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Exploring "Good Garbage Governance" in Low- Income Area: A Case Study of the Ga East Municipal Assembly- Accra, Ghana

Masters Thesis for the award of Philosophy (Mphil) in Development Studies, Specializing in Geography

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DECLARATION

I, **Lartey Benjamin Nii Badu**, hereby declare that this thesis is the result of my own research except for the references to other people's work that have been duly acknowledged. This thesis was supervised by Associate Professor Camilla Louise Bjerkli and has neither in part nor wholly been presented for another degree in this university or another university. I bear full responsibility for any limitation that may arise out of this research.

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DEDICATION

I hereby dedicate this thesis to Saint Herbert Berko and Atomic Prince of Peace Church choir, Presbyterian Church of Ghana; for their support and prayers throughout my studies.

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ABSTRACT

The concept of governance since the late 1980's has gained much prominence in the development arena especially when dealing with issues like solid waste. In line with the concept, this study explores UNDP's term of "good garbage governance" by using the Ga East Municipal Assembly as its case study. It presents the changes that governance has brought to the Waste Management Department as well as the challenges the department faces in fostering good good governance.

The study was guided by some theoretical and conceptual framework. These include World Bank's concept of Governance as well as Norman Long's framework on Actor- Oriented Approach. Other concepts used in the research include the concept of Institutional Pluralism, Power, Environmental conflict, Environmental in (justice) and Inequality. The study further adopted an exploratory qualitative approach by using both primary and secondary sources of data. Interview, both semi-structured (5) and unstructured (7), as well as Field Observation and Focus Group Discussion (2) were used in producing primary sources of data. Documentary analysis was also used in producing secondary data for this study. In reaching research participants, the study relied on purposive, snowball, convenient and simple random sampling techniques.

The study reveals that the introduction of solid waste decentralization as a form of good garbage governance has brought in new actors into the management of solid waste; thereby leading to the reorganization of solid waste in the study area. However, much improvement has not been recorded as there exist a gap between what governance tends to achieve and what it actually achieve such as effective participation of all the actors in solid waste decision- making process, increase transparency and accountability, information sharing among others. This is as a result of the unequal power relations such as legislative state power vested in the hands of bureaucrats, work experiences as well as education that exist among the actors involved in solid waste management. This makes the elite able to still control the affairs of solid waste leading to the marginalization of the other actors; hence questioning the motive of good garbage governance. This limited stakeholder participation, hindered transparency, led to the misappropriation of solid waste funds, lack of trust from the community towards the bureaucrats as well as the lack of political will from the bureaucrats towards solid waste management policies.

The study recommends that the forms in which power exhibited itself should be identified and addressed in order to be able to improve upon solid waste management. In addition, national and

municipal governments should make efforts to improve good garbage governance by ensuring an effective citizen participation, accountability and transparency, and fairness in decision making. Further, the study also entreats both national and municipal government as well as the households to be proactive and also see the prospects associated with the management of solid waste in terms of job creation, energy generation and revenue generation activity when dealing with solid waste matters. This calls for a revision of the National Environmental Sanitation Policy by giving equal opportunities to the various actors involved in solid waste management as well as intensifying its educational programs to increase awareness among the citizens.

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LIST OF ABBREVIATIONS

AMA	Accra Metropolitan Assembly
ASDA	Akwapim South District Assembly
CBO	Community Based Organization
CHRE	Centre on Human Right and Eviction
CSIR	Council for Scientific and Industrial Research
DES	Department for Environment and Sanitation
DFID	Department for International Development
EHM	Environmental Health and Management
EI	Establishment Instrument
EPA	Environmental Protection Agency
ERP	Economic Recovery Programme
ESAA	Environmental Sanitation Assessment and Audit
ESICOME	Expanded Sanitation Inspection and Compliance Enforcement
ESPAG	Environmental Service Providers Association of Ghana
GAEC	Ghana Atomic Energy Commission
GEMA	Ga East Municipal Assembly
GEMCA	Ga East Municipal Chiefs Association
GES	Ghana Education Service
GHS	Ghana Health Service
GLG	Ghana Landfill Guidelines
GNFS	Ghana National Fire Service
GSS	Ghana Statistical Service
GWMA	Ga West Municipal Assembly
IAEA	International Atomic Energy Agency
IMF	International Monetary Fund
KTDA	Kwabenya Township Development Association
LC	Lands Commission

LNMA	La Nkwantanang Municipal Assembly
MA	Municipal Assembly
MCE	Municipal Chief Executive
MEST	Ministry of Environment Science and Technology
MLGRD	Ministry of Local Government and Rural Development
NEAP	National Environmental Action Plan
NESP	National Environmental Sanitation Policy
NESPoCC	National Environmental Policy Coordinating Council
NGO	Non-Governmental Organization
NYEP	National Youth Employment Program
SAPS	Structural Adjustment Policies
SSNIT	Social Security and National Insurance Trust
TCP	Town and Country Planning
TESD	Town Environmental Sanitation Development
TMA	Tema Metropolitan Assembly
UNDP	United Nations Development Programme
WMD	Waste Management Department

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CHAPTER ONE: GENERAL INTRODUCTION

1.1 Introduction

Over the past few decades, solid waste management[1] has become more complicated as a result of the complex interplay between rapid urban growth, increasing wealth of urban dwellers and the development and consumption of different goods which are less biodegradable. This is creating many problems for various municipalities across the globe (Asase et al., 2009; Oteng- Ababio, 2011). One major problem facing the management of solid waste in developing countries is the lack of a comprehensive strategy that seeks to integrate the knowledge and skills of the various actors, right from policymaking to its implementation (Owusu et al., 2012; Oteng- Ababio, 2010). These actors which include the city authorities, the private sector as well as civil society group organizations can help manage the urban environment in a sustainable way. However, most of the solid waste policies are executed with little or no discretion from the grassroots level (Agamuthu et al., 2009; Abas & Wee, 2015). Furthermore, city authorities in these developing countries often lack the financial resources, technology, knowledge, and capacity to formulate and enforce policies (Fobil et al., 2008). In addition, the poor economic conditions in such countries do not allow for the majority of the poor population to pay for solid waste collection, transportation, and disposal services. As a result, the limited high- income areas are served with solid waste services at the expense of the majority population in the income areas (see Oteng- Ababio, 2011).

