

## Institutional Challenges to Municipal Waste Management Service Delivery in South Africa

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**ABSTRACT** This paper describes the link between inadequate waste service delivery and institutional arrangement challenges affecting municipal waste management service delivery in South Africa. Using secondary data from Statistics South Africa in relation to literature review, the study finds that there are no distinction between responsibilities and powers among levels of government; no clear definition of roles and responsibilities among municipal waste staff; lack of experience among waste staff; the existence of discrepancies between job specification and managerial staffs' qualifications; and the failure to consider parameters peculiar to specific waste location as some of the institutional challenges that resulted in poor waste service delivery in South Africa. This paper recommends a clear and elaborate job descriptions as practiced in the private sector; adequate training on legal provisions of waste management and sanitation rules; the establishment of a professional waste management association; and ensures that waste contractors adhere strictly to the requirements of their contract through effective monitoring.

### INTRODUCTION

Prior to the adoption of the 1996 Constitution in South Africa, local government administrations were a creation of the apartheid statutes; racially segregated to provide unequal services to different communities (Nyalunga 2006). The 1996 Constitution was to bring about transformation in local government administration to remove disparities in services delivery by integrating the segregated society (Bollens 1998). The imbalances of the apartheid era were to give room to freedom of access to municipal services, restore dignity and equality through effective service delivery (Tshoose 2013). One of such imbalances is the defective institutional practices of the apartheid era that had spilled into current local government administration. Although, poor institutional practice is a major challenge facing municipalities in the provision of effective waste management, other challenges include poor financial management; poor equipment management and; shortage of skilled and qualified staff (Godfrey and Nahman 2007). Poor institutional practices are the reason for inefficient, ineffectiveness and unsustainable waste collection systems (Hamdy et al. 1998).

Waste is the creation of human activities, and the way it is handled, collected, stored and disposed of, can pose a very great risk to the environment and public health (Zurbrugg and

Schertenleib 1998). The South African Constitution, Act No. 108 of 1996 (Schedule 5, Part B) states that waste management service delivery is a municipal function. Consequently, municipalities are responsible for general waste management, both in residential areas and industrial sites. Waste management activities by municipalities include the collection of garbage, rubbish, and trash; the transportation and disposal by incineration or by other means; and the removal of human waste products either through drains, sewers or by other means. Waste management service delivery, while reasonable in high and middle income areas of South Africa, especially in cities and urban centres, it is still inadequate in low income and rural areas (Briscoe 1993).

The problem addressed in this paper is the continued disparity in the provision of waste management service delivery by South African municipalities' post-apartheid period. Hence, this paper seeks to describe the disparities in the provision of waste service delivery among various communities and social groups as a result of institutional imbalances of the apartheid era's local government system of administration. The first section discusses the method used in this study. The next section provides a background on waste service delivery in South Africa and highlights poor institutional practices by municipalities that have resulted in low levels of

waste management service delivery. The discussion section suggests how these poor institutional practices can be improved to achieve the desired level of waste service delivery.

### METHODOLOGY

The study used a qualitative approach to inquiry to describe the correlation between data on households obtained from Statistics South Africa (StatsSA 2010) and findings from literature review to address current institutional arrangement challenges to waste service delivery by South African municipalities. The sample of interest in this study is the waste management service delivery by municipalities of the nine South African provinces (Eastern Cape, Western Cape, Gauteng, North-West, Limpopo, Kwa-Zulu-Natal, Mpumalanga, Northern Cape, and the Free State) between 2001 and 2007. The sample that is accessible to this study consists of the numbers of households within each province that have or do not have access to refuse removal. Because of the large number of households involved, a simple summary of the households as provided by the Statistics South Africa was included in the study. The study reviewed data on household accessibility to municipal waste service delivery from the Statistics South Africa to provide explanations on the link between inadequate waste service delivery and institutional arrangements challenges affecting municipal waste management service delivery in South Africa. This is because the vagueness in the assignment of waste service delivery responsibilities within municipalities can undermine responsible and accountable service delivery.

#### Waste Management Service Delivery in South Africa

Solid waste management in South Africa is the primary function of municipalities as specified in Section 156(1) (a) of the Constitution. Effective waste management can improve public health through reduction in the spread of diseases which occur at unregulated dumpsites; enhance protection of watercourses, and ground water. The failure to provide effective waste management systems by municipalities has dire environmental consequences on poor households. In 2001, the South African government

set a target of providing all households with access to refuse removal services by the year 2012, a vision that is yet to materialise (National Treasury 2013). Although, considerable progress has been made in expanding access to refuse or waste removal services mostly in urban centres, significant challenges however are still present. Lack of access is highest in rural municipalities, where households dispose waste in unregulated manner. Although, there are difficulties in obtaining reliable waste information in South Africa, data from the Community Survey 2007 indicates the backlog in the provision of waste service delivery to about 2.1 million households (Community Survey 2007). Data from Statistics South Africa show that about 892 609 households received no form of waste service at all. In contrast, waste service delivery information indicates that about 4.1 million households, that is, out of 12 500 634 households in the survey, only 8 396 574 households received waste service delivery in 2009 (StatsSA 2009). While the lack of access to waste service delivery remains highest in South Africa's rural municipalities, the failure by municipalities to provide waste services in informal settlements and other underserved areas has resulted in unregulated dumping of household waste (StatsSA 2009). Although, the levels of service differ by municipal type, this study identified institutional challenges as a common impediment to waste service delivery. Accordingly, some of these institutional challenges are discussed below.

