomenon. A case study was used because it uses multiple sources of data. In this case the study used both primary and secondary sources of data. A case study also investigates a contemporary phenomenon, in this case the subject being contracting out of solid waste management.

1.8.2Study population

The study population was all households in Lusaka District

(about 2 million people). The population also comprised three companies that are involved in the solid waste management including institutions charged with the responsibility of environmental issues, namely; ZEMA, NGOs and LCC.

1.8.3Sample size

This study used a sample of 122 respondents. The sampled was divided as follows; 100 respondents were sampled from three residential areas of Lusaka. Three areas were categorised on the basis of population density. Therefore the research selected Matero, Chelstone and Kabulonga. Matero represented a high density area, Chelstone represented a medium density area and Kabulonga represented a low density area. The researcher also interviewed 10 users at busy business centres like city centre bus stops and. 12 key informants from relevant institutions such as Waste Management Unit in Kalingalinga, Lusaka City Council, the Environmental Council of Zambia and three private contractors of solid waste management operating in the residential areas aforementioned. The three private contractors were Clean Fast Limited, Cartron Enterprise and City Mop Ltd. There were 2 officials interviewed from each of the relevant institutions bringing the total sample size to 122 respondents. The researcher ensured and took into consideration the demographics of the sample.

1.8.4Sampling Procedure

The study sample was selected using purposive sampling and systematic sampling. The households were selected using systematic sampling. Here the researcher went into

each of the three target areas (Matero, Chelstone and Kabulonga) and purposively selected a household after which the direction to go was chosen. After that the researcher selected the number five as an interval of sampling. Therefore every fifth household was interviewed. Purposive sampling is a non- probability sampling method which is also known as judgmental sampling and is based on the judgment of the researcher regarding the characteristics of a representative sample. Here a researcher selects a sample based on who would be appropriate for the study. Purposive sampling was used to sample key informants. McMillan and Schumacher (1997) describe purposive sampling as "selecting information rich cases for study in depth" This means that this type of sampling was based entirely on the judgment of the researcher in that the sample contained the most characteristic, representative or typical attributes of the population.

1.8.5Research Instruments

It is important to mention here that the researcher used both primary and secondary data. Primary data was directly collected by a researcher while secondary data was reviewed from data which have already been collected by other researchers on studies related to solid waste management.

Primary data was collected using questionnaires and interview guides while secondary data was collected from books, journals and the internet. The researcher also used both qualitative and quantitative data. The questionnaires consisted of both open ended and closed questions. In

order to collect primary data which comprised both quantitative and qualitative features, questionnaires Qualitative data was collected from key informants using in-depth interview guides. Interviews were used because they provided an opportunity for face to face encounter between the researcher and informants. This was directed towards understanding informants' perspectives on their experiences expressed in their own words with follow up questions from the researcher. As regards the quantitative data collection tool, most of the questions had alternative responses from which the respondent had to make a choice. In certain cases, the respondent had to rate their responses and/or make follow-up responses using in-depth interview guides were also used as data collection instruments.

1.8.6Mode of Data Collection

The questionnaires and interview guides were administered in person by the researcher to the respondents in the study. This was done in order to ensure collection of all questionnaires given out. In addition to questionnaires, in-depth interviews were done by the researcher with officials at Lusaka City Council and private companies dealing in waste management.

1.8.7Data analysis

Analysis of data was done by using both qualitative and quantitative methods. The data gathered from the closed ended questionnaires was analyzed using the Statistical

Package for Social Sciences (SPSS). Responses from the questionnaire were pre-coded and summarized into cross analysis tables which were used to generate charts and percentages. Responses from the interviews were summarized to come up with emerging themes. Data was analyzed qualitatively and quantitatively with the use of summaries, diagrams and illustrations and coded in order to use the Statistical Package for Social Sciences. Data was stored using excel schedules. Pictures representing actual scenarios were also captured and presented among the findings.

1.8.8Ethical Considerations

Permission was obtained from the Ministry of Local Government and Housing. Consent was also sort from the respondents while observing their confidentiality. Confidentiality as well as of responses was assured. The findings, interpretations, and conclusions expressed in the study paper were entirely those of the researcher. The accuracy of the data included in the report was directly related to the accuracy of the reviewed literature and the information given by those contacted during site visits. The researcher had visited Accra in 2009 and Cape Town in 2011 while on other official duties, during which time was also utilised to visit some of the Municipalities, landfills and speak to citizens and private contractors discussed in the research. This helped the researcher in the gaining of more insights since primary data could be collected at source.

Data on contracting out of solid Waste Management specific to African cities is generally not available, though some regional evaluations have been made. Usually, the literature

available on the waste varies depending upon such diverse variables as urbanization, commercial enterprises, manufacturing, and service sector activities important though quite difficult to analyse due to lack of comprehensive comparison. In particular documented data about Zambia is never readily available. The researcher had to make more than a couple of visits to Lusaka City Council, Zambia Environmental Management Agency as well as University of Zambia Library to try and gain more insights through literature.

Secondly, access to homes especially low residence areas was not easily attained. Interviews at busy markets and stations were not easy to conduct due to a hive of activities and noise from passersby, motorists and marketeers. Most of the officials interviewed were not always readily available for interviews and in most the researcher had to reschedule appointment a number of times.

1.9 Objectivity, Reliability and Validity

To ensure reliability, the questionnaires were piloted. The questionnaires for general members of the public were simplified taking into account their level of understanding of the English language. In addition, respondents were allowed to fill their questionnaires without interference and those who were interviewed were allowed to adequately express their views. The use of triangulation too helped in the comparison of data. The researcher took enough time to work on the study area in order to present current and valid findings.

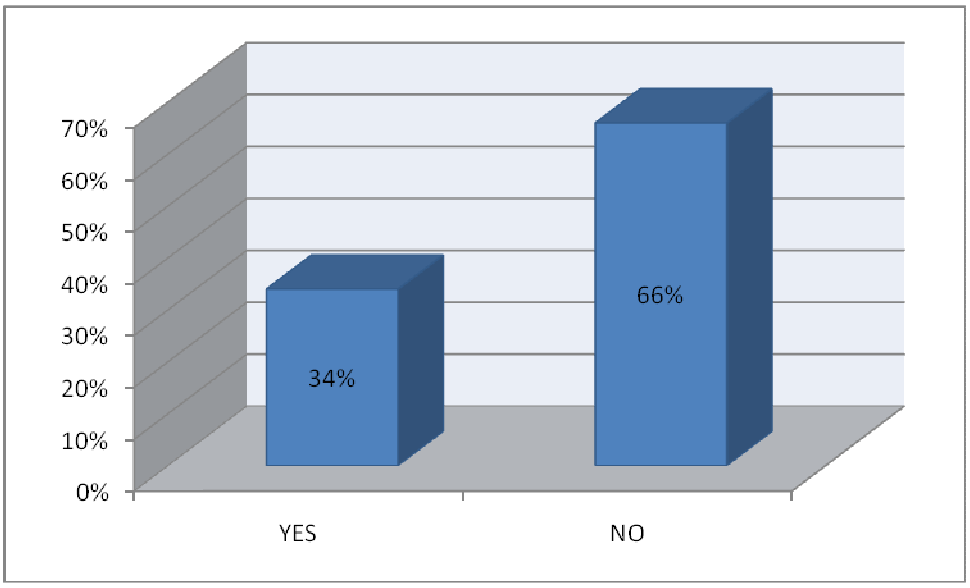
CHAPTER TWO

THE EXTENT OF SOLID WASTE MANAGEMENT IN THE CITY OF LUSAKA

2.1 Extent of solid waste management

The research established that the majority of the respondents were not using contractors to dispose off their waste. Only 34 percent of the respondents indicated that they were using contractors to dispose of their solid waste while 66 percent of the respondents indicated that they were not. Figure 2.1 shows the responses on the utilization of contractors to dispose of solid waste.

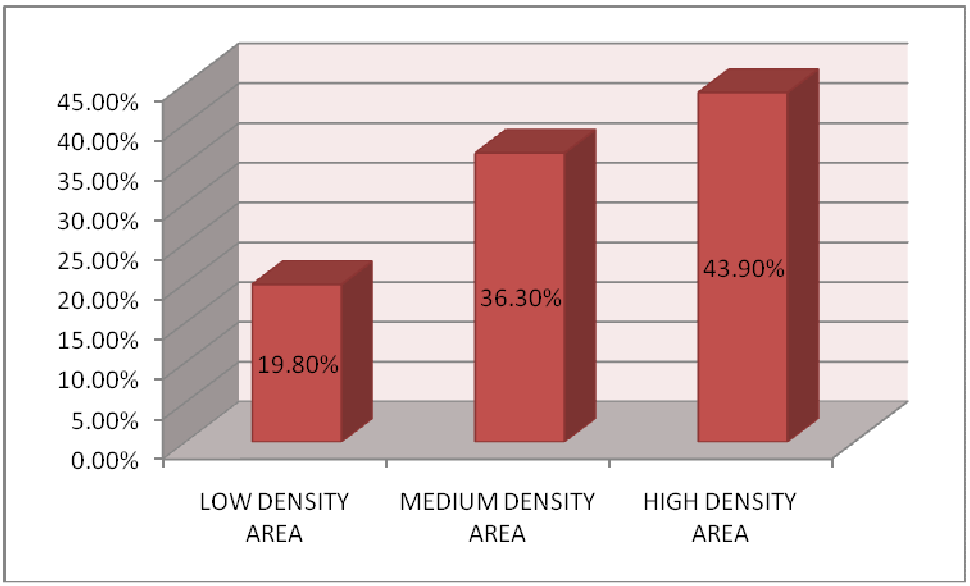
Figure 2.1: Utilisation of private contractors



The research established that out of the 66 respondents (66 percent) who had indicated that they had not used contractors to dispose off their solid waste, only 13 respondents (19.8 percent) were from a low density area, 25 respondents (36.3 percent) were from a medium density area and 29 respondents (43.9 percent) were from a high

density area as shown in figure 2.2.

Figure 2.2: Residential area



The research established a number of reasons why the majority of the respondents were not using contractors to dispose off their solid waste and these are as shown in figure 2.3: Respondents indicated that the fee charged by contractors to collect solid waste was expensive. Others indicated that they did not use contractors because they had never seen them passing through in their communities offering to be collecting solid waste on their behalf. Some respondents indicated that they did not use contractors because they were comfortable with their current method of solid waste disposal.

Figure 2.3: Reasons for not using contractors

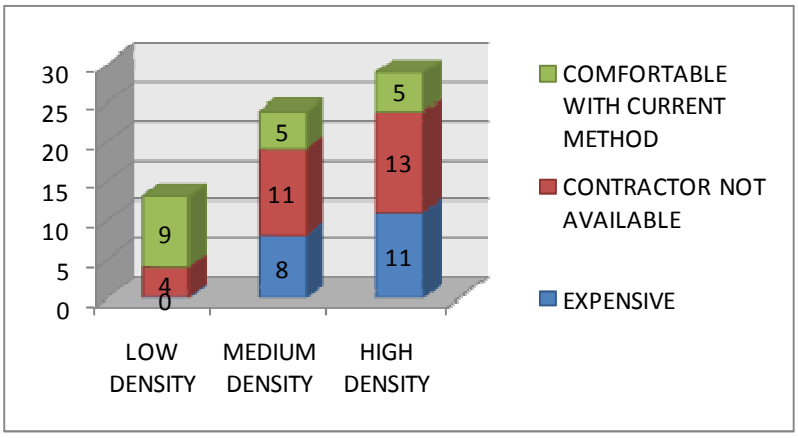


Figure 2.3, shows the responses given for not using contractors by residential area. The findings show that in medium and high density areas the most prominent response was non availability of contractors. This could be attributed to the fact that most contractors would prefer operating in the low density areas where most people are able to manage to pay for the solid waste collection fees unlike in the high density areas where most people are likely not to afford to pay for the solid waste collection fee. For instance none of the respondents from a low density area indicated that they were not using contractors because they thought it was expensive. Therefore since private companies are motivated by profit, they are more likely to operate in low density areas. This is evidenced by the fact that from the 28 respondents who indicated that they did not use contractors because the contractors were not available in their area, 24 respondents were from medium and high density areas as opposed to only 4 respondents from a high density area. This therefore shows that most efforts by contractors to manage solid waste were focused mainly on low density areas. The more prosperous and influential residents were, the less they cared about the poorer districts getting a reasonable service. The findings presented in the graph above show

residents were unwilling to use contractors to collect their solid waste because they felt the services of the contractors were expensive. This was also supported by the responses given by the respondents who were using contractors to collect their solid waste. Figure 4 shows that most of the respondents who were using contractors indicated that they solid waste collection services offered by contractors were expensive.