In recent years, due to the failure of most municipal governments to provide an adequate solid waste service for their citizens, various approaches have been embraced to tackle the problem of poor solid waste management. These approaches include the technical approach which relies on scientific knowledge and skills in the treatment and disposal of solid waste. Other approaches involve solid waste privatization (Post, 1999), a collaboration between municipal governments and the private sector in the form of Public- Private Partnership (Oteng- Ababio, 2007) as well as the role played by the informal sector in solid waste management (Oteng- Ababio, 2012). These approaches, however, have not provided a long-term solution to the problem. Currently, in order to further address the problem of poor solid waste management, international donor organizations including the World Bank, IMF and, UNDP have stressed the importance of embracing the

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[1] Solid Waste Management is described as the collection, treatment, and disposal of municipal solid waste, which includes wastes from the noted sources (Nunan, 2000; Bhuiyan, 2010).

principles of good governance. Following this, development agendas have given considerable attention to governance, and the United Nations (UN) has embraced the term 'good garbage governance' in its report (UN-Habitat, 2010b; Bjerkli, 2013). Their call for a governance approach to solid waste management is where the activities and knowledge of civil society group organizations[2], the city authorities as well as the private sector can be integrated effectively. This takes the form of decentralization[3]. Nonetheless, studies have shown that issues pertaining to power and politics need to be given much prominence as they can undermine the effectiveness of good governance (Schalkwijk, 2005; Grindle, 2007; Bjerkli, 2013).

Ghana among many developing countries in the world continues to grapple with poor solid waste management. A study made by Oteng- Ababio (2010), reveals that the problem of solid waste might be as a result of the non- implementation of a management system that is politically, socially, economically and environmentally sustainable. Achieving an effective and efficient management system in solid waste should involve all groups within the society including the local authority, Community and Faith Based Organizations, Non- Governmental Organizations, households (Hardoy, Mitlin & Satterthwaite, 2013). Asomani- Boateng (2016) explains that local communities, for instance, could work hand in hand with the private and public waste service agencies, which will help reduce their operational cost as well as enhancing a better service delivery. The informal sector plays a crucial role in promoting solid waste reduction, solid waste segregation, and the recycling and reusing of inorganic solid waste materials, all of which have increased in recent years (Oteng- Ababio, 2012). Oteng- Ababio goes on further to illustrate how civil society group organizations, for instance, respond to poor environmental conditions by initiating and promoting primary collections as in the case of La Mansamokpe Association in La Township in Accra, Ghana. Asomani- Boateng (2016), contests that, regardless of the important roles played by the informal sector and the civil society group organizations, governments in developing countries continue to give preference to a technocratic, top- down approach due to the

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[2]Civil society is described as 'the arena in society between the state, the market, and the family where citizens advance their interests' (Heinrich, 2005). It has a shifting dialectics from organization recognized by the government to include non- formal social organization like the households. In this research, the Unit Committee Members were of importance as they constituted my main civil society group together with the traditional authority or chiefs.

[3] Decentralization is understood as "the transfer of powers from central authorities to lower levels in a political-administrative and territorial hierarchy" (Larson and Soto, 2008).

financial gains of some corrupt government officials (Oteng- Ababio, 2010; Post & Obirih- Opareh 2003).

This research seeks to explore the effectiveness of good garbage governance[4] in low-income urban areas of the GEMA, taking into account World Bank's concept of governance which has dominated development discourse and being implemented by governments across the world. The aim of governance is to improve the management and provision of public services including solid waste.

1.2 Problem Statement

The burgeoning nature of the process of urbanization within the Ga East Municipality has increased the level of economic activities, which tends to have a positive correlation with the various amount of goods and services consumed (GSS, 2014). This together with inadequate finance and expertise, logistics etcetera have led to the situation whereby there is an increase in the amount of uncollected solid waste that is generated in the municipality (Addae, 2014). It is estimated that about 385 tons of solid waste is generated monthly, out of which 261 tons are collected and disposed of, representing about 67% (GSS. 2014). This leaves a substantial amount of solid waste uncollected. In this direction, various kinds of inconveniences are created including health hazard to the people and reducing the beautification of the municipality. Pressure continue to mount on the Municipal Assembly's Department of Environment and Sanitation, with the need to protect the health of the population among other important aims like promoting environmental quality and sustainability (ibid).

In understanding the problem of solid waste management in GEMA, previous studies have focused on household willingness to pay for solid waste (see Addae, 2014). Addae in her research identifies and explores the factors that influence households' willingness to pay for an improved solid waste collection within the GEMA. Also, Yoada et al., (2014), explored the practices of community members and their perceptions of solid waste management and its associated health implication. They analyzed the social and behavioral factors that affect an effective solid waste management system. These studies among other studies have contributed to existing knowledge gap by deepening our understandings about people's perceptions and attitudes toward solid waste. They

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[4] Good Garbage Governance and solid waste governance are used interchangeably in this study.

also help us to understand how solid waste is managed and can be improved upon at the household level. However, there is a lack of research on how the various actors including the city authorities, civil society group organizations, the informal sector as well as the households involved in solid waste management interact and how their interactions affect the management of solid waste. There also exist a lack of research that identifies the barriers that limit the interaction among these actors and how these barriers can be tackled. Following these, one outstanding question that has necessitated the need for this research is to examine the processes and outcomes in solid waste governance and its related environmental conflict, by also taking into account the issue of power. In addition, I want to understand the contributions, actions and everyday struggles of the various actors involved in the governance process. This will help policy makers and future researchers to understand the extent to which solid waste is managed not only in the municipality but also in Ghana as a whole.