#### Institutional Challenges

Poor institutional practice is a major challenge to municipal waste management in developing countries; this problem has been exacerbated by increasing population and rapid urbanisation (Zurbrugg and Schertenleib 1998). Cointreau-Levine (1994) noted that municipalities in developing countries usually spend between 20 to 50 per cent of municipal expenditure on solid waste management service delivery which ultimately results in low level of service provision. These low levels of waste service delivery are attributed to inefficient institutional structures (Godfrey and Scott 2011). Some of these institutional challenges include, among others the lack of well-defined line of authority, ineffective sanitation rules, inadequate organisational capacity, unreliable services, and erratic collection schedules (Regassa et al. 2011).

### **Lack of Clear Line of Authority**

Many of the municipalities in South Africa do not have clearly defined line of authority that is well established within this institution (Oelofse et al. 2007). This lack of clearly defined organisational roles and responsibility in municipalities for staff members means that superiors have to deal with exceptions on a continual basis (Gauteng Enterprise Propeller 2010). Given this condition, it follows that there are no clear rules outlining staff's lines of authority in the municipality leading to inadequate supervision of duties. As such, inadequate supervision is manifested in an environment with weak institutional practices (Dohrman and Aiello 1999). Consequently, ineffective supervision often results in inadequate coverage of waste collection services, a situation whereby refuse remains along the streets for days. This inconsistency in waste collection patterns have become a challenge that needs urgent attention and the strengthening of the institutional systems within municipalities. Lack of a clear line of authority has resulted in the outsourcing of waste collection responsibility to private providers who are considered to be more organised and resourceful; thereby raising the cost of waste service delivery of municipalities (Martin 2001).

A clear line of authority is where the roles and responsibilities of each person in the municipality are defined (City of Johannesburg 2011). Having a clearly defined line of authority ensures that staff members are aware of their responsibilities within the municipality (Poister and Streib 1999; Bakker and Hemson 2000). Municipalities need to establish authority lines that facilitate the duties and maintain authority structure for ease of municipal operations. Authority structures will help to provide accountability, clarity, and coherence to municipal operations especially in waste service delivery as practiced in the private sector (Moore 1995). Hence, the development of municipal administrative level structures requires an institutional development such as the elaboration of job descriptions, operational procedures, and definition of competencies.

### **Ineffective Waste Management and Sanitation Rules**

Misunderstanding the functions, responsibilities, and powers by specific levels of gov-

ernment is a major obstacle that limits effective management of waste and sanitation rules in South Africa (Held 2002). The Bill of Rights, as enshrined in the *Constitution of the Republic of South Africa* (Act 106 of 1996, Chapter 2), provides in section 24 that communities with fundamental rights to access social services, of which waste service delivery is essential.

Moreover, it is the responsibilities of the national, provincial, and other agencies to set policy and targets for waste reduction and recycling while municipalities are responsible for general waste management planning, and the development of by-laws. These responsibilities include the provision of economic incentives to support waste minimisation and recycling in their areas. Although, waste management is mostly controlled by municipalities, there are often discrepancies in the enforcement, regulation and administration of waste management functions between the different municipalities, since each municipality makes its own by-law (Schubeler et al. 1996). Municipal by-laws should be specific to the services that are provided with charges and associated tariffs commensurate to the services provided.

The National Sanitation Policy states that municipalities have the core sanitation responsibility. In terms of the National Sanitation Policy, sanitation services "means the collection, removal, disposal, or purification of human excreta, domestic waste-water, sewage, and effluent resulting from the use of water for commercial purpose" (Department of Water Affairs and Forestry, Republic of South Africa, 1996). Consequently, the necessary institutional arrangements to achieve the principles and practices of adequate sanitation services are the responsibility of municipalities. Unfortunately, sanitation rules are currently not adequately enforced by South African municipalities because of the increasing population, urbanization and industrialization has resulted in a large proportion of mostly rural communities lacking adequate sanitation, waste disposal (Gemmell and Schmidt 2012).