Figure 2.4: Cost of using contractors

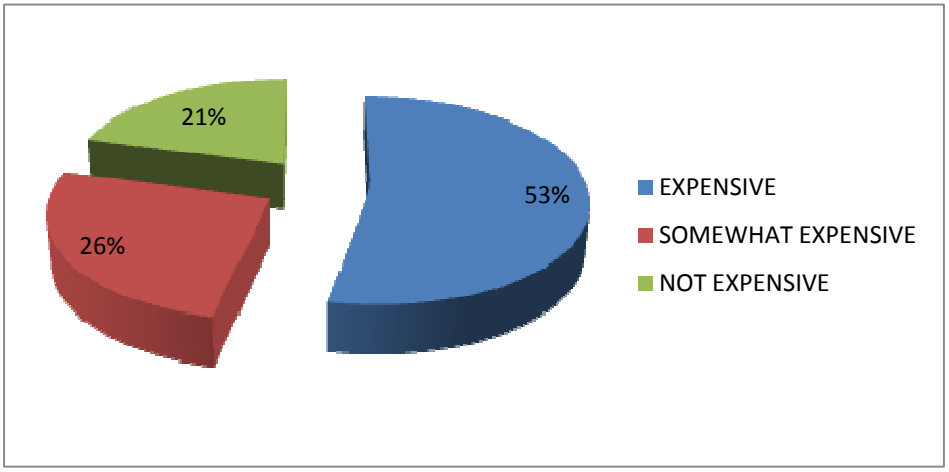


Figure 2.4, shows that out of the 34 respondents out of 100 respondents who indicated that they were using

contractors to collect their solid waste, 7 respondents (7 percent) reported that the fees they paid to contractors were somewhat expensive, 9 respondents (26 percent) reported that the fees they paid to contractors were not expensive and 18 respondents (53 percent) indicated that the fees were expensive. This could also explain the low levels of utilization of contractors by Lusaka residents to collect their solid waste. These findings reveal that most people may not be willing to use contractors to collect their solid waste because they are expensive.

The findings presented above show that the contractors have provided solid waste management services to a less extent. This has been validated by the fact that most of the respondents were not using the contractors to collect their solid waste. Only 34 percent were found to be using contractors to manage their solid waste while 66 percent of the respondents were not. Furthermore, the research revealed that the private companies contracted to collect solid waste have largely concentrated in the low density areas. For instance, out of the 28 respondents who indicated that they were not using private companies contracted to collect solid waste to collect their solid waste because they were not available in their areas, only 4 respondents from the 28 respondents were from a low density area. Therefore private companies contracted to collect solid waste have not paid too much attention to the high density areas where there are a lot of people who generate a lot of solid. This is evidenced by the fact that from the 28 respondents who indicated that they were not using contractors because they did not see any contractors in their areas, 24 respondents were from medium and high density areas. This shows that there was less presence of contractors in the medium and high density areas. This

therefore shows that because of the profit that motivates the private sector, they contractors have limited their operations in low density areas where they are anticipate they can generate enough money. This in has made them neglect other areas such as the high density areas thereby lessening the extent of their service provision.

The study also revealed that the less extent of service provision by contractors has been facilitated not only by the lack of their presence in high density areas but also by the fact their services tend to be expensive. The research revealed that most of the respondents who were using contractors to collect services indicated that they felt the services offered by contractors were expensive. Out of the 34 respondents who indicated that they were using contractors to collect their solid waste, 18 respondents (53 percent) reported that the services provided by the solid waste collectors were expensive. The residents complained that new fees and the changes in the waste collection service were imposed without consulting them, and they believe that the companies that provide the service are making huge profits at their expense.

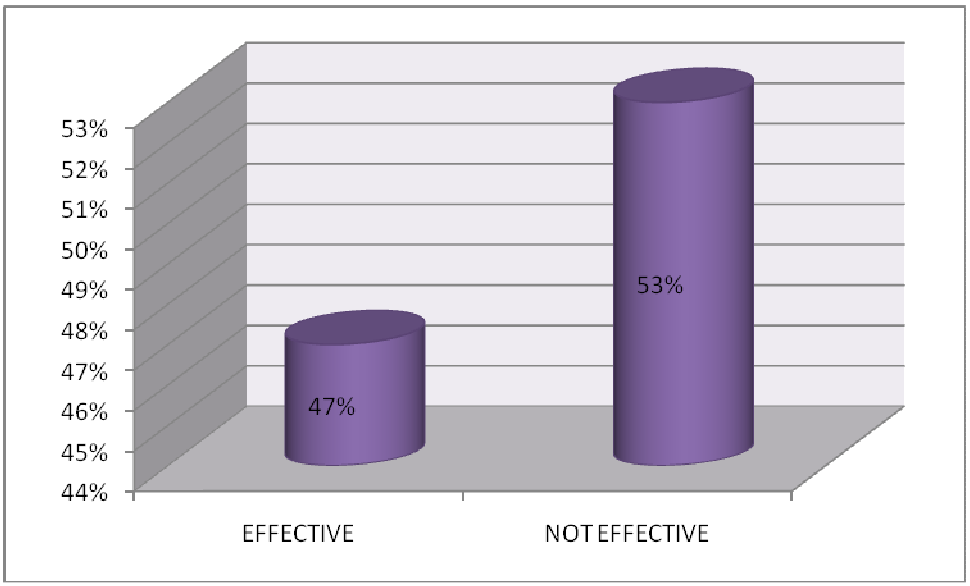
2.2 Effectiveness of Contracting Out Solid Waste

This section sets out to discuss the effectiveness of contracting out solid waste management to private companies.

The research established that most of the respondents indicated that the use of contractors to collect solid waste was not effective. From the 34 respondents (34 percent) out of the 100 respondents who indicated that they were using contractors to dispose off their solid waste, 18 respondents (53 percent) indicated that the use of

contractors was not effective while 16 respondents (47 percent) indicated that the use of contractors was effective. The graph below shows the responses on effectiveness of using contractors.

Figure 2.5: Effectiveness of Contracting Out Solid Waste



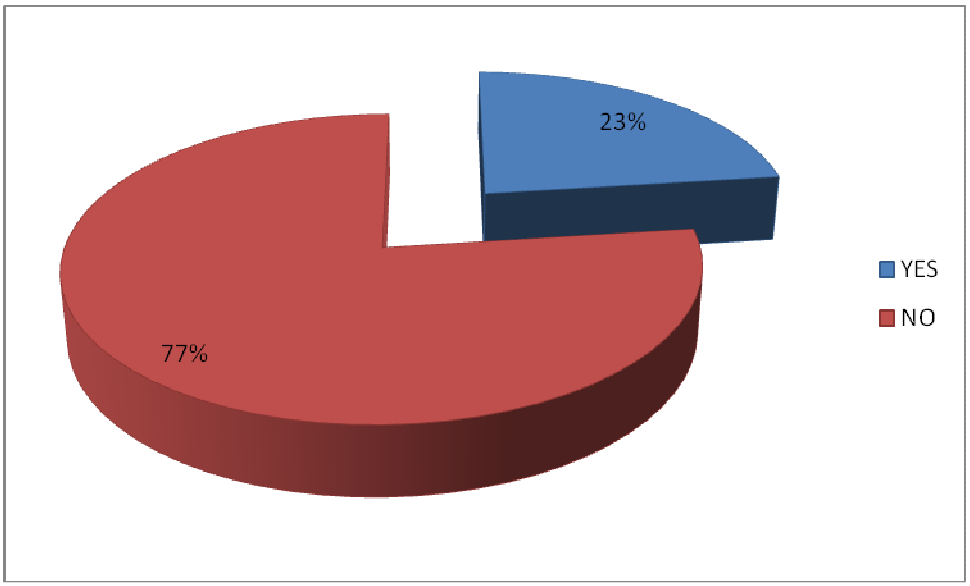
The reasons given for lack of effectiveness were as follows: All the respondents who stated that the use of contractors was not effective indicated that contractors would usually take time to come and collect the solid waste and this would leave residents with no choice but to dispose of the solid waste by the road side and/or in the drainages so as to create space for more solid waste. One respondent whose views reflect the views of other respondents put it like this. "They take forever to come and collect the solid waste from my house so in order to create more space for more solid waste I am forced to dispose of the solid waste across the road where there is a dumping site. Sometimes they take

two weeks before they show up to collect the solid waste."

Those who indicated that the use of contractors was effective gave the following reasons: They reported that the contractors have been effective in that they come every week to collect solid waste. They stated that they have been consistent in their collection of solid waste. One male respondent whose views represent the views of many reported that ever since he started using contractors to collect his solid waste he has never been disappointed because they were consistent with their services and they never delayed in collecting the solid waste. He stated that every Wednesday they passed through to collect the solid waste. He stated that he had a cleaner surrounding because contractors came every week to collect their solid waste unlike before when he would dispose off his solid waste in the drainages and by road side.

The study also revealed that most of the respondent indicated that the contracting out of solid waste management had not improved the levels of cleanliness in Lusaka. 23 percent of the respondents indicated that they felt contracting out of solid waste management had improved the levels of cleanliness in Lusaka while 77 percent indicated that they felt that the contracting out of solid waste management had not improved the levels of cleanliness in Lusaka. Figure 2.6 shows the responses.

Figure 2.6: Improved level of cleanliness



The chart above shows that most of the respondents (77 percent) felt the contracting out of solid waste management had not improved the levels of cleanliness in Lusaka while the minority of the respondents (23 percent) reported that they felt the contracting out of solid waste management had improved the levels of cleanliness in Lusaka.

Those who indicated that they felt the contracting out of solid waste management had improved the levels of cleanliness gave the following reasons: The indicated that most of the surroundings had become cleaner because there were contractors moving around the city collecting solid waste. The respondents gave their home surroundings and their neighbourhood as examples. One female respondent whose views best reflects the views of other respondents indicated that she had a cleaner environment not just within her surrounding but also around her neighbourhood. She argued that there used to a big heap of solid waste just a few meters from her house and that during the rainy season the place would smell badly. She added that every time the council would clear the

solid waste it would not take time before people started dumping their solid waste there again because they had nowhere to take their solid waste. He reported that ever since the contractors were introduced that heap of solid waste had disappeared and no one dumps their solid waste there because people now use the contractors to dispose of solid waste on their behalf.

Those who indicated that they felt contracting out solid waste management had not improved the levels of cleanliness in Lusaka gave the following reasons: The reported that most of the places in Lusaka were still full of solid waste. They stated that in most residential areas especially the high density areas, solid waste was still in abundance. A female respondent whose views represent the views of many explained it like this: "They have not done anything, when you go to the residential areas where they are supposed to be collecting solid waste you will find that there is a lot of solid waste laying around carelessly especially in the high density areas like Kaunda Square, Kalingalinga and Mutendere. There is still a lot of dirty around Lusaka and I think Lusaka is the dirtiest town in Zambia."

The study also established that most of the respondents felt the private companies contracted to manage solid waste do not have the capacity to work effectively. The study revealed that out of the 100 respondents, only 23 respondents (23 percent) indicated that they felt the private companies contracted to manage solid had the capacity to effectively manage solid waste. The reasons they gave are as follows: They indicated that the private companies had the money and equipment suitable enough to effectively manage solid waste. They indicated that managing solid waste needed adequate finances and

machinery to effectively collect and dispose of the waste. They also indicated that they had employees specifically trained to deal with solid waste management. One male respondent whose views reflect the views of many indicated that private companies are better suited to manage solid waste effectively because the companies that deal in solid waste management are companies which know what managing solid waste is about. He reported that companies train their employees on how to best dispose of solid waste. He further stated that they also had the money to buy necessary equipment specifically for handling solid waste.