1.3. Research Objectives and Questions

The research on Good Garbage Governance in Low-Income Areas is to examine the processes and outcomes in the management of solid waste. This is to broaden our understanding of Solid Waste Management (SWM) practices. The specific objectives are as follow:

➢ To identify the main actors and their contributions to solid waste management
➢ To analyze the current situation of solid waste governance in the municipality
➢ To explore the major problems undermining the effectiveness of good garbage governance
➢ To offer recommendations to the municipality and other stakeholders for policy making

1.3.1. Main Research Questions

➢ Who are the main actors involved and what roles do these actors play in the management of solid waste?
➢ How is solid waste managed in the municipality?
➢ What are the major factors undermining the effectiveness of good garbage governance in the GEMA?

1.4. Significance of the Study

The study provides an insight into the current waste management practices of the GEMA. It adds to existing knowledge gap by looking at how governance approach can be used to study solid waste management. It helps us to understand the main obstacles the solid waste sector faces and how these problems can be solved. That is, the study provides policy- makers with knowledge on how to avoid policy failures, which might occur as due to the little interaction with the general public. The study further serves as a case to most municipal governments on how to go about with a public developmental project.

1.5 Organization of Chapters

The study is divided into eight chapters. The Chapter One outlines the general introduction of the study, the problem statement as well as the research objectives and study that the study tends to achieve and answer. It also looked at the importance of the research. Chapter Two describes the theoretical and conceptual framework guiding the study. It further reviews relevant literature necessary for the study. Chapter Three concentrates on the research methodology adopted for the research. It comprised of the research methods used in producing data, sampling techniques and method of data analysis. Chapter Four explains why the study area was selected and, further gives the general profile of the study area. Chapter Five discusses the first objective of the study by identifying the various actors involved in solid waste management and their respective roles. Chapter Six focuses on the second objective by giving an account on the current situation of solid waste management in GEMA. Chapter Seven examines the problems undermining the effective implementation of good garbage governance in the municipality. Chapter Eight concludes the study by offering recommendations for policymaking based on the research findings. It also talks about the limitations of the study as well as the implications for further research.

CHAPTER TWO: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

In exploring good garbage governance in the GEMA, various theoretical approaches can be used. However, for the purpose of this research, I decided to use World Bank's concept of governance in order to analyze the often dynamic and complex processes of policymaking and implementation. The concept of power is also adopted in order to understand how unequal power relations affect decisions and actions pertaining to solid waste governance. I discussed the concept of Institutional Pluralism and its relationship with solid waste governance. Environmental Conflict, Environmental (In)justice and Inequality are also discussed as they are crucial in examining the outcomes in solid waste governance. Long's Actor- Oriented Approach was used to identify the main actors involved in solid waste governance and their roles as well as how their operations are caught up within the interaction of micro and macro influences in the governance process.

2.2 Governance

The concept of governance was first introduced in a developing world scenario by a World Bank report on Sub- Saharan Africa: *"From Crisis to Sustainable Growth. A Long-Term Perspective Study"* (World Bank, 1989; cited in Bhuiyan, 2010), after development experts expressed great concern at the end of the late 1980s about the failure of neoliberal policies or structural adjustment reforms and the various countries inability to reap the benefits of a long decade of strict reforms (Woods, 1999). Ngaire Woods further intimates that the answer widely agreed on in the early part of the 1990's was that countries taking on adjustment policies lacked the institutional capacity to ensure its fruition. The concept of governance then came to the fore and gained grounds, with the view that it will play a crucial role in determining societal well-being (Graham et al., 2003), and a major component of development assistance (Grindle, 2010). Following this, the then Secretary-General of the United Nations, Kofi Annan, envisaged a growing consensus when he stated that *"good governance is perhaps the single most important factor in eradicating poverty and promoting development"* (United Nations, 1998). Since then, governance has been used in different context to refer to Environmental governance, Corporate governance, Community governance, Organizational governance, Security Governance, Political Governance: all with the

aim of promoting development (Brinkerhoff, 2007; Brinkerhoff & Johnson, 2008; Jayne & Ward, 2016).

The main difference between government and governance is that, government refers to the formal structures and institutions characterized by strong institutional legitimacy, meaningful autonomy from senior government officials and basic local governments, relevant territorial control (Lefèvre, 1998), that formulates and implements decisions and actions in accordance with the laid down rules (Béné & Neiland 2006; Nunan, 2015). This is different from governance. According to Stoker (1998; following Rhodes, 1996), research on governance reflects the growing concern within the social sciences in the changing patterns in governing styles, which is about sharing responsibilities and power between the private sector, civil society group organizations and the state. Governance is about setting the policy agenda and objectives and the processes of implementing management actions (Béné & Neiland 2006). Governance, therefore, extends its meaning to encapsulate the new process of governing or the new methods by which societies are governed (Stoker, 1998; Davies, 2008). The Concept governance, has different meanings for different people (see Kjær, 2004; Schuppert 2005; Kooiman & Jentoft, 2009). Beginning with World Bank's definition in its 1989 report on Sub-Saharan Africa, Governance is defined as *"comprising the state's institutional arrangements, the processes for formulating policy, decision-making, and implementation; information flows within government; and the overall relationship between citizens and government"* (World Bank, 1989; cited also in Woods, 2000). Woods goes on to intimate that this definition in subsequent years has been revised by the world Bank so as to keep up with its constitutional mandate and make it more effective. The World Bank revised definition tends to focus more on implementing and promoting neo- liberal policies. For instance, the World Bank in 1997, in its *World Development Report*, states in relation to governance that "*an effective state is vital for the provision of the goods and services and the rules and institutions, that allow markets to flourish and people to lead healthier, happier lives*" (World Bank, 1997; Woods, 2000). From the above definition, it can be deduced that the World Bank is committed to promoting the private sector through participation, transparency, accountability, efficiency, fairness and ownership.