In order to effectively implement and enforce sanitation rules, municipal officials need to know and be familiar with the provisions of the relevant policy guidelines. It appears that many staffs that are directly responsible for waste management service delivery are unfamiliar with their responsibilities due to insufficient and in-

adequate information dissemination (Philippines-Canada Local Government Support Program (LGSP) 2003). There are gaps in the waste management and sanitation rules that could pose serious problems to the municipalities in the process of enforcement due to poor institutional practices by staffs such as the life cycle of a dumpsite before its closure. Therefore, municipal waste staffs need to get familiar with relevant sanitation and waste management rules and legal provisions through refresher courses, workshops and seminars in order to improve on their expertise.

### **Inadequate Organisational Capacity**

Devolving the responsibility and authority for planning and developing waste management service delivery to municipalities can lead to poor service delivery if these institutions lack the necessary experience and capacity (Schübeler et al. 1996; Karani and Jewasikiewit 2007). Effective organisational arrangements for waste management at the municipal level, especially at the metro level in large cities, should be established that would foster the more demand-oriented waste management service delivery (Schübeler et al. 1996). Organisational capacity building is much more than training and includes the elaboration of management structures, processes and procedures, not only within the municipality, but also the management of relationships among public, private and communities (Bryson et al. 2010). Organisational capacity building in municipalities on waste management issues has been about new technology and strengthening of financial base, but also about understanding the administration systems for waste management and related activities (Marshall and Farahbakhsh 2013). It is also about understanding the need for human resource development to achieve better results in waste management service delivery. Organisational capacity building should also focus on building sound institutions and good governance for attaining improved waste management service delivery (Schübeler et al. 1996). Moreover, adequate organisational capacity building in municipalities should be about delineating strategies for a sustainable waste management service delivery (Asase et al. 2009).

The status and capability of the municipal waste department to provide improved waste

management service delivery need to be determined. The determination of the appropriate institutional arrangements of the municipal waste department will vary the size and developmental status of the service area. In essence, the inter-connections among the various municipal service sectors, such as sewage and drainage, public works, public health and roads and the waste department need to be clarified within the overall municipal administration to avoid function overlap for effective service delivery. The management approaches, methods, and techniques employed in municipal waste service departments are often inadequate to provide the type of efficient service delivery expected of it. This is because municipal waste service departments are unable to adapt or integrate private sector based management style to achieve inter-disciplinary interaction and cooperation among the different functional areas of the municipal administration.

The existence of large discrepancies between the job requirements and actual qualification of municipal waste staff at the managerial and operational levels is a major institutional challenge that needs to be addressed. An initial step may be to improve on the awareness-building measures among responsible staff regarding waste, sanitation, and environmental issues. A programme for manpower development for municipal waste management staffs may be elaborated and an appropriate training programme be implemented on issues such as organisational development plan, job description and also on training needs analysis (Godfrey and Scott 2010). It may be logical and appropriate to establish institutional capability for training and human resource development for municipal waste staff at the city, regional and national levels. It may be appropriate to establish a national association of professional municipal waste management employees that would help to raise their profile, promote improved professional and operational standards.

### **Unreliable Service and Collection Frequency Challenges**

Solid waste collection is facing a lot of challenges in recent time, but the difficulties faced by one municipality are different from that experienced by another (Contreras et al. 2008). In most instances, the technical systems estab-

lished for the collection, storage, transportation, treatment, and disposal of waste are often poorly suited to the operational requirements of most collection areas (Schübeler et al. 1996). The use of inappropriate technology and or equipment types undermines the efficiency of waste collection operations and equipment maintenance especially the use of imported or international donor equipment (Talyan et al. 2008). Unfortunately, this problem is made worse by the diversity of materials in the waste which is no longer mainly food waste and ash, but includes plastic packaging, paper and electronic waste (Talyan et al. 2008). The failure to consider parameters peculiar to a particular location has led to unreliable waste collection service and infrequent collection (Coad 2011). The purchase of large numbers of collection vehicles, which has not been effectively put to use or have only been operational for a short period, is the reason for wasted fund by municipalities and a sign of institutional inefficiencies (Thornhill 2012). In some instances, unsuitable equipment is purchased because of corruption, but in other instances waste equipment is purchased with the assumption that the equipment will work efficiently in all situations (Talyan et al. 2008).