The study further revealed that out of the 100 respondents, 77 respondents (77 percent) indicated that they felt the private companies contracted to manage solid waste did not have the capacity to manage solid waste effectively. They gave the following responses: they argued that most of the companies had no financial capacity to effectively manage solid waste. They also stated that these companies usually hire cheap and this compromises the quality of the solid waste management. They reported that mostly these companies had no proper equipment to use to collect and dispose of solid waste. One female respondent explained it like this: "The private companies do not hire credible people they just hire anyone on casual basis so that they pay them less but this compromises the effectiveness of the solid waste management because mostly those casual workers do not collect all the waste." Another female respondent indicated that most of the companies do not have the capacity to manage solid waste effectively because they do not have the financial capacity to buy suitable equipment specifically for solid waste management. She narrated how some companies came with small vans to

collect solid waste. She indicated that mostly because the vans were too small the some of the collected solid waste would fall off the vans as they go away thereby making the surrounding dirty.

2.3 Effectiveness of the role played by the council in Solid Waste Management

The study also set out to establish the effectiveness of the role played by the council by interviewing 10 council officials.

Findings indicated that although the contracts were supposed to be given to registered local companies with demonstrated capacity, in practice, the most frequent beneficiaries had tended to be the politicians like Councillors, who had an intimate knowledge of what was happening in the local offices. Often they used front companies which were community business employing local people. Many were former leaders who continued to be dominant in local politics but tended to behave and remained officially non-partisan.

Conflicts usually erupted when new generations of Councillors were elected and wanted to challenge the dominance of the old cadres of the previous leaderships. In effect, public services became politically protected business opportunities which, like car wash companies or bars in other cities, were given out as political favours. In Lusaka in particular the notoriously corrupt and dictatorial appointed leaders are the most dominant.

Findings further revealed that there was lack of adherence to contracting procedures. Much as the Public Procurement Act No.12 of 2008 provides for the declaration of interest in the award of contracts, some contracts for solid waste

management were still obtained fraudulently. Contracts were sometimes openly distributed to loyal ruling party cadres, and denied to critics. Under some regimes, the council in Lusaka became virtually broke as both revenue and patronage were centralised under the control of cadres. The realities of garbage politics in Lusaka which had continued since 2004 meant that politicians and officials were not as enthusiastic about attempts to end litter on the streets as it could openly be seen that the contractors did not have the capacity to undertake the task. (Council official's respondents 2011).

2.4 Effectiveness of the role of the community-based organisations in the new service provision structure

The study also set out to establish how effective the role played by the CBOs by interviewing 2 officials. With a varied range of responses, findings indicated that official policies to encourage more community-based participation in the provision of local environmental sanitation had not been met contrary to what was anticipated by the new creed of participatory, citizen-based development. In Zambian society there was already a strong tradition of voluntary community development and group social welfare organisation to build on, most typically embodied in the home town development association which brought together the residents of a traditional community with its elite who have the connections and the ability to raise funds. Other types of organisations included youth associations, residents associations in middle class areas, neighbourhood mutual welfare and social clubs, ethnic migrant associations, women's groups and trade associations. Many of these kinds of groups came forward by, some providing awareness announcements and programmes, others providing labour to tackle the waste

and drainage problems and maintenance of sanitary.

There was however no support from government as the communities had to depend on self mobilisation of resources to run the programmes. One of the respondents complained that in density residential areas, citizens could never be forced to pay fees at the drop centres as they would just throw garbage in the drainage while an inspector was watching. (Figure 26)

2.5 Findings from private Contractors on the effectiveness of their service provision

Respondents were asked what challenges they faced in service provision, if they had adequate capacity to undertake the task, what revenue was realized and whether the delivery of services had improved compared to when the council was managing the activity.

Findings indicated that contractors had most staff hired on a temporary basis as it was very difficult for them to maintain permanent staff. Contractors often depended on workers for revenue collection who sometimes could cheat with reason that clients were not paying. The waste part was that with or without collection of revenue, the contractors still had to pay tax and charges to the council. They had vehicles that were not serviceable and maintained due to lack of revenue and sometimes failed to meet their obligation to pay staff salaries. Some council officials demanded to be paid bribes in order for the contractors to stay in business.

The respondents were asked whether they provided adequate protective clothing and machinery for their field staff. Findings revealed that the contractors often could not afford to buy protective clothing or use containerised

compactors to collect garbage (Figure 27). As a result targets were not met due to frequent breakdowns on the vehicles that were used for garbage collection. Although some contractors had proper vehicles, they had very limited fleets. They complained of high maintenance costs on motor vehicles and non settlement of collection fees by most clients. They accused the Council officials of not being concerned about non settlement of collection fees by most clients. The contractors had no one to complain to as the council did not do anything about their plight. Asked whether they had improved the situation from where the council left it, the contractors responded that they could only improve the situation if the council helped address some of their issues. The landfills also charged some delivery fee which made it difficult for them to make any profits.

The contractors appealed to government to intervene in the matter and not just terminate their contracts for what was deemed as non-performance by the council officials. "There is no form of monitoring of performance as long the councils charges are paid. Whilst the best approach is to win the support of senior local officials for the idea of private sector involvement, a fall-back position is to ensure that the contract guards as much as possible against the abuse of power, and that there are quick and effective means of resolving disputes" (Contractors responses, Lusaka, 2011).

2.6 Poor Collection and Transportation System

The collection system has not undergone any drastic change since the inception of the private sector in solid waste management. Prior to the privatization, waste from the waste storage depots was collected in open trucks. The

problems such as waste spillage and odour were common. Moreover the staffs carrying out the collection of the waste without the provision of any safety equipment such as masks, gloves, boots etc. was highly vulnerable to potential health hazards. Also the whole system was inefficient and poorly managed. The waste in the Waste Storage Depots (WSD) used to rot for several days. There was no proper scheduling or tracking of the waste collection vehicles. Also the waste was collected without any discrimination between the wet and the dry portion and was picked in the mixed form. Minimization of the waste going to the landfill was totally neglected.

Figure 2.7: Open Vehicle transporting waste in Lusaka City

The system has not undergone any huge transformation since the privatization. Compactor loaders are hardly used for the transportation of the waste. Containerized mechanical loading and unloading which was recommended in order to avoid multiple handling, reduce

spillage, ensure hygienic environment around the WSD's and also reduces environmental and health risks has not been achieved. Moreover any type of vehicle is used for transportation of waste. A major chunk of the biodegradable portion is sent to a centralized composting facility. The whole transportation activity is not managed by anyone. They are no strong team of supervisors (including team leaders). The movement of the vehicles takes place according to the drivers schedule and is not tracked by anyone. Moreover, the on road movement of the vehicles can breakdown while loaded and remained packed for more than 24 hours as no one seems concerned or handles complaints.

2.7 Unserviceable Waste Storage Depots

Findings indicate that waste storage depots have been not been reconstructed at all. They are never repaired or maintained. Each waste storage depot is supposed to be supervised. The waste is thrown on the floor of the WSD as was the practice before and there is no care at all. There are no separate bins for wet and dry waste. The capacity of each bin is undefined. No water, electricity and drainage connections have been provided in the WSDs. The waste is not collected on daily basis from the WSDs and there is no time when the bins are completely empty. Proper hygiene and cleanliness is not maintained.

Figure 2.8: Unserviceable Waster Storage Depot

2.8 Lack of sufficient Street Corner Bins (SCB)

Findings indicate that Street Corner Bins (SCB) have not been placed in strategic places for the purpose of waste collection in the residential colonies, commercial establishments and other institutions. Waste from the households, offices etc. is brought and dropped into these SCBs. However the responsibility of bringing the waste to the SCBs lies upon the waste generators. There is no door to door collection system. Minimum one SCB should have been placed in an area of 1 sq.km to make accessible. The few bins that have been placed are as a result consultations and self donations among local residents. The bins are either non-existent, never replaced or never empted at all.

Figure 2.9: Inappropriate Street corner bins

2.9 Lack of Waste Segregation

Prior to privatization, the only segregation done was by the rag pickers or the informal sector. The segregation was done at different levels of the mass flow starting at the generation, waste storage depots and even at the landfills. Though the informal sector is still very prevalent and rag pickers continue to work under hazardous conditions, no relief has been provided by the inception of the private sector. They still work under extremely hazardous and unhygienic conditions. They still have to pick waste from rubbish pits which overflow with rotting waste and housed rodents and infections. They face harassment at the hands cadres at disposal sites who used to ask for money and other favours to allow access to the real community employers who are never found at all. Working conditions have deteriorated tremendously.

It is important to note that the section of the rag pickers have not benefited by the inception of the private sector. However the conditions may be improved if the

responsibility of door to door collection system may be handed over to the rag pickers and they may be brought under some formalized system.

CHAPTER THREE

3.1 CHALLENGES OF CONTRACTION OUT SOLID WASTE MANAGEMENT

This study has shown that much of what is said appears negative, warning of problems, telling of disappointing results in the effectiveness of contracting out of solid waste management. In order to find out whether contracting out of SWM was more effective that it was before, the researcher analysed the specific objectives and questions that had been asked in relation to the hypothesis. There are certainly cases in which the private sector has succeeded in providing a good public service delivery in cities where the public sector had previously failed, but it is also more common to find that, where the public sector (local government) failed, private enterprise also fails to deliver the required service to various factors.

3.1 The urbanisation challenge

From the earliest primitive human society, there had been attempts to safely dispose of solid waste. In the early days, disposal did not pose difficulty as habitations were sparse and land was plentiful. Disposal became problematic with the rise of towns and cities like Lusaka where large numbers of people started to congregate in relatively small areas in pursuit of livelihoods. On one hand, the density of population increased in these centres of congregation and therefore wastes generated per unit area also increased. On the other hand, available land for disposal of waste has decreased in proportion. SWM thus has emerged as an essential, specialized sector for keeping cities healthy and liveable. The challenges of the SWM sector are continuing to grow with the growing urbanization.

Lusaka city is expanding rapidly, and public sector waste collection services are unable to grow at the same rate. Lusaka will face increasing strain under rapidly growing urbanisation. Alternatives to the present mode of delivering service by the public and private sector working in isolation may become imperative to maintain a minimum quality of service. As in any other developing country, one of the socio-economic problems facing Zambia is the growing inadequacy of its urban infrastructure and services in the face of a fast growing urban population. In Zambia nearly half the population of Lusaka have incomes below the World Bank's absolute poverty threshold (Chileshe, 2004). The severe inadequacy of urban infrastructure and services such as roads, water supply, sanitation and solid waste management is a major constraint on the productivity of urban households and enterprises and, consequently, on national economic development.

Since the urban crisis is most evident in the areas of solid waste management and sanitation, it poses serious risks to human health and the environment, including the dwindling water resources. Inadequate or absent storm-water drainage causes flooding in most settlements and has been particularly serious in Lusaka in recent years. Vector-borne diseases such as malaria and Cholera are rife due to the virtual absence of pest and disease-vector control programmes and insufficient and ineffective hygiene education. This situation has a serious health impact, with more than half of all reported diseases related to environmental pollution (ECZ, 2004). Therefore, the private sector may also be unable to cope with the demands of the changing environment.

3.2 Lack of capacity

Lack of capital to buy new equipment and restrictions on hiring new staff, together with low productivity, has been cited as reasons that prevent the collection service from increasing sufficiently by both the private and local authorities. The central government, therefore, provides grants to local authorities in an arbitrary manner with most councils receiving far less than they require for efficient delivery of services let alone breaking even. In consequence, local authority in Lusaka has been unable to deliver services and is extremely indebted, especially in terms of unpaid wages and terminal benefits. Often it is the low-income areas that have no service or only a very poor service. The private sector may be able to meet this need for additional coverage, perhaps by charging generators directly. In any city, it is the poor and informal areas that suffer the worst service. One reason is that these areas are often the most difficult to serve because the access routes are often unpaved and narrow. Furthermore the waste in poor areas has the least value for recycling and the poor have less political and social influence. The private sector therefore cannot service these shanty places due to inaccessible roads and the risk of damage it posses on the few machinery they have.