According to the UNDP (1997), governance is defined as "the exercise of economic, political and administrative authority to manage a country's affairs at all levels', which comprises mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise

their legal rights, meet their obligations and mediate their differences" (UNDP, 1997; see also Grindle, 2007; Gisselquist, 2012). To the UNDP, governance is characterized by transparency, equity, participation that ensures that political, social and economic agenda are based on broad consultative work in society and that the voices of the marginalized group (poorest and the most vulnerable) are considered in decision-making over the allocation of development resources. In understanding governance is to decentre our attention from the role of state and its subsidiary institutions to include interventions from civil society group organizations (UNDP, 1997; Grindle, 2007). As World Bank's definition is committed to promoting neoliberal policies, UNDP tends to focus on the role of civil society groups in bringing about social change. Central to the governance approach is that societal matters are not the preserve of the state or technocrats and the scientific community but rather decisions should be of social, cultural, political and economic concerns that shape the environment in which we find ourselves. In addition to the governance concept is the importance of scale, thus local to global that may influence the ways in which decisions regarding societal wellbeing are made (Davies, 2008). Kooiman & Jentoft (2009), concludes that these mixes or combination of different actors, different sets of rules and processes are remedies to changes in societal dynamics and ever-growing societal diversity and complexity. In terms of responses to major societal issues, we need to look not only to the state but also to the market as well as civil society, each with its own expertise and responsibility.

From the above definitions, debates focusing on governance finds it very difficult to pin down the meaning or definition of governance and its practices (Graham et al., 2003). Common in these definitions is the weakening of state institutions and the strengthening of civil society organizations while market forces are let loose to operate (Griffin, 2001; Myers, 2005). Further is the recognition among individuals, community members, private entities, civil society groups, government, that governance analysis are geared towards understanding of rules and how decisions are made (Davies, 2008). According to Bhuiyan (2010; citing from Pierre, 2000) governance has a dual meaning. Firstly, it refers to the current and empirical adaptation of the state to its external environment as it emerges in the late twentieth century. Secondly, governance portrays a theoretical representation of coordination of social systems and for the most part, the role of the state in that process (Pierre, 2000). All in all, governance is concerned with the performance of the government; including public and private sectors, global and local arrangements, formal structures, informal norms and practices, and spontaneous and intentional system of control (Roy, 2006;

Bhuiyan, 2010). These all come together to influence decision outcomes. With governance approach, it is expected of the state to provide the right atmosphere for the organization of urban services and to monitor these services provided. That is, the role of the state is to steer the management process. Non-state actors like Civil Society Group Organization, the Private sector, among other groups on the other hand are expected to be able to participate in the decision-making processes and to provide the needed urban services (see Bjerkli, 2013).

2.2.1 Understanding Bad Governance

Bhuiyan (2010; also see Moore, 2001), contests that, "bad governance" is neither deep- rooted in the traditions of the people of poor countries nor an outcome of poverty. It is rather the result of the ways in which state authority in the developing countries has been constructed and is being maintained through economic and political relations with the global economy. He further points out that the policies and practices of the developed countries governments and the pattern of international economic transactions help sustain bad governance in the south (ibid). Khan (2002), goes on to highlight that for bad governance be made manifest, certain conditions must come to play. Firstly, is the inability to make a clear distinction between what is public and what is private which can lead to the direction of public resources for individual private gain. Added to the above is excessively limiting participation based on non-transparent decision making. Furthermore, is the lack of fairness in decision- making process and excessive bureaucratic processes that limits the functioning of other actors, which can promote bribery and corruption (Bhuiyan, 2010). In most municipalities across the developing countries, these are said to be very common which however have limited the operations of non- state actors including the private sector and the civil society group organization (World Bank, 1992). For instance, Nunan (2015), explains that, the World Bank's 1989 report attributed the poor economic growth in the developing countries to "bad governance" which captured issues of corruption, nepotism and bad policies, lack of transparency and accountability. The report brought to the fore the immediate need for good governance, requiring an increase in transparency and accountability within state institutions in the developing countries that can lead to improvements in public services including the management of solid waste.