### DISCUSSION

Municipal waste service departments often experience certain problems in their current waste collection systems that can be linked to poor institutional practices. Some of these shortcomings may include shortage of funds, which is often cited as a major problem (Godfrey and Scott 2010). This problem may restrict operational expenditure such as salaries, fuel, maintenance, and lack of capital to purchase new waste vehicles and equipment. Another problem may be caused by administrative procedures on approving parts and equipment purchase. The inability to provide full waste collection coverage by municipalities is a result of rapid growth of a city both in land area and population (Nahman and Godfrey 2010). Areas of the city which has recently been developed or is difficult to access may pose a strain on effective waste collection. Illegal dumping and littering pose a serious challenge to effective waste collection effort despite improved law enforcement and public education campaigns (Ichinose and Yamamoto 2011). Some reasons for illegal dumping and littering may in-

clude the following: unsatisfactory street containers may lead to people dropping waste beside the container; unattended overflowing street containers; and wrongly located street containers sometimes requiring people to cross the road to drop off household waste. Other reasons could be ignorance and careless behaviour such as driving or walking and dropping off waste along the road; some pockets of waste dropping during pick-ups by waste vehicles; scattering of waste by pickers from waste containers; and illegal dumping of waste debris by construction companies. Experience with disappointing waste contractors because the responsible municipal official has not sufficiently prepared contracts with clear responsibilities and expectations has been inappropriately stated, or that the tendering and selection procedure has been inadequate, and there is ineffective monitoring and management of contracts (Coitreau-Levine 1994). Lack of public cooperation in waste collection may render the waste collection process infrequent because solid waste collection requires participation and cooperation from a large number of the population to succeed. A transparent system whereby the public is carried along on waste collection issues by municipal officials gives the public an opportunity to learn more on payment of fees.

Institutional arrangement challenges contribute to poor waste management service delivery by South African municipalities (Martin 2001). In order to resolve these institutional challenges, municipal waste service delivery should ensure that individual municipal waste service staff takes responsibility for specific actions and duties assigned to them. This approach contributed to the success of privately managed enterprises. This is often referred to as “responsibility accounting” whereby every task given to an official is rewarded when actions and performance is level achieved. Since, decentralisation of duties is not clearly defined in South African municipalities and no particular individual is made to account for poor service delivery, it is appropriate to have clear definition of roles and duties in accordance with the demands of the position of individual staff members. As such, municipalities need to have a revised organisational structure that is clearly spelt out during staffing plans with clear job descriptions to achieve an efficient waste service delivery. By this measure, it is hoped that such institutional imbalance apparent in lack of clearly defined job descriptions is taken care of.

Despite improvements in waste law enforcement and public education to ensure that waste is disposed of properly and at designated places, some citizens still have reasons to flout waste management and sanitation rules by dumping waste illegally in undesignated dump sites. Municipal waste staff should be made to do a survey by observing how residents dispose their waste, especially in identified hot-spots and to probably ask them why they fail to abide by waste and sanitation rules. This approach will assist municipal staffs to know if the rules need improvements or if more public education is necessary to change such attitude since public support is a major criterion for efficient waste service delivery.

Inadequate organisational capacity is another institutional problem that contributes to poor municipal waste service delivery in South Africa. Discrepancies often exist between job requirements and actual staff qualifications due to nepotism in the recruitment process whereby political associates with no experience on waste management issues are employed at the expense of qualified but unconnected applicants (Kanyane et al. 2013). Although, training and human resource development are necessary to correct such an institutional problem, however, municipal capacity building efforts may consider giving attention to strategic planning and strong financial management.

Unreliable waste service and infrequent waste collection patterns experienced in waste service delivery are the results of institutional arrangement challenges. The technical capacity in most municipal waste department needs to be re-evaluated vis-à-vis the size of the city it is meant to serve. In this regard, municipal management support systems should involve waste service staffs in the selection and purchase of new waste vehicles and equipment in order to promote ownership for responsible waste service delivery. Consequently, waste collection fees should be differentiated between urban and rural customers. Municipal waste service staffs involved in private-partnership participation should be trained to ensure effective monitoring, co-ordination and management of the waste service delivery process.

### CONCLUSION

Institutional challenges limiting the efficiency and effectiveness of municipal waste management service delivery in South Africa has

been examined. Effective waste service delivery has become a desirable factor in promoting sustainable. The study noted that institutional challenges have a correlational effect on municipal waste management service delivery. However, poor institutional arrangements can be positively improved, if municipal waste management staffs display a great deal commitments to correcting the negative perception which the public have about their persistent poor waste service delivery. The lack of clearly defined roles and responsibilities for waste service staffs; and failure to consider certain parameters peculiar to particular waste locations are some of the reasons for poor waste service delivery.

### RECOMMENDATIONS

It is suggested that good institutional practices, such as the establishment of clear authority lines, would improve staff performance through accountability and responsibility. Municipal waste staffs should be trained on relevant sanitation and waste management rules, including legal provisions, through refresher courses, workshops and seminars so as to improve on their skills. Establishing a national association of professional municipal waste management employees will promote professionalism and increase operational standards. Designated municipal officials should ensure that waste contractors have clear responsibilities and the level of expectation should be appropriately stated in their contracts for the effective monitoring and management of performance. Furthermore, these good institutional practices should be constantly monitored, reviewed and evaluated from time to time for improved municipal waste service delivery in South Africa. This has become necessary given that effective waste management service delivery is a desirable factor in sustainable livelihood.

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