3.3 Non- payment of fees for Services

Citizens were never enthusiastic about private sector waste collection services, and their experience has confirmed their opposition. Concerned with the level of fees that they are required to pay and with the convenience of the service, a number of residents complained that instead of the waste being collected on a Monday, it is sometimes collected on a Tuesday or Wednesday after dogs have scattered the waste making the area more dirty, they are not interested in what happens to

be their waste after it has been carried around the corner. Most of the citizen complained that they were always never consulted about the privatisation of urban services.

3.4 Poor Sustainability of Regulatory Roles and Responsibilities

Literature findings have indicated that effective contracting out of public services to a private company is considered as alternatives to full privatisation in which the government relegates some of its function to private companies assumes a regulatory role for the delivery of city services. One of the reasons advanced for outsourcing is that the private sector is better placed to manage as it has adequate resources and machinery. Through contracting out, the advantages of the private sector which are dynamic, access to finance, knowledge of technologies, managerial efficiency, and entrepreneurial spirit, are combined with the social responsibility, environmental awareness, local knowledge and job generation concerns of the public sector. Under mutually favourable circumstances it is advantageous to have both the public and the private sectors playing active roles, thus capitalizing on the strengths of each sector.

However, if the public sector cannot afford machinery to carry public services, it therefore follows necessarily that it cannot regulate private sector which is well placed to defend its inefficiencies by paying expensive defence Lawyers. If in the first place the Public sector has no funds to collect garbage, it would not have funds to prosecute erring solid waste contractors.

The findings have further suggested that success in private

sector participation depended more on the local government client than on the private sector service provider. This may come as a surprise to those in government circles who regard private sector participation as a means of getting rid of the responsibility for solid waste management. It is true that there are companies that fail because they take on commitments that are too big for their resources which are either financial capacities or human resources, but even in this case, the responsibility rests at least partly with the local government client for not sizing the contracts according to local capacity and for selecting an unsuitable private sector partner. Whilst it is true that the number of council workers and vehicles involved in solid waste management, and the associated problems of management and maintenance, can be dramatically reduced by involving the private sector, there are new tasks and challenges which come instead. These new tasks require reorientation, administrative changes, capacity development and a willingness to make mistakes and learn from them.

Weak regulatory capacity of the public sector may lead to exploitation of vulnerable groups. For example, findings reviewed that some private waste collection businesses are employing children as young as 8-10 years. They frequently suffer from cuts and bruises while collecting waste because their employers do not provide them any protective gear. However, since the government's role is to regulate. In most cases the council has often cancelled contracts for such contractors but have further engaged other un-scrutinised contractors who will later fail. The government merely postpones the problems.

3.5 Lack of adequate policy research and planning

As mentioned earlier, it appears that the basic ingredients for private sector formation in SWM services in Lusaka are non-existence. The pendulum swings slowly, between the extremes of dependence on local government for the provision of public services and the contracting out of all operations to private sector service providers. In many places visited for data collection, it appears that the pendulum had gone as far as it can towards the private sector, and is now beginning to swing back towards a more favourable attitude towards the involvement of public sector labour. Local government agencies have discovered that working with the private sector is not as simple as they had anticipated. Having discovered that their tender and contract documents were inadequate, that the process took longer than they anticipated, and that managing the process was more complicated than they expected, they are now thinking about returning to what is more familiar to them. Contractors have found that local governments are often difficult partners to work with. The findings have shown that adequate information was not given to contractors for them to be informed before making the decision to bid for the task. Their income is found to be less than expected because of inflation and high penalties, and payments were delayed. The lacks of monitoring by the local authorities and the influx of illegal contractors have often pushed private companies out of profit. They had not anticipated the difficulties they experienced in working with the public and the extra work that was necessitated by a lack of co-operation.

3.6 Negative Impact on Waste Pickers

Private operators may jeopardise the livelihood for large numbers of waste pickers, and may also try to monopolise waste management in certain communities. One must

remember that these are the most vulnerable people having the least power to absorb the shocks of change. As pointed out earlier, a large number of people depend on solid waste for their livelihood. It is inevitable that outsourcing would affect their lives in some way. Snel (1999) cited an example in Pune, India where a group of women waste pickers used to conduct house-to-house collection. The new business acquired the sole right to buy recyclable materials and threatened to drive away the waste picker women.

3.7 Lack of Accountability

It is often true in developing countries that neither private nor public collectors are held accountable for the extent of waste removal on their route, and their compensation is not tied to their performance. There are typically few, if any, individuals in government who are accountable to their constituents for system performance. Both elected municipality officials and private contractors on the other hand have one thing in common; making unachievable promises to the helpless citizens. Even when it is clear that they cannot perform their duties effectively, their removal usually depends on the expiry of tenure of office. This usually does not serve the citizens any good as by that time, more deterioration will have been made to the environment and increased number of deaths through pandemics will have been recorded.

Government has the ultimate responsibility for public health and welfare, and this makes governments ultimately accountable for the performance and adequacy of the SWM system. Governments can choose to transfer operations to the private sector, but performance must be monitored and ensured through contractual guarantees. The

government retains ultimate accountability. In most cases however, no one is held accountable for loss of lives of vulnerable child.

A secondary level of accountability is that which the collection service organization owes to the generators. The organization and individuals doing the collection are accountable for collecting, transporting, and discharging the waste or materials in a manner consistent with their contract, with ethical practices, and with environmental and public health regulations. They are accountable to their clients, who pay indirectly through taxes or directly through fees, for the removal service.

The private sector may become involved in solid waste management because of a new policy of central government. This policy may be the result of pressure from donors or international financing agencies. In some cases the policy to deciding whether to involve the private sector has specified in some detail how the private sector should be involved. If the method of participation has been defined in detail, it is to be hoped that the procedure has been discussed intensively with stakeholders and experts before being finally formulated. However it is clear from the findings that in some cases, private companies exert considerable influence in government circles. Medina (2004) explains that, sensing the opportunity for profitable activities, enterprises may pressure their friends in government to offer certain services to the private sector. The policy of central government to encourage private sector participation may be assisted by means of a taxation policy that offers tax breaks for particular kinds of enterprise or specific projects.

3.8 Unsustainable Laws

Local government agencies may invite the private sector to take over some of its functions in order to simplify or reduce its administrative and operational duties. However the service must still be regulated, monitored and financed and these aspects require effort and expertise. The desire to be rid of the responsibilities for waste management can result in unwise haste. If all waste management functions are put out to tender without any prior experience of private sector participation, there may be serious weaknesses in the arrangements, resulting in inferior service standards or higher costs Mihsill (1997).

According to Medina (2004), particular problems can occur if donors or funding agencies, via their consultants, are the main driving forces for involving the private sector. If the leaders of the local administration are not convinced, but being pushed by outsiders, the whole system may collapse when the consultants leave and the financial support has all been received. This results from lack of ownership. If the senior local managers' leaders do not take the lead in making the decisions the result will be that the local managers miss the opportunity to develop their own expertise and understanding of the strategic issues. Because of such excessive dependence on external consultants the system may deteriorate when the consultants are no longer present.

3.9 Public Sector's Resistance to Attitude Change and Political interference

Sanchez (2004) explains that many of the origins of hostility towards private sector in the public sector service

delivery are to do with attitudes, perceptions and prejudices, rather than facts. In some countries senior local government officials may be accustomed to autocratic control of certain functions and of their subordinate employees. Consequently they may oppose efforts to involve the private sector for political, emotional and personal reasons, because control is being passed to private sector managers and actions are restricted by contracts. This opposition may express itself in the creation of obstructions to the processes of tendering and awarding contracts, in the delaying and reduction of payments, and eventually lead to personal hostility towards private sector managers. Politicians and officials may be suspicious of the motives of private enterprises in negotiating long-term concessions fearing that the companies wish to use the assets for other purposes.

Senior public officials may seek to retain some control by instituting systems of penalties that give them control, rather than basing penalties on the reports prepared by subordinates and on the provisions of the contract. They may also expect the contractor to do extra work as personal favours in the way that they previously used municipal workers, and be angry if their requests that are outside the scope of the contract are refused. Private sector participation may be the policy of national government, but local officials may informally oppose it, perhaps for reasons of political beliefs.

Some resistance from residents may come in the form of them missing out on favours as Scheu (2001) argues that residents may like to have the same worker serving them because they get to know the particular street sweeper or refuse collector that works in their area, they engage them to do extra jobs and they develop a concern for their

welfare, passing on old clothes and other second-hand items. Under public sector management, the same employee may work in a particular area for many years. There may even be cases where a municipal street sweeper buys the right to work in a particular area. So both residents and sweepers may resist change.

Political and individual opposition to private sector involvement may be based on the perception that such arrangements lead to excessive profits for the companies concerned. Some municipal managers may object to dealing with small enterprises because they regard the leaders of these enterprises as socially inferior.

Fear of corruption often results in cumbersome and slow bureaucratic procedures, which cause expensive and frustrating delays, extreme centralization of power and wastage of human resources. Corruption and, to some extent, the suspicion of corruption, can discourage competent enterprises from bidding for work, because they believe that the most competitive and competent bid will not win the tender, but rather the bidder that has the best connections or pays the largest bribe. As a result, the best service providers do not become involved.

(Medina (2004) argues that during the operation phase also, corruption can lower standards if monitoring inspectors are bribed not to report shortcomings in the service, or if good performance is reported as deficient in the hope of getting a bribe for a more favourable assessment. In addition, some attempts to prevent corruption have also had harmful effects. Senior officials may be reluctant to recognise and admit good performance by the contractor, even if the work has been done to a very high standard, because of the fear that they will be accused

of receiving bribes to earn this approval. Sometimes the accusations may come from very junior staff. It is commonly agreed in some circles that government officials can be expected to always make negative comments about the work of the private sector.

The results are poor performance by contractors and the inability of many companies to survive in such a jungle. Fear of accusations may also make junior officials, such as field inspectors, unwilling to sign reports and reluctant to certify that a job has been well done by a contractor.

3.10 Lack of Public Awareness

Findings have shown that public awareness is usually considered as an optional luxury tool in policy making, but an essential component in any successful private sector participation. Public awareness and community participation also are no less important items where a government wants to impose decisions. Most of the residents complained that they were never consulted before privatisation was embarked on.

The Government may embark on a programme without making any public awareness to the intended beneficiaries. The roles that that each player should take are never stipulated thus leaving the exercise prone to misinterpretation. Residents are never adequately informed of the benefits of living in a clean environment and the incentives that may arise from waste reduction and waste segregation. Instead this aspect is left to the private companies to advertise themselves to residents who are already hostile to paying fees for the service. Waste segregation is usually not considered as important while handing over the responsibility of waste management to

the private sector.

3.11 Flouting of Tender Procedures

Findings have indicated that, if a local administration is unable to provide an efficient service directly, using its own workforce, it may also have difficulty in preparing the necessary arrangements for engaging a contractor, and in overseeing the contractor effectively. If public sector operators have not been able to achieve satisfactory standards themselves, they may not be unable to monitor the private sector in a satisfactory way. Camacho (2001) adds that if local government has been unable to ensure adequate funding of the recurrent expenses of public sector operations, it may also have difficulties in making regular payments to a contractor.

3.12. Organisational culture and changing relations with the public

Provided that LCC and Zambia Environmental Management Agency can make some tangible contributions, the best officers can establish good personal relations with community groups, and they seem to welcome the initiative. At the moment this is limited to supplying insufficient wheel barrows, shovels and brooms to community clean up campaigns, and participating in helping with the organisation and direction of such campaigns. These are, of course, temporary palliatives since storm drains quickly become choked again and illegal dumps grow again in the absence of an effective city wide public service. But for the EHOs to become a more effective force with higher morale they need to be given some concrete ways of showing residents that the situation can be improved, as a result of people listening to their advice.