2.2.2 Understanding Good Governance

Good governance, in particular, is used in a normative sense, referring to how governance "should be" rather than "necessarily is" (Nunan, 2015). The concept of good governance has become an important criterion for assessing the role of the state in the development agenda as well as defining the criteria for development and a necessary condition for it. Good governance is used as an umbrella concept to describe a wide variety of "good things" (see Grindle, 2010). However, this variety of "good things" which are being promoted by international donor agencies, are not adapted to the local setting (Grindle, 2007; 2010; Bjerkli, 2013). That is, the implementation of good governance in most developing countries has not produced the intended result due to local factors including the political culture that exist in such areas. International donor agency fails to pay close attention to the political economy that can influence the way decision- making process are carried out. Bjerkli (2013), opines that, refusing to pay much attention to the power dynamics at play, would mean that government officials would misuse power to their own advantage and in this instance, promote bad governance. These variety of "good things" as formulated by international donor agencies are worthy of support and implementing. In identifying and making good governance an indicator for development, each of these "good things" has been transformed into a necessary component of developmental policies that can stimulate growth and political stability (Grindle, 2010). Following this argument, Grindle's recent publication reveals that the list of "good things" of good governance includes many more conditions to be achieved and these include, widespread service delivery, sound regulation, an open trade regime, respect for human rights, gender and racial equality, a good investment climate, sustainable energy use, citizen security, job creation etcetera (Grindle, 2017). Nevertheless, with more "good things" or principles being added to the good governance approach, achieving a "developed status" has become more burdensome for most developing countries. The problem is not the principles or "good things" that these international donor agencies tend to promote but overloading the agenda of good governance, thus "inflating what must be done" beyond the capacities of most developing countries (considering their political economy and nature of their state institutions), and making good governance a precondition for development to occur (Grindle, 2010). What development practitioners expect from developing countries to achieve from good governance are extremely high. These technical solutions or "good things" from donor agencies have led to instances whereby power and resources are still concentrated in the hands of powerful actors at the expense

of the masses (Grindle, 2017). Adding to this, Merilee Grindle, goes on to highlight the need for "good enough governance", with target and goals being within the reach of developing countries and, that making it more realistic to attain (Grindle, 2004). This, she offers recommendation through the analysis of the political economy and the nature of state institutions that shape the options available for introducing and sustaining reform initiatives. Understanding how governance institutions (formal and informal) evolved and function is very important than proposing and relying on a variety of "good things" that serve as a recipe for social change or development. Adopting a new policy or new system of governing institutions does not easily translate into a change in practice because this might conflict with existing rules, processes, and functions (Grindle, 2017). Good governance has been associated with the process of decentralization since the mid-1980s. Decentralization for some time now has been regarded by development practitioners as a positive development approach, bringing governance and related development to the doorsteps of people. On the other hand, decentralization as a governance process has rarely led to substantial improvements in the living conditions of people because of the incomplete devolution[5] and deconcentration[6] of power and resources. This is limiting the scope for decision-making and enforcement of rules (Nunan, 2015). Lockwood (2010), developed some principles for analyzing decentralization. Among these are Transparency[7], Participation (Inclusion)[8], Integration and coordination among actors[9]. Others include trust building, fairness, etc. These principles serve as recipes to which good garbage governance in GEMA is explored.

2.2.3 Linking Theory and Practice

There is a growing concern that governance concept is a political one and therefore calls for critical analysis that test whether the concept serves as a good basis for developing a coherent analytical approach (Marinetto, 2003; Davis, 2008). There are also concern about the theoretical nature of

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[5] Devolution refers to the transfer or delegation of power from central government to a lower level, which may include community-level organizations (Nunan, 2015).

[6] Deconcentration also refers to where central ministries transfer power to branch offices outside of the capital city (Nunan, 2015).

[7] Transparency denotes how visible are decision-making processes? Are reasons for decision- making communicated to stakeholders? Information about the arrangements and performance of governance structures should be available (Lockwood, 2010).

[8] Participation/ Inclusion captures notions of existing mechanisms that are available which enables groups to take part and also influence decision- making process and outcomes (Lockwood, 2010).

[9] Integration deals with coordination between and within levels of governance? How do information and resources flow? Do priorities, plans and activities within and across levels of governance fit together (Lockwood, 2010).

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governance approach which has called for more empirical testing of the governance approach (Kooiman, 2003; Eberlein & Kerwer, 2004; Davies, 2008). This will provide a deeper understanding of what constitute good governance and how it is being implemented on the grounds. This calls for a shift from a normative understanding of good governance to an empirical one. This can serve as a framework for most development practitioners when studying other development related issues. Good governance approach was propounded to make governments across the world more productive and efficient in their daily activities. However, it is also important that more emphasis be placed on the unequal power relations among the various actors within the governance process. This is because of the tendency of excluding the less powerful actors from the decision- making process (Heynen, Kaika, & Swyngedouw, 2006; Bjerkli, 2013).

2.2.4 Institutional Pluralism and Governance

The limits of formal institutions (state and private actors) to enhance the efficient and effective allocation of public goods and services, has necessitated the need to integrate informal institutions in the development agenda. Institutional pluralism according to Claassen (2009), has a normative position of ensuring the just provision of public goods and services. Claassen explains that, there is no single principle of distributive justice, but rather different rules should be incorporated. This marks a shift from the single institution to complex institutions providing goods and services under different sets of rules at the same time. This therefore enhances the capabilities of producers and ensures that customer satisfaction is achieved (ibid). As defined by Tukahirwa et al., (2013), Institutional Pluralism involves the situation whereby multiple institutions operate within complex or diverse institutional arrangements simultaneously. Following this, these agencies cope within multiple set of rules: formalized and non- formalized (Fritzpatrick, 2006). This comes with different forms of accountability, different modes of payment and producer- customer relationship (Tukahirwa et al., 2013). At the heart of Institutional Pluralism are effectiveness[10], efficiency[11] and accountability[12] (Blair, 2001). Among these three, accountability is seen as the most important factor in developing world context that can facilitate good governance. Institutional Pluralism enhances the effectiveness and legitimacy of the ruling government with the state having the opportunity to pay attention to other sectors. Harry Blair expands that, this is a solution to most

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[10] Effectiveness offers the best benefit to cost ratio
[11] Efficiency delivers quality
[12] Accountability ensures specific responsibilities for outcomes/ results

failed decentralization policies especially in the developing countries (ibid). Multiple relationships between organizations are very helpful because they enhance specialization and efficiency as compared to a single actor (Tukahirwa et al., 2013; Esman, 1991). Tukahirwa et al., (2013) illustrates that, Institutional Pluralism enhances cooperation, collaboration, complementarity and third party governance. In that, there is the sharing of centralized state responsibilities with other cooperating agencies and actors. Integrating Institutional Pluralism in social change processes enable us to understand how multiples agencies including the marginalized group can coordinate and collaborate with the state effectively in providing a public good or service, as this cannot be effectively be achieved by a single actor (Claassen, 2009). However, Blair (2001), reveals how institutional pluralism can be manipulated by the powerful class, leading to what he calls institutional monopoly: characterized by a technocratic top-down, centralized approach to governing. Institutional pluralism presents us with a normative approach to solid waste governance that needs to be subjected to more empirical testing.