Then they could have some satisfaction that they were achieving something. Practical help and results might also help to mitigate the destructive legacy of years of poor performance by city governments which have created a vicious circle of public disillusion, unwillingness to contribute or pay taxes, falling revenues and reduced capacity. By any standard, it is unrealistic and unfair to expect humble front line workers to tackle something as fundamental as the lack of legitimacy of city government; this is a mountain to climb which requires good leadership at the very top; otherwise the very real potential of local civil society action is likely to be dissipated or to take exit options.

Policy on sanitation has been particularly affected by the political implications of changes in modes of provision. On the one hand, both LCC and ZEMA have since the early 2000s been trying to reduce generation of waste by removal of street vendors.

3.13 Garbage Wars

The researcher has so far traced how changes in regime both at local and national level have influenced policies on sanitation and their implementation. But it is difficult to exaggerate the extent to which the conflicts generated by the management of public services by local politicians and their clients are also a product of the realities of urban politics and their associated political patronage networks. The management and control of public services has been a source of political patronage with which local and sometimes national politicians reward their clients. This is evident by the numerous instances of conflicts generated by the public services and the associated arm-twisting tactics of politicians. Similar conflicts over the management

of car washes, bus stop running and market control. Even when the council could have evicted vendors, they could not do so because they felt deterred by the street vendors' political connections. In many areas the history of the contracts awarded by the previous Municipal Chiefs was so poorly documented that informal local gangs simply took over certain public services by force after new officials are elected in power, as it is unclear who is supposed to be running them anyway.

The shift to service provision through contracting out, franchising, community microenterprises and encouragement of service provision by CBO-LCC partnerships has radically changed power relations within the public service bureaucracy and between officials and the public. In effect there has been a decline in the power of officials and increase in the power of politicians and contractors, who now a form a nexus of patronage relations which is very difficult for officials to challenge. Indeed sometimes, as in the case of the contractors, they are the same people. The plan to transform and expand the roles of WMD managers in the ways envisaged has to confront the very real difficulties presented by this new structure. In their daily lives, the officers are still expected to deal with the continuing and overwhelming crises of waste management and insanitary conditions. Yet they feel with some justification that they lack the power or the means to make much of an impression. Their most effective weapons remain threatening individual households with prosecution for failing to pay the fees but tackling the contractors who are failing to perform effectively in solid waste collection, whether by franchised motorised collection at dumps, or house-to-house by community enterprises in the areas without motor access, is another

matter. Of what use are their new inspection and monitoring powers, in the face of the political connections of the contractors. Most of contractors would be suspended and will resurface with other business names but same behaviour.

Since the early 2000, policies for responding to the environmental health crisis in the City of Lusaka have followed a similar path of moving to privatisation of waste collection and public sanitation through franchising and contracting out and also encouraging more community-based participation in the provision of local cleansing and sanitary services, principally through engaging micro-enterprises for local waste collection. Where citizen self-help groups and neighbourhood associations have sprung up, officials at the shanty level have been attempting to provide support for clean -up campaigns. In Lusaka, policies for gradually franchising waste collection out to private contractors took a radical turn in 2004 when the previous government clearly moved vendors out of the City and moved them to markets. Recent developments have however wakened the policies as vendors have been allowed back on the streets and the officials that pledged to carry out the government's declared policy of emphasising clean campaigns are now futile. Vendors have left designated markets and are now operating on every corner of the street.

The failure to remove vendors from the street has serious consequences on the Environment and the residents at large. The kinds of sanitary and solid waste collection systems which dominate in Lusaka city generate a cross-over or interconnection between human and other wastes which have serious public health consequences, although this interconnection is not often recognised in the

literature. The problem derives basically from the interaction between uncollected solid waste, drainage systems (storm drains, ditches and streams) and vendor management. Findings have indicated that estimated that 90% of human waste remains in the urban environment, mainly because of failure non availability of toilet facilities or dumping of the cleared waste in streams, ditches, waste ground and solid waste rubbish dumps (King, 2004). Free rangers often use plastic bags dispose of them on the rubbish dumps which accumulate around latrines, particularly abandoned ones. Even waste which is transported to landfills is not treated and leaches into rivers and streams, whilst household liquid waste goes into street ditches and drains.

The uncollected solid waste which accumulates at official dumps therefore becomes increasingly contaminated with human waste. At the same time, households dump randomly all around official sites or in drains, streams and ditches again and often because children are used for this task. Worse, even the collected rubbish is often dumped, not in the official landfills outside the city, but on waste ground, ditches and streams, often by private contractors. Thus all the main drainage systems of the city, both constructed and natural, have become choked with a mixture of human and solid wastes, a blockage made worse by the massive increase in the use of plastic bags. This therefore leads to outbreaks of diseases.

Solid Waste has consistently have been poorly managed and have been the site of local political conflicts despite efforts at franchising them and involving communities in their management. In this sense, contracting out the provision of publicly funded services has changed the political context in paradoxical ways; on the one hand, as

direct public provision has diminished, the city governments and their representatives are less able to provide direct help or solutions to the environmental service crisis in any given local area. On the other hand, decisions on the allocation of publicly funded business opportunities and on which areas will benefit most from those contracts have become more politicised and more interconnected with the political relations between citizens and government. This is attributable to the politics of patronage at the urban level, the relationship between city government patronage and community level groups, and the failure of regulation.

Findings have further shown that some development co-operation agencies were convinced that private sector participation was the right approach for upgrading services and improving the living conditions of the poor. They have been frustrated by the lack of interest in their advice and the influence and interference of political leaders in matters which should be resolved according to contracts or in courts of law. The findings have shown that effective contracting out for SWM will not evolve naturally. At the same time public agencies and local government require capacity building to address new challenges. Since the capacity in local government is small to shift from a traditional role of service provider to a new role of a regulatory body, it is felt that facilitation in such transition is vital. The facilitator can build the capacity in both public and private sector to cope with the new way of doing business through partnership.

CHAPTER FOUR

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

4.1 Introduction

For sustainable contracting out, certain enabling conditions must be met. The question then arises whether effective contracting out will form naturally by pressures of mutual interest or whether a facilitating role by an external agency is necessary for the convergence. For sustainable and effective contracting out for SWM, entails that both public sector and private sector must adapt to a new way of doing business. It is difficult for public bodies such as municipalities to change their traditional role of service provider to a new role of service partner and regulator. Conducive policies and institutional framework are necessary for the above changes to take place. In this chapter, the researcher has drawn conclusion from both literature and primary findings. The lessons learned are mitigating factors have also been presented.

4.2 Conclusions

The researcher concludes that contracting out of Solid Waste Management has not improved service delivery. A lot of challenges have been faced by policy makers, service providers and end users. Some of the challenges faced by service providers were attributed to lack of concern by the Council as service providers had to collect own fee, high staff turnover, frequent breaking down of machinery due to impassable areas and competition with both fellow illegal service providers.

It is also clear that privatisation of solid waste management was initiated to show the affected citizens that the local

authorities were doing something about resolving sanitation issues for enhancement of healthy cities to the population. However, solid waste management in the city of Lusaka has been characterized by inefficient collection methods, insufficient coverage of the collection system and improper disposal of municipal solid wastes often by the use of very informal sector but in the name of privatisation. The informal sector mainly comprises the vulnerable groups in society who usual would go for any type of job to derive a living. It therefore suffices to say the government puts this category of people in more danger and ignores their basic right to good health. Often the vulnerable in society have no access to proper medical facilities and risk having their lives prematurely terminated by the disease burden acquired through 'dirty' jobs such as garbage collection. Zambia like many other third world countries has no specific waste management legislation. Usually integrated waste management is not implemented; and very little information is available on composting, controlled sanitary landfills and the recovery of the landfill gas.

Of concern is the current lack of regulatory initiatives to manage waste minimization, with the potential for reducing the hazardous waste problem. No differentiation is made in the collection of different types of waste, although some municipalities have implemented higher taxes for commercial waste. The informal sector represents a significant part of the economy, and waste recuperation and recycling is an important economic activity. Funding for waste management is always inadequate, and real costs are never fully recovered. Although the key alternatives of waste management currently favoured includes privatization, privatization

proposals are in many cases hurried, ill thought-out, and often based on developed country models which assume a totally different technical, financial and organizational framework, particularly with regards to primary collection. Since the privatization of all or parts of many municipal solid waste systems requires corroboration among players, its success is far from realisation as the private contractors are often faced with survival challenges of continuous bribing the contracting officials who often threaten them with contract termination clauses for lack of performance. Effective service delivery through contracting out of solid waste will therefore take a long time to come as its mechanisms should be implemented by involving those who are amongst the poorest and who potentially would be the most disadvantaged by such changes. In most cases, the implementations of contract investments by contractor in terms of equipment and technology aspects is never preceded by background studies and surveys of the solid waste management success situations that can assure that the proposed methodology is best suited to the capabilities of the countries and their people. Education and communication channels between sectors, especially government and civil society, are considered to be inefficient and inadequate. A lack of a right to know, secrecy and misinformation has also been major contributory factors to poor waste management practices in many African countries by contractors. It has been seen that most community initiatives operate up to the stage of primary collection. Community contributions to small area based organizations; informal payments to municipal sweepers exist only because the community needs a regular and reliable primary collection system and does not like to see waste in the immediate vicinity.

On the positive side, Zambia is well-endowed with human and natural resources and civil society is becoming empowered. Political and institutional reforms, although slow, remain the biggest hope for waste management policy change. Political will, sound politics and governance and inter-regional cooperation will determine how waste management resources are allocated and used. A range of initiatives in waste reduction and management are underway at home, in schools, offices, and small and large business, local governments, and public institutions. There is some evidence on the ground that the private companies have succeeded in waste collection from other private premises. Embassies were satisfied with general cleanliness and amenities, such as water, towel, toilet paper and lighting. Accordingly, the users pay more for private than for services. It is also instructive to note that the number of people throwing litter anywhere in these areas has reduced considerably because of the better services being offered by the real fully fledged companies. Some of the interviewees felt that the private fees are low enough to make to allow anyone to through litter anywhere.

4.3 Expensive Failures

Solid waste management in Zambia has been a very poorly planned affair with onus on simply transporting the mixed waste by open trucks and disposing it in sanitary landfill. It is clear, therefore, that even the shift to various combinations of privatised provision on a fee-for-service basis; contracting out to the private sector and community-based corroborations do not relieve Lusaka city council of their public responsibilities of solid waste collection.

4.4 Recommendations for Effective Contracting Out Of Solid Waste Management in Lusaka City

It is clear that SWM in future will expand in scope and complexity. It will also consume a considerable proportion of city budgets. The SWM sector, therefore, deserves careful attention for striking a balance between quality of service and cost effectiveness. This challenge is particularly significant for developing countries, where resources are limited but urbanization is occurring rapidly. It is against this background that the researcher undertook to assess the impact caused by the private sector involvement in solid waste management and what measures have been put in place to ensure effectiveness in terms of service delivery. Thus specifically the research set out to assess the effectiveness of contracting out solid waste management in the city of Lusaka to the private sector

4.4.1 Use of Integrated Waste Management

Prevention and minimization of waste through maximum reuse should be considered before engaging private contractors. The desire to be rid of the responsibilities for waste management can result in unwise haste. Integrated waste management involves following through all procedures policy advocacy before the final implementation. Waste management should also involve recycling and use of environmentally sound alterative materials, with the participation of government authorities and all stakeholders. Among others: encouraging production of reusable consumer goods and biodegradable products and developing the infrastructure is required.

(a) Policy and Planning

Experiences of unsuccessful involvement of the private sector may discourage officials from considering engaging the private sector once more. In such cases it would be useful to investigate why the private sector failed. Trade unions or other labour organizations may oppose private sector participation because of their political beliefs or because they fear the withdrawal or erosion of the benefits that their members enjoy, or because they oppose the more disciplined work habits that are expected of private sector workers. Consequently, municipal and political leaders may oppose private sector participation because they fear the protests, and strikes that the labour organisations would organise if private enterprises were invited to bid for services.

However, within the framework of a reasonable contract that is backed up by an effective judicial system, a private sector operator may decide that the risks are worth taking, after consideration of the opportunities and likely benefits. In preparing a bid and negotiating a contract, the potential contractor is well advised to be aware of the risks and problems that are discussed in this review of experience.

National and local government officials can also learn from these recommendations. An unsuccessful relationship with the private sector affects the standing and reputation of the government partner, so it is also very much in the interest of the public sector to find ways of developing mutually beneficial and sustainable partnerships with the private sector. There should be an effective programme for gaining the cooperation and support of the public. Monitoring is not a means for showing that the public sector is the stronger partner, but is to motivate the service provider to operate according to the contractual agreement.

It is important that policies and comprehensive waste and hazardous waste management strategies, (integrated waste management) including basic elements like waste collection, waste treatment, waste recycling, disposal sites, etc. should be in place. These would address recycling of items such as papers, plastics, batteries, lubricating oils and electronic wastes. Integrated waste management plans have to support pro-poor involvement of the private sector in waste management as a source of employment and hence income generation for the local authorities.

(b) Legal aspects including enforcement

There is a need of strict enforcement of the law by the local authorities and progressively provide for continuous reviews and updates of legislation so as to tailor it to suit, as well as enable it to attain the vital coping mechanisms to deal with new developments and future challenges such as lack of payment for collection fee by the user, lack of contractor performance.

(c) Key stakeholders, their roles and coordination and partnerships

It is important to enhance the integration and coordination among different concerned parties and the responsibilities of the various agencies involved should be clearly defined to eliminate confusion and effort duplication in relation to private companies. The partners should be drawn from Central Government, local authorities, NGOs, the community and industry. The current waste management experience demonstrates that formal organizations alone cannot deal adequately with the increasing volumes and complexity and diversity of urban wastes. To address the waste management challenges of the cities through

sustained waste recycling, re-use and composting programs, a partnership approach needs an appropriate framework, which clearly lays out responsibilities of each party for effective waste management. This is calling for the development of Integrated Waste Management Systems in urban centres. Contracting out should also not only end at collection and disposal but also the private sector can set up recycling centres, landfills and incinerators designed in such a way to bring in participation of women and the youth. It is important to encourage the private sector to take part in investing in waste management systems and issues of high cost of capital should be addressed. There should be more funding to NGOs and the media to enable them to play their advocacy roles for environmentally sound management of waste.

(d) Cleaner Production and sustainable Technologies

The promotion of cleaner production practices, methods, policies and technologies should be done in order to ensure efficient use of raw materials and energy resources whilst minimizing waste generation. There is need at country level to enhance capacity building and create awareness on the importance and benefits of cleaner production

A multi-sectoral plan should be developed to spearhead the development and dissemination of appropriate technologies and practices for environmentally sound management of wastes. This should ensure that all sectors are able to handle their specific wastes without jeopardizing human health and the environment. As reviewed from literature, the Egyptian technology and experience for the conversion lingo cellulose residues to

ethanol for example, should be considered by other countries with large amounts of agro-wastes (UNESCO, 2009). Application of various waste recovery techniques and technologies such as briquetting, incineration, gasification and bio-digestion should be adopted as economical, efficient, cost effective and environmentally friendly ways of disposing organic wastes.

4.4.2 Develop Waste Management Retainable Skills for Local Staff

(a) Capacity building and Training

It is important to promote the on-going training of various stakeholders on environmentally sound management of wastes using the existing institutions. This should also include integrating sound management of wastes into curricula at different schooling levels. Special needs for customs officers and enforcement agencies should be addressed. Environmental Agencies and Local Authorities should be strengthened to enhance participation of stakeholders in the implementation of the waste management plans which will address source reduction, reuse and recycling of hazardous waste.

Effective contract management requires a new set of skills for many government organisations. Recruitment and staff training policies need to take account of this. Organisations that contract out activities need to maintain their knowledge of the market and their technical knowledge of the activity. This is imperative in order to be able to communicate with the contractor on equal terms, and to be in a position to effectively tender the activity again. This is especially relevant in the case of contracting out complex

activities. It can be considered inappropriate to assign responsibility for the contract management function to staff members formerly responsible for in-house production, especially if they were part of an unsuccessful in-house bid. It should be recognised that contracting out involves a learning process, with knowledge gained through the contract management phase enabling subsequent tendering of the activity to be carried out more effectively.

It is important when considering proposals for contracting out that all alternatives, which may include continued in-house provision, be comprehensively evaluated. This involves considering both the costs and outcomes or outputs, including comparative quality. All risks should also be systematically assessed. This includes the risk of dismantling in-house capabilities and possible dependence on a single supplier.

A thorough costing of the present activity should be conducted and used as a benchmark for evaluating contracting out proposals. This involves identifying all costs related to the activity that is to be contracted out. These include not only the direct costs of the activity, but also its share in overhead costs and such non-cash costs as depreciation and cost of capital. The treatment of the present activity for taxation purposes also needs to be taken into account. If the present activity can be restructured in such a way as to offer improved performance, then this should be similarly analysed and used as the benchmark for evaluating contracting out proposals.

If contracting out an activity will incur a liability for severance payments, then this should be identified as a separate item recognising the one-off nature of such

payments. When the Audit Generals Office contracted out many of its audit functions, careful attention was paid to determining the cost of its services for comparison with private sector providers. The financial management reforms undertaken by government Zealand in recent years were of great assistance in this respect. All costs are reported on full accrual-basis, thus reflecting depreciation charges; and include a capital charge to reflect the cost of capital employed. This enabled the reported cost of producing audit services by the public sector to be directly compared with the price charged by private sector providers.

Members of staff should be allowed to carry out in-house bids. An in-house bid occurs when the staff presently performing an activity bids against an outside contractor for an activity being considered for contracting out. In-house staffs are often in the best position to identify opportunities for work process improvements. Their bid should be judged on the basis of these improvements. In-house bids should in all respects be treated the same as outside bids. Special care needs to be taken to ensure that the costing of the bid is complete, i.e. that it incorporates all items of cost faced by private sector contractors. The costing should be reviewed by an independent organisation to verify its accuracy. In-house bidders should also fulfil any accreditation and certification requirements imposed on an outside bidder. A winning in-house bid should be awarded to the staff on the basis of a formal document that obligates the staff to meet the terms of their bid. The performance of in-house staff should be monitored using the same processes and criteria used for outside contractors. The criteria used for deciding whether to permit an in-house bid should be clear and specific.

When the Electoral Commission of Zambia decided to contract out its printing services, it emphasised extensive consultations with all stakeholders. Involving all parties in the process at an early stage led to a balanced solution that was widely accepted. Staff members participated in the working group established to develop further the contracting out proposal. This working group recommended that no decisions be taken until a detailed Social Plan was developed for dealing with each affected staff member at the Government Printing Department. All staff were either offered new positions with the contractor, reassigned to other positions within the organisation or offered outplacement training and related services. Given this Social Plan, the unions agreed with the decision to contract out the printing services.

(b) Increased Public awareness

Findings have shown that public awareness is not an optional luxury, but an essential component in any successful private sector participation. There should be an effective programme for gaining the cooperation and support of the public. Prevention of disease outbreaks should begin with sensitizing the community on the importance of a clean environment. There has been an increase in community awareness of the need for improved solid waste management. Awareness messages should include are:

the growing occurrence of environmental problems that affect people's daily life and the dissemination of information about them through the media;

the perceived relationship between solid waste management and the well being and health of citizens;

the increasing cost of services, especially where universal coverage is sought in the urban zones of a municipality, which demands a more professional management by the municipal administration;

the widespread exposure in the media of problems in developed countries caused by defective handling of hazardous industrial waste or its inappropriate final disposal and the resultant damaging effects on the health of the population.

One response to these difficulties is to use arrangements which maximise public ownership and control and hence the ability both to set "social objectives" for the private providers, and the capacity to ensure reversion of the service to the public whilst retaining the accumulated benefits of the private.

It is therefore important to mount a strong public awareness campaign on the impact of different types of wastes on human health so as to increase community participation and positive attitude. This will also result in increased knowledge on the quantity and cost of disposal, type and toxicity of hazardous waste and their environmentally sound management. There is a need for continued training and sensitization among media personnel to equip them with knowledge on emerging issues in waste management including electronic waste.

(c) Changes in duties/functions and Attitude

There is now an even bigger emphasis on their duty to encourage local CBOs to engage in cleanup campaigns unblocking storm drains, preventing illegal dumping, cleaning up tips as well educating members of various groups and training community leaders. They have

therefore to confront all the sensitivities and difficulties of local community politics and the patron-client relations which exist with city politicians. The new duties also, as noted earlier, demand a change in organisational culture and behaviour, from inspection and enforcement to more responsive and flexible interactions with the public and with contractors, and a more sophisticated understanding of financial and performance data. The change is even more dramatic for the WMD managers, used to wrestling with day-to-day problems of delivering a basic and generally poor direct service without much accountability to the public. From the look of things, a gloomy picture of a routine bureaucracy which is still characterised by a largely prescriptive, procedural and authoritarian culture geared to enforcement of regulations yet so weak as to be generally incapable even of performing these traditional functions very effectively. On top of these difficulties is the general demoralisation that comes from years of facing contracting out of public services perceived as aimed solely at destroying the organisation? The provision of reasonable sanitation facilities may require full public provision of basic infrastructure; transparent, independent and rigorous regulation of any contracts for service provision given to non-state agencies; and the enforcement of "conflict of interest" laws applying to elected local representatives. The boundaries between the state and the market have been redrawn, with important activities that used to be an integral part of state activity now in the hands of non-state actors, for and not-for-profit alike. At the same time the state sector is transforming itself continuously by rearranging the assignment of responsibilities, most notably through the decentralization of functions to local and regional governments and subcontracting specific functions to non-state actors.

(d) Staff and equipment

It is important to increase the number of qualified and trained personnel to manage and operate various waste management systems and equipments. Contracting out should be integrated with the overall corporate strategy of the organisation. It requires the active leadership of top management if it is to achieve its full potential. The ownership and oversight of the contracting out exercise should therefore rest with the very top of the organisation. Contracting out should not involve a mechanistic consideration of contracting out existing tasks or processes. Rather, it should be used as an opportunity to re-evaluate both the rationale for existing tasks and the processes used to carry them out. These re-engineering benefits can only be reaped with top management involvement.

Contracting out can lead to tensions within organisations. There may also be resistance to contracting out by some in the organisations. Active top management involvement is essential in preventing, or resolving, these internal impediments to contracting out. This high-level commitment is one of the key factors responsible for the success of the project. It should be recognised that contracting out is not only a financial and performance issue, it is also a people issue. It is essential to demonstrate a high degree of sensitivity in this area. Staff is inevitably concerned by contracting out. These concerns are caused in large part by the uncertainty that the contracting out exercise can create for them. While the process requires proper analysis, it must proceed rapidly in order to minimise any period of uncertainty for staff. It is of primary importance to consult staff immediately when an activity is being considered for contracting out, to deal with them honestly and frankly, and to keep them informed at

every step of the way, both individually and as a group. As some staff may feel uneasy about asking questions, a confidential box (or similar) should be established where staff can drop questions anonymously with the answers then being posted for all to see. Similarly, the relevant trade unions should be consulted immediately when an activity is being considered for contracting out and kept up to date on developments.

When the Zambia Revenue Authority contracted out its information technology function, it immediately recognised staff worries about their future, and adopted a number of approaches to keeping them informed and responding to their concerns including: establishing a confidential telephone inquiry line, issuing newsletters and information bulletins, providing question and answer booklets and one-on-one meetings with individual staff. Consultations were opened with the trade unions at an early date as well. This was done in order to show that the staff is enjoying better career prospects at one of the world's leading information technology firms than they did previously before contracting out of the service.