The concept of Institutional Pluralism is a very useful concept in understanding good garbage governance. It involves a multi-stakeholder approach to solid waste whereby the social, political, economic and environmental issues are discussed by all members of the group or society (Abas & Wee, 2015). This is seen to promote cooperation, collaboration, and coordination among members involved. Mohammed Niyas (2012), intimates that institutional pluralism is based on risks sharing, capacity building and priority to human and environment. These principles can ensure that a better system is attained when managing or delivering services like solid waste. With solid waste management being seen as a societal burden that needs the collective efforts of all individuals (Baabereyir, 2009), Institutional Pluralism helps us to understand how such environmental burden can be solved. This involves giving due attention to the views and expertise of other stakeholders. This fosters the need for accountability and good governance (Bjerkli, 2013). However, it is important to stress that, there are unequal power relations at play within the society that influence the way decisions are made. This power tends to produce some setbacks like lack of trust, lack of accountability, limited participation etcetera. Institutional Pluralism can enhance an effective and efficient allocation of public goods and services when the right environment is provided for it to operate. In that, the local community, state and private companies involved in the delivery of the public goods and services are allowed to cooperate effectively without any hindrance. In using Institutional Pluralism in studying good garbage governance, I will be interested in the level of

involvement of the people, the need for accountability, and the collaboration that exist between state and non- state institutions as well as the power dynamics at play.

2.2.5 Urban Politics and Power

Hall & Barrett (2012), reveals that, one crucial issue that needs to be considered when analyzing urban governance is power; what it means and who possesses it? Power within our urban environment takes diverse forms and is unequally distributed among social groups or actors. The concept of Power has been used to study societal ways of life for many decades and applying power in a study is to comprehend the problems and struggles of the everyday life. (McAreavey, 2009). Yet its meaning remains a matter of controversy in the social sciences (Lukes, 2005). This subjects the concept to open questions and criticisms (Few, 2002). In most cases and usage, power may seem a straightforward concept to refer to the capacity to bring about change (see McAreavey, 2009) or the control an individual has over his environment or over another individual (Bryant & Bailey, 1997). There are many arguments among both academia and political activists who are divided along different lines of opinion on what makes or constitutes power, how power should be examined and be effectively exercised (Doyle et al., 2015). Such an analysis requires a critical examination of the forms and processes of power in operation and how politics operates and interacts with lesser and greater scales of government and networks of power (Parker, 2011). Just like governance, the concept of power was traditionally confined to the agencies or institutions of the state and the actors involved in contesting and making political decisions in and for societies (Ibid). Thus, there is the power given to the representatives from political parties through elections or the ballot box, the power of organizations and institutions, perhaps from big business or other organizations to control and influence the processes of urban politics in their own way (Hall & Barrett, 2012). There is also another power held by the less powerful actors within the urban environment such as civil society groups and residents who resist or protest any decision against their interest. It is important that when thinking about power in the urban environment, we should not then limit our reasoning only to the narrow function emerging out of formal political processes (Parker, 2011). Following this, Sharp (2000), states in relation to power that "*in particular we wish to emphasize the myriad entanglements that are integral to the working of power, stressing that there are wounds up in these entanglements, countless processes of domination and resistance*

*which are always implicated in, and mutually constitutive of one anothe*r" (Sharp, 2000; see also Few, 2002).

The basis of power sometimes remains subtle but are mostly made manifest through its effects (McAreavey, 2009). This occurs in modes of "resistance" and "domination" (Sharp, 2000; Few, 2002). This present a challenge in itself and may help explain the reason why the much recent debate on power tends to be identified with the sources of power, how power is exercised and the consequences it brings. Understanding and exploring good garbage governance cannot be divorced from the issue of power with an unequal power relation existing amongst different social actors. The occurrence of unequal power relations determines the way solid waste is governed in the municipality. Social actors and their relations in environmental governance are deeply embedded in politics and power and therefore an analysis or study on good garbage governance should strive at bringing to bare these nuances in power and examine their origins and implications (Bridge & Perreault, 2009). Power in solid waste governance can be exercised through various processes and forms. In this research, distributive and collective approaches to power are considered. These will help identify the various sources of power at play in solid waste governance.

Distributive Power according to Weber (1947), is *"the probability that one actor in a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests"* (1947). Weber's explanation to power describes how one individual in a social relationship (relational power) has the capacity (power as capacity) to exercise power over another. McAreavey (2009), ascertains that for one actor to gain and exercise power, the other actor(s) must experience a loss in power. This conceptualisation of power held by Weber portrays how power is unequally distributed among actors within society and thus represents a distributive approach (ibid). In this way, power is simply limited to a sect of individuals or a person. Weber in his explanation of power does not only limit his ideas to economics but also conceive notions of politics, culture, and ideology, which serves as sources of power to social actors. Weber distributive power approach analyses power at the micro level, considering an individual's capacity over other individuals. According to Law (1991), power is exercised through social, economic, cultural and political connectedness among social actors (see also in Sharp, 2000; Few, 2002). In this regard, the position of an actor within a group determines one's degree of power exercised. To Foucault (1986), power is the transformative action of people

embedded within the social system and resides in the very judgement and acts of individuals. People produce power in accordance to their social, economic, cultural and political stands to influence others. That is, social actors exercise power from multiple sources including wealth, forces, technical knowledge and skills, access to state apparatus and idea system. For instance, in developing countries, distributive power is exercised by the governments in the society due to their positions (by means of political appointment) in relation to the masses. Power among these actors is unequal causing the powerful group to have dominance over the other. However, power should not be regarded in a unidirectional sense in all cases which produce outcomes of dominance but also the ability of the subjects to resist the power exercised on them (Lukes, 2005; Few, 2002).