(e) Monitoring

Monitoring is not a means for showing that the public sector is the stronger partner, but is to motivate the service provider to operate according to the contractual agreement. It is important to create special bodies for monitoring, reporting and following up the quality and quantity of waste and their fate. There should be regular audits of the quality of emissions of incinerators and other medical waste treatment units. There should be an effective programme for gaining the cooperation and support of the public.

Service requirements should be specified in terms of outcomes or outputs, not inputs. This means specifying what the activity is, not how the activity is to be performed. Operational flexibility is essential for the contractor to be innovative in performing the activity, and thereby securing efficiency gains. These outcomes or outputs should be specified as fully as possible, and include appropriate service quality measures. Consideration should be given to the applicability of incentive payments in the contract, either by structuring payments in such a way that they are contingent on the achievement of certain levels of service, or by offering bonus payments for achievement of service levels above a pre-defined baseline. That was the desired outcome, and the contracts were framed around that. This was backed up by the payment schedule to the contractor. Contracting out an activity does not diminish, in any way, the responsibility of the organisation for the performance of that service. This is especially relevant when that service is being provided to a third party.

The organisation should regularly and formally monitor the performance of the contractor to ensure that the performance standards stated in the contract are fulfilled. When performance information originates from the contractor, it should be audited to ensure its accuracy. Monitoring is not a means for showing that the public sector is the stronger partner, but is to motivate the service provider to operate according to the contractual agreement. Only if the arrangements are carefully designed and implemented, can private sector involvement be expected to bring improvements.

Although contracting out involves a formal contractual relationship, both parties need to recognise their mutual dependence and thus their mutual interest in developing a

co-operative relationship rather than an adversarial relationship. The contract should incorporate provisions regarding contractor non-performance, dispute resolution mechanisms and the smooth hand-over of the activity to another contractor. When the University Teaching Hospital contracted out its cleaning services, a system of performance monitoring was put in place. The hospital established a group of controllers to ensure that the work performed by the contractor was in accordance with the provisions of the contract. Unannounced quality checks were made 8 times per month. No such independent reviews had previously been conducted. When the University of Zambia contracted out its catering operations, it ensured that they were regularly monitored against the output-based quantity and quality standards stated in the contract. If they were found to be in non-conformity with the terms of the contract, the contractor was warned and fined for the first two violations. If the violation was repeated for a third time, the contract was terminated and the contractor's guarantee fee is not returned.

Since both the private and Public sectors have inevitable weaknesses, the design of a partnership, therefore, calls for a balanced and measured approach. A new set of incentives must be designed for both private and public sectors. Other barriers for meaningful privatisation include weak structural, financial and legal framework. These weaknesses provide outlets for lack of transparency, fairness and accountability which are the underpinnings of effective service delivery. Repressive regulation or excessive competition may drive out the private operators. Privatisation must also be dynamic, adjusting to new situations as both private and public sector agencies evolve in terms of scope and nature. There may be a need for a

facilitating agency to nurture privatisation with possible subsidies. Capacity for effecting proper service delivery does not exist in either public or private SWM agencies in low-income countries. An independent facilitating agency that has no conflict of interest is necessary for bringing about successful partnerships for SWM service delivery.

(f) Improved Waste Management practices

It is recommended that segregation of waste components from the point of generation should be done with the establishment of transfer stations with suitable capacity and stockpiles of all crushed materials should be stored in separate and secured designated storage areas to avoid contamination or deterioration by weathering. Generation rates and waste data and characterization on types, sources and composition of waste has to be improved further because planning for sustainable waste management requires good and reliable national data on generation levels and composition.

Local authorities can make good use of available resources by contracting to small-scale waste collection enterprises, and by providing support and recognition to waste pickers and itinerant collectors, effectively allowing their activities to be included in the overall MSWM system. This is particularly important when new waste services are being introduced, or where existing systems are being upgraded or modernized. Sound practice in this arena is illustrated by the waste cooperatives for materials recovery and reuse in place in many regions of Asia and Latin America. These associations employ workers (who might otherwise be waste picking without equipment or recognition) to separate wastes at sources, collect recyclable materials, and transport them to the collection centres for processing and

sale.

The primary motivation for MSW collection is the need to remove noxious, unpleasant, toxic, or dangerous materials from households and public spaces and thoroughfares. While private sector organizations have a role in the waste management sector, sound practice virtually always requires a fiscal commitment from some level of government to design, finance, create, and maintain the MSWM system. In the case of collection, this means that the collection system must be adequately capitalized, operated, and maintained. Once the commitment to create the system is made, sound practice calls for the authority to make a set of decisions on how to finance the system and the extent to which costs of the system should be recovered directly from specific beneficiaries.

There is a great deal of interest at present, in cost recovery systems for waste collection and disposal. In some places this is taking the form of "pay per bag" or volume-based fees, where generators pay for what they throw away. In some cases, such a system has led to increased illegal dumping or burning of waste. In most countries, municipalities are still more likely to levy a flat fee included in a utility bill, or to simply pay for services out of taxes. It is probably true that any sound practice will include these three components:

Many technically adequate waste management systems have failed because of conflicting bureaucratic claims or unclear jurisdictional boundaries. Regardless of the status of the overall system, collection systems must have clear accountability linked to the service area. Anyone in the service area must know what body has jurisdiction over their collection, and how to give feedback to that system.

(g) Proper Tender Procedures

Competition, transparency and community involvement are essential components in any strategy to ensure value for money and to minimise the effects of corruption. If a public administration is not prepared to embrace these characteristics, it is not ready to consider any kind of partnership with the private sector. Ensuring the spreading of the benefits of contracting out equitably among the high-income and low income areas add to the challenge. There is also the possibility of resistance from the public workers unions. The preparation of a strategy and the tender documents, the preparation of bids by prequalified companies, the preparation of contracts and the mobilization stage before full implementation all take more time than is normally allowed, if they are to be done well.

Literature indicates that competitive supplier markets are key to achieving the benefits of contracting out. However, translating theories into realities requires research and advocacy, building political will and popular support. The government should foster competitive markets by recognising that its contracting out practices can play a major role in the development of markets for the relevant services. This relates especially to the scope and duration of contracts. At either extreme, contracts may be so small and short that they do not stimulate interest, or so large and lengthy that only the largest suppliers can participate. Consideration should therefore be given to bundling various services into attractive "packages" that can be contracted out as a single activity, or, conversely, splitting an activity among more than one contractor in order to foster competition. A judgement has to be made each time, but it should explicitly take account of its competitive

impact. Avoiding over-specification in contracts is also important for fostering competitive markets. If the objective is specified, rather than the operational aspects of an activity, the market may be encouraged to develop its own proposals and solutions. Contracting out is part of the procurement function. It should be recognised that participating in the bidding process involves substantial time and resources on the part of the bidders. To the extent that this process can be simplified and shortened, a greater number of valid bidders are likely to participate. If the government is to decide to contract out public services, it should be well known whether there are any potential contractors willing to provide these services. The government should, however, be determined to see if it could extend its competitive tendering policies to core social functions such as this. The government should therefore publicise this widely and take out advertisements in leading newspapers soliciting interest from the private sector. The response would be overwhelming. A competitive private sector market has be therefore be established where none existed before so that all solid waste management contracts are competitively contracted out.

(h) Collection system and (Transportation

Efforts should be directed towards increasing the collection efficiency of all types of wastes and their collection and transportation services, but there should be strict control of the handling of special or hazardous wastes (e.g. chemicals, medical wastes) and prohibit its recycling or reuse.

In general, the best collection practices are context sensitive, elective, and make optimal use of a range of local resources, from labour to institutional arrangements. Local

resources include the commercial formal and informal sectors operating in the region; the deployment of these resources should be carefully considered as part of the planning process. Privatization is sometimes mistakenly seen as a way to solve all of a government's waste management problems. Privatization of waste collection generally involves the responsible government contracting out collection services to one or more private sector operators. There is competition at the point of securing the contract, but once a contract or a franchise is awarded, the contractor receives a managed monopoly from the government. When these arrangements are well managed and free of corruption, they can deliver a high level of cost-effective service often higher than the government could provide using its own workers.

By contrast, some privatization efforts have entailed the total retreat of the municipal government from the waste management business. In this circumstance, there is no management by government: private collection firms must go directly to generators and contract with individuals. This tends to create redundant systems, where multiple trucks roll down the same streets, with each picking up from only a few of the contiguous residents. The resulting scale effects are very unfavourable, which means that fees tend to be high, and smaller firms are likely to fail or become the target of corporate takeover. This can lead rapidly to an unmanaged monopoly situation, and waste collection costs can become quite startlingly expensive.

It is important to develop a transportation system to transport various waste streams from rural and urban areas to suitable disposal and treatment facilities. There is need to increase the number and appropriateness of vehicles for collection and transportation of waste. Further,

local authorities and private contractors should consider the use of Geographic Information Systems (GIS) and Remote Sensing (RS) to improve waste mapping and assist effective collection and transport.

(j) Recycling

It is important to introduce appropriate incentives to promote the usage of recycled, recyclable and/or biodegradable items for daily use, including for example recycled paper bags and biodegradable plastic bags. Wastes containing metals such as steel, copper and aluminum should be sold to factories in order to be recycled in producing new metals and all construction and demolition wastes such as bricks, concrete, stone and marble should be crushed on site to a uniform quality of adequate grading in order to maximize their reuse as recycled aggregates and filling materials. It is important for NGOs and local authorities, to support the creation of regional networks which promote waste recycling and reuse. Waste management operations would benefit greatly from the development and implementation of national policies on solid waste management that criminalize inappropriate waste management, including for example incineration or land filling of recyclables and compostable materials.

(j) Recovery

Promotion of the production of compost should be enhanced and suitable enabling systems and techniques developed and disseminated for affordable collection and transport of organic waste from farms and other sources. Where feasible, the scope of agriculture waste reuse or recycling by using it as source of energy, briquetting, compositing, biogas production, ethanol production and

animal fodder should be explored.

(k) Incineration.

It is important to ensure all hospitals and other medical facilities can dispose of their medical wastes in properly equipped incinerator or autoclave/shredding system which can handle such waste in an environmentally sound manner.

(l) Land filling/dumpsites

Disposing of wastes should be carried out in controlled landfills to prevent any contamination to water and soil. Selection, design, construction and operation of landfill sites should take place within proper environmental management systems in order to protect the environment during the whole lifespan of the landfill. There has to be continual rehabilitation of the controlled dump sites and methane capture should be put in place. There should be strict control of the handling of medical and other hazardous waste and prohibit its recycling or reuse.

4.4.3 Ratification and Implementation of Relevant International Instruments on Hazardous Waste.

(a) Ratification

It is important Zambian ratifies the relevant international instruments for hazardous waste (including Basel and Bamako Convention) to do so as to speed up the development and implementation of nation action plans for implementation. There is generally lack of literature on sanitation pertaining to statistics of hazardous and generation of solid waste. This is because developing countries like Zambia are not signatories to international protocols that demand prevention of hazardous material,

maintenance of rights of the citizens. In the first place, most of the policy literature on privatisation is derived from the experience of industrialised, high income. Once these signatories are ratified, it will be inevitable on the Zambian Government to ensure that statistics on the generation and management of solid waste is regularly updated for ease comparison every year. Hence the creation of public-private arrangements would be based on accurate statics and would more in the nature of a transfer, in which cost recovery for the private operators was feasible and strong regulation at least possible, even if politically it is not always acceptable. The contrast with the situation in southern, especially African, states is obvious. Here the problem is more about the extension or creation from scratch of services for communities which currently lack them altogether, both in urban and rural areas. Ratification of International signatories will ensure compliance from all concerned. It is important that African countries prepare inventories of hazardous wastes and sites potentially affected through inappropriate disposal of hazardous wastes to enable targeted national and international remedial actions. This would also foster Regional Cooperation in managing trans-boundary movement of hazardous waste effectively including illegal trafficking there is a need to strengthen trans-border controls and policing of waste transports through strengthening cooperation with neighboring countries. Revenue authorities should also be involved in implementation of these agreements. Used consumer goods that contain hazardous materials (e.g. electronic and electric products, cars, medical equipment, pharmaceuticals etc.) are becoming an issue and pose serious ecological and health threats. There is hence a need for concerted efforts at a regional and international level

to prevent and minimize these concerns (UNESCO, 2009). This would also ensure Global and regional cooperation, including exchange of information and experience and transfer of appropriate technologies to improve the management of radio-active wastes. There should be Support for the cleanup of sites contaminated as a result of all types of nuclear activity and to conduct health studies in the regions around those sites as appropriate with a view to identifying where health treatment may be needed and should be provided. It is important to comprehensively identify sites that potentially have been contaminated with radio-active wastes in Africa. The African countries acknowledge the importance of sound management of radio-active wastes, the capacity to do so remains still very low across Africa, as only few countries (e.g. Egypt) have given priority to develop and implement comprehensive radio-active waste management systems(UNESCO, 2009).