Collective power, according to McAreavey (2009, citing from Parson's (1960), moves power relations from the individual perspective to a broader perspective. To quote Parsons, "*power is a generalised facility or resource in the society. It has to be divided or allocated, but it also has to be produced and it has collective as well as distributive functions*" (Parsons, 1960). Parsons explains that collective power is maintained and enhanced through a system of co-operation, such as people's obligations or commitment to the community they live in. Power here is understood as a generalised capacity (sovereignty) within the social life of people or society rather than the individual relationships. Central to this idea is that the consents of community members provide the community with the capacity to act (ibid). Albeit the approach enables us to understand the source of community power and how it is exercised, it ignores the fact that the community is a heterogeneous unit with conflicting interests among the various actors or community members (Gidddens, 1968). Social actors seeking for social change or development may carry out their activities within voluntary systems. With some community members being interested in the course of the community in bringing about development, others also exercise their choice (power) by not partaking in the development agenda of the community. This might be related to issues like politics of cultural difference as a result of ethnicity (see Myers, 2005), political affiliation, and, religion. Though actors might choose to remain within the group or society, it cannot be firmly agreed that consensus would be reached. Social actors do not share the same objective and it is more likely that reaching a common ground must be contested. Nevertheless, legitimacy and cooperation among the majority of the society serve as the capacity for the group to exercise power (Parson, 1960; McAreavey, 2009).

It is important to stress that, these approaches to power are not mutually exclusive within the society (Heiskala, 2001). According to Mann (1986), power relates to individuals with one having power over the other but also serves as collective actions through cooperation where people can combine resources to dominate or resist another hence the two coexist. In this study, my aim is to use these two approaches to power to understand how power is manifested among the actors. In addition, how the usage of power operates in order to affect decision- making process on good garbage governance in GEMA.

2.2.6 Environmental Conflict

Conflicts create the atmosphere for discussions, debates, and deliberation about the right means of dealing with urban problems like poor solid waste management (Davies 2008). Davies, further explains that conflicts about solid waste can be damaging to the environment and pose a threat to environmental health. This is because it delays procedures and processes about the right treatment of solid waste. Environmental conflicts can be traced to the growing struggles over environmental resources including land, forestry, water resources among others resources. This struggle might stem from the increasing misuse of these resources. Following Feitelson (2001), Oteng- Ababio (2011), opines that environmental conflicts in low-income areas of the developing world can be as a result of their opposition to the forceful relocation of a hazardous project into these areas. The cause of environmental conflict can also be attributed to the weak environmental governance whereby society is regarded as an independent entity and not a social construct. The views of societal members are needed in terms of policy formulation and implementation (Bush, 1997; Oteng- Ababio, 2011). The inhabitants in these low-income areas are sometimes not consulted in the initial phase of the proposed project. In addition, government authorities sometimes do not fulfill the conditions attached to the relocation of these hazardous projects to the receiving communities. This, however, cause a resistance from the community when the implementation of the project is about taking place. (Text Box 2.1 below, presents a case of Environmental conflict and governance from Israel).

2.2.7 Environmental (in)justice and Inequality

International, national and regional inequalities in terms of socio- economic variables such as income, population density, age composition, unemployment rate and the education level may have a great impact about the difference in waste generation, collection, transportation, and recycling (Chen, 2010). Over the past few decades, there have been great improvements in environmental protection and regulatory arrangements. However, Bullard (1993; 2001) opines that, regardless of such great improvements, about a total of 1.3 billion individuals globally reside in unsafe and unhealthy physical environments. Hazardous waste generation, waste facility location and international and national movement of hazardous waste and toxic products pose some important health, environmental, legal, political, and ethical consequences (ibid). Environmental benefits and regulations have not been equally distributed across all segments of society. Some communities in most cases are polluted and poisoned with hazardous waste facilities while governments and other political leaders and elites look on (Bullard, 2001). Environmental (in)justice and Inequality serve as equally important concepts in understanding this phenomenon. Environmental injustice as explained by Pellow (2000; citing from Bryant, 1995) is when a particular social group (defined based on variables like income status, age, race, educational level among other variables) suffers or is burdened with a hazardous project like a waste facility. With Environmental Injustice, individuals lack the resources and power to prevent the unequal distribution of such environmental burden. Environmental injustice has both socio- economic and geographic dimensions and usually denies households that fall as victims, an unequal access to resources (Bullard, 2005). Bryant (1995) further defines Environmental justice as "*the cultural norms and values, behaviours, decision, policies, regulation that supports sustainable communities where people can interact with the confidence that the environment is safe, nurturing and productive*". Bryant further intimates that Environmental justice is enhanced by a "*decent paying safe job, quality education and recreation, decent housing, adequate health care, democratic decision-making and potential empowerment as well as communities free from violence, drugs and poverty. It occurs when the cultural and biological diversity are respected and highly revered and where distributive justice prevail*" (Bryant, 1995).

Environmental justice is a problem- solving concept based on life supporting factors as mentioned in the above definition. In order to understand Environmental in(justice) and how it comes about,

there is the need to take a critical look at Environmental Inequality. Environmental inequality examines the broader social, political, economic and historical factors that have produced these environmental burdens. It delves into the structural processes of unequal distribution of power and resources and its consequential environmental decisions and burdens (Pellow, 2000). Until recently, most Environmental Inequality research focused on the existence of unequal outcomes rather that looking at how these unequal outcomes are produced or how they emerged. Pellow goes on to argue that, in a political economy, the struggles of individuals for power and resources produces some benefits and costs that are unequally distributed among these actors or individuals. With this, Environmental Inequality involves how diverse individuals or actors with conflicting interest interacts to produce winners and losers within the global, national and regional political economy. Environmental inequality also involves a spatial dimension whereby actors at different locations interacts to produce outcomes at a particular conflict location (ibid).

Text Box 2. 1 Governance, Politics and Conflicts in Israel

In Israel, Nassim et al., explores how conflict over landfills development posed a threat to environmental health and urban quality. According to them, the 4% - 5% increase per annum in the urban population caused some difficulties to Israel's Ministry of Environment in managing its solid waste as population growth led to an increase in the number of unregulated dumpsite, which had concern for the environment (Nassim et al., 2005; Davies, 2008). This caused the government to replace all unregulated dumpsites with a large-scale engineered dumpsite, which were to help improve upon urban quality. The detailed plan by the government's Ministry of Environment failed to achieve its intended purpose as the planning process encountered a substantial opposition and delays from the locals. The level of resistance from the locals forced the MOE to come up with a new conflict approach including participation in the EIA and supervision that met the specific requirements of the various locals in Israel (Davies, 2008). For instance, in Dundaim, Nassim et al., (2005), illustrates that the communities who resisted the development of the engineered landfills were given a "host fee" whereby the regional council would gain a certain amount of money per tonne of waste disposed at their sites. This also did not satisfy all the residents as some used legal means to prevent the operation of the facility in Dundaim (see Davis, 2008). Regardless of this, the MOE and Interior ministry had succeeded in closing and improving some of the dumpsites.

Source: Davies 2008

2.3 Actor- Oriented Approach

According to Turner (2012), the Actor-oriented approach was propounded in reaction to earlier modernization, neo- Marxist and structuralist approaches that were criticized for their inability to explain specific differences in development, while overemphasizing economic determination (Hebinck, den Ouden, & Verschoor 2001). These perspectives placed less emphasize on the active role played by people or individual (agency) with regards to social change and development (Long, 2001). Long explains that it is crucial that much attention is placed on people who are engaged in the everyday process of social change by recognising their roles leading to their development. Actor- Oriented Approach advances on a more sophisticated treatment of social change and development that emphasizes on the significant roles of human agency and self-organising processes, and the interactions of internal and external factors and relationships (Long, 2003). The approach contends that in development and policy interventions we often observe the emergence of a range of *"negotiated orders, accommodations, oppositions, separations and contradictions"* (Long 2004; Turner, 2012).

Turner (2012), further argues that to fully grasp the everyday processes by which identities, social practices are shared and contested, one needs to analyse the extent to which the life worlds of actors, including their everyday socio- cultural practices are independent or at times subjected to extensive forms of power, ideology and institutions. It is these interactions that enable us to grasp the relation between the everyday life of people and the structural forces inherently at play in the society. This can be seen with individuals having differing interests who interact on daily basis or actors at a distant scale who still have a say in local outcomes (ibid). According to Long (2001: cited also in Bjerkli, 2005; Acquah, 2015), actor-oriented approach explains how different actors react to similar problems at the same time. It posits that, society is heterogeneous and that different attitudes form part in understanding how society operates but these attitudes are subjected to macro and micro institutional processes which breed separations, oppositions, and harmony (Long, 2001). This implies an analysis of the life worlds of actors and people whose actions are shaped by social meanings, purposes, and power. It also requires delving more deeply into the social and cultural discontinuities and ambiguities inherent in the society (ibid). Long (2003), goes on to posit that, social change is not confined to the local scene but rather embrace a wide range of social actors committed to different livelihood strategies, cultural interests, and political trajectories. It enables

the researcher to appreciate broader issues related to poverty, inequality, and domination within the evolving global political economy (ibid).

Actor- Oriented Approach helps us to understand how internal and external structures interacts with each other. Actions and decisions taken within the society are not the preserve of a sole actor but takes place as a result of an actor's relationship (network) with the society in which the actor finds him/herself. In this way, it is important to recognise how people's actions are shaped by unequal power relations within the society and different responses to structural problems emanating from an individual's or an actor's own capacity. Actor- Oriented approach enables us to understand how different reactions come to play when dealing with a problem which could be deeply embedded within their society (Long 2001). Actor- Oriented perspective belongs to the Interpretive school of thought that appreciates multiple social realities, a different understanding, and interpretations of experience (Long, 2003). It downplays the ontological realism of positivist science that views the world as it is. This approach rather conceptualises knowledge as involving ways of understanding the world, and not as a simple accumulation of facts or as being unified by some underlying hegemonic order or system of classification (ibid).

In exploring good garbage governance in GEMA, this approach will help in identifying the main actors responsible for waste management and their everyday practices and their response to the problems they face. For instance, research on solid waste management in Ghana reveals how structural issues like poverty and inequalities in major Ghanaian cities have caused residents or households not to employ the services of private waste companies. As result, people have to cover longer distances to access the public waste bin or central skip. Other households, on the other hand, are able to afford the fees and enjoy solid waste services but have to bear the problem of service irregularity because of the inadequate dumping sites. Actors who cannot pay for the services charged have to resort to dumping solid waste at inconvenient locations that compound the problems of the other actors (Oteng- Ababio et al., 2013).

Figure 2. 1 Analytical Framework to the Organization of Solid Waste in GEMA