4.4.4 Public Good or Public Bad

The State may consider taking over the provision of SWM altogether through subsidy since the private sector has failed. Findings indicate that it is not easy on the citizen given the way in which contracting out was introduced in Lusaka. The prevailing attitude of the public service workers could be described as a combination of resentment, hostility and fear. Getting front line workers to even care about implementing the new duties requires that these public agencies address the issues of individual incentives and working conditions. Better training, greater

sense of professionalism is possible steps. Doing something about the real lack of capacity and pay levels would seem desirable but unlikely unless the economic situation improves and the government accepts that its shift to the private sector requires an effective public administration. At the management level there is also a need for champions of change who can see an interest in pursuing the goal of a more professional regulatory and enabling public sector. There is a continuing debate over the value of private contractors providing public services in poor urban areas. Many policy-makers in the developing countries have been persuaded that the main problem with established direct public service provision lies in the alleged lack of incentive for regularly-employed public servants to provide a good service. They have therefore sought to involve local communities, citizens and the private sector more directly in the management of services.

The state has assumed a reduced role for the state in national economic management. The state is instead expected to provide an enabling environment for private sector economic activities by implementing appropriate economic policy reforms and providing the necessary legal and regulatory framework. It is also expected to provide some of the social and physical infrastructure, sometimes in partnership with community based organisations. Yet these new roles for the state are not necessarily easier and in many respects may be beyond the capacity of many developing country governments. For instance, good governance programmes suggested by donors may require that the state must initiate policies and programmes that, will create a conducive political, legal and economic environment, protect vulnerable groups, improve

government efficiency and responsiveness, empower people and democratise the political system, decentralise the administrative system, close the gap between the rich and the poor, encourage cultural diversity and social integration, protect the environment and uphold gender equality These ambitious political and social goals require, at the very least, both political legitimacy and competent administration. The researcher demonstrates here that the improvements in public service provision which are supposed to flow from introducing private sector practices and the disciplines of the market do not necessarily materialise if the politics of privatisation undermine both the logic of the market (customer-contractor accountability) and the state's ability to regulate performance standards and contract conditions. This is particularly so with respect to services such as urban water, sanitation and particularly solid waste collection where effective demand is guaranteed. These therefore are classified as public goods whose services cannot be divorced from government. The service involves delivery to large numbers of poor households in logistically difficult situations and there are very restricted opportunities for cost recovery, the logic of public monopoly tends to be easily replaced with the logic of political patronage as a way of reducing private risk and securing sufficient incentives.

As has been well established, private sector participation in service provision can take a form that rely on public sector responsibility and funding, with only particular elements of service contracted out. Solid waste collection is a type of classic public goods. Generally, these are services which continue to require substantial public participation, and tend to be provided either by pure public provision of the main city-wide services combined with informal self

provision at the local level and in the informal neighbourhoods, or through various mixes of public-private partnership tend to become public bads. Urban areas in Zambia lack formal, household-based public provision of drinking water, liquid and solid waste disposal, and main water borne sewerage are a rarity. In the case of solid waste disposal, the mass of the poor urban population living in densely populated traditional or ever-expanding informal (shanty town) areas rely on publicly provided local area containers and dumps which are difficult to charge for or to make excludable. Similarly with sanitation and liquid waste, the poor rely mainly on various kinds of public, locality-based bins and drainage systems, which have to be maintained and emptied through some form of collective provision.

Above all, if the state has to rely on non-state agencies in the private and citizen sectors to provide services which it once provided directly, then there is an enormous premium on its ability to regulate and manage public-private arrangements as well as sectors which have been fully privatised.

Some of these services could in theory be provided by fee-charging private companies; but the negative externalities of exclusion would have major public health consequences. In the cases of both solid waste and sanitation, poor residents' easiest option is to exit or free ride, i.e. to dump their waste wherever they can, unless charges are heavily subsidised. The economic reality is, therefore, that poor urban residents cannot or will not pay the full costs involved in providing a more effective solid waste collection, or in upgrading sanitation provision. It is possible, however, that people would be more willing to contribute if they could see an immediately visible benefit

to their household and perhaps neighbourhood.

It would seem unlikely that large scale, technically sophisticated private operators would have much incentive to provide better services to poor communities, or much understanding of how to operate in those contexts. Even in the high-income country context, it has been acknowledged that public-private partnerships have tended to widen the gap in service provision between rich and poor . The private sector tends to choose those areas that would give them maximum profit, leaving the state to provide basic or last resort service for the poor.

It is also clear that regulation and contract management, and hence improved service performance standards are likely to be problematic, for technical and capacity reasons alone (Batley 1996). The researcher therefore argues that the political context of privatisation in the typical African situation is such as to make effective regulation in favour of the poor even more unlikely. Most environmental sanitation services are to be provided by the private sector, including NGOs and community-based organisations, and supervised by public agencies, especially the Municipal and District Councils. The private sector could provide such services on a full cost recovery basis, under franchise, or through concession agreements. Where full cost recovery is not possible, the Local Authorities are required to enter into proper contracts with service providers. Some of the services to be provided include the construction, rehabilitation and management of all public sanitation, subject to the supervision and setting of maximum tariffs by the government. The policy is to emphasise real, transparent and competitive privatisation, in contrast to the franchising policies, which had become co-incident with patronage politics.

Therefore the ultimate recommendation will be to empower the Ministry of Local Government to help the Council to abrogate the solid waste collection contract with City and Contractors. This contract lacked transparency and, because it reduced indigenous the original firms to mere waste pickers, undermined efforts by the World Bank and other donors to build a viable local business class in solid waste collection. If the principle of competitive bidding or tendering were to be followed, there would certainly be more transparency in the privatisation of the SWMs. Bids are open to the public, although unfortunately Members of Parliament have been told that they are qualified to apply.

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APPENDIX I

QUESTIONNAIRE FOR THE GENERAL PUBLIC

Age

below 19 ☐

20-24 ☐

25-29 ☐

30-34 ☐

35-40 ☐

40 and above ☐

Sex

Male ☐

Female ☐

Residential Area……..(district)

High density ☐

Medium density ☐

Low density ☐

How far have you gone with your education?

University ☐

College ☐

Secondary school ☐

Primary school ☐

Never been to school ☐

Others specify ☐

What is your best way of disposal of solid household waste

Burning ☐

Rubbish pit ☐

Road side dumping ☐

Drainage dump in nearby bush ☐

Others specify ……..

Have you ever heard of the waste management unit

Yes ☐

No ☐

If yes, what do you think is the function of the waste management unit?

……
……

……
……
……

Do you use your waste management unit to dispose off your waste?

Yes ☐

No ☐

If no, why don't you use the waste management unit to dispose off your solid waste?

Expensive ☐

Bins are too far away from my home ☐

Contractor does not pass through my home to collect solid waste ☐

Comfortable with the current method of waste disposal ☐

What method of solid waste disposal do you use?

Burning ☐

Rubbish pit ☐

Road side dumping ☐

Drainage dump in nearby bush ☐

Others specify ……

Do you pay any amount of money to have your solid waste collected by the waste management unit?

Yes ☐

No ☐

How affordable is the amount that you pay to have your solid waste collected?

Affordable ☐

Relatively affordable ☐

Not affordable ☐

How does the contractor collect your solid waste?

They pass through my home to collect it ☐

They have put communal bins where we go to dump our solid waste ☐

Others specify
……

……
……

What method of solid waste disposal were you using before the contracting out method?

Burning ☐

Rubbish pit ☐

Road side dumping ☐

Drainage dump in nearby bush ☐

Others specify ……

How effective do you think the use of the waste management unit to dispose off your solid waste is compared to the method mention in 15 above?

Effective ☐

Relatively effective ☐

Not effective ☐

Do you think the privatization of the solid waste disposal has improved the levels of cleanliness in Lusaka?

Yes ☐

No ☐

17. Do you think the private company that manages solid waste has the capacity the work effectively?

Yes

No

18. What do you thing are the major causes of poor solid waste management in your area?

Lack of capacity by the contractor

2 Council does not monitor activities of local contractors

3 People fail to pay

Locals were not involved in identifying their needs

Are conditions of service for workers in private companies in solid waste management good?

No

Yes

Elaborate your response……

Are workers on permanent?

Yes

No

Do you accept these private companies to perform their functions in your area?

Yes

No

Elaborate your response……

Do you think there is enough political will in private sector solid waste management?

Yes

No

Elaborate……

Do you think corruption plays a role in the awarding of contracts to private companies in solid waste management?

Yes

No

Elaborate……

What do you think are major causes of failure of private companies involved in solid waste management?

Lack of acceptance by the public

No political will

Failure to honor contracts

Simplicity of responsibility

Were you involved in arriving at the fee payable to the solid waste company?

Yes

No

Elaborate……..

Do you think contracts with these solid waste companies are well covered to warrant excellent service delivery?

Yes

No

Elaborate……..

Are you able to pay for the service to the solid waste management company?

Yes

No

Elaborate……..

The involvement of private sector in solid waste management was to increase coverage

Agree

Disagree

Don’t know

The involvement of private sector in solid waste management was because private sector has access to capital

Agree

Disagree

Don’t know

The involvement of private sector in solid waste management was improve standards

Agree

Disagree

Don’t know

The involvement of private sector in solid waste management was an opportunity to introduce a fee

Agree

Disagree

Don’t know

The involvement of private sector in solid waste management was because private sector administration is

more effective

Agree

Disagree

Don't know

The involvement of private sector in solid waste management was to be seen to be doing something

Agree

Disagree

Don't know

The private sector solid waste management has worked to my expectation

Agree

Disagree

Don't know

What benefits have you enjoyed from the privatization of the solid waste management?

……
……
……
……

……
……

What problems do you face as a result of using a contractor to dispose off your solid waste?

……
……
……
……
……

What problems do you think the waste management unit faces in executing the duties of solid waste disposal?

……
……
……
……
……

38 What do you think should be done to improve the management of solid waste?

……
……
……
…

Thank you for your cooperation

APPENDIX II

DATA COLLECTION GUIDE FOR LUSAKA COUNCIL

Why did you involve private companies in solid waste management?

Are these private companies that you engaged able to deliver to your expectations?

What challenges do you think they face?

What criteria did you use to pick these private companies

Are you are aware that some of them do not have the necessary capacity to deliver to your expectations?

How often do you monitor their activities per months?

Do you honour your financial obligations on time to these private companies that you have involved in solid waste management?

Is the condition of service for their workers befitting to do the job that they do?

What do you think can be done to improve on what is obtaining?

Do you have any further suggestions?

APPENDIX III

DATA COLLECTION GUIDE FOR PRIVATE COMPANIES INVOLVED IN

SOLID WASTE MANAGEMENT

For how long have you been involved in solid waste management?

What is your area of coverage?

How many employees do you have?

Of the number of employees that you have, indicate how many are on permanent and temporal employment

Why do you prefer these kind of employees?

What is the highest qualification of you employees?

How is your relationship with the locals where you conduct your business?

Do you have necessary capacity to cover the area you have indicated above?

Are your clients able to honour their financial obligations as they fall due?

What are the conditions of your contract with LCC?

Are you happy with these conditions?

What obstacles do you face as you conduct you business?

What do you think can be done to improve on your service

delivery

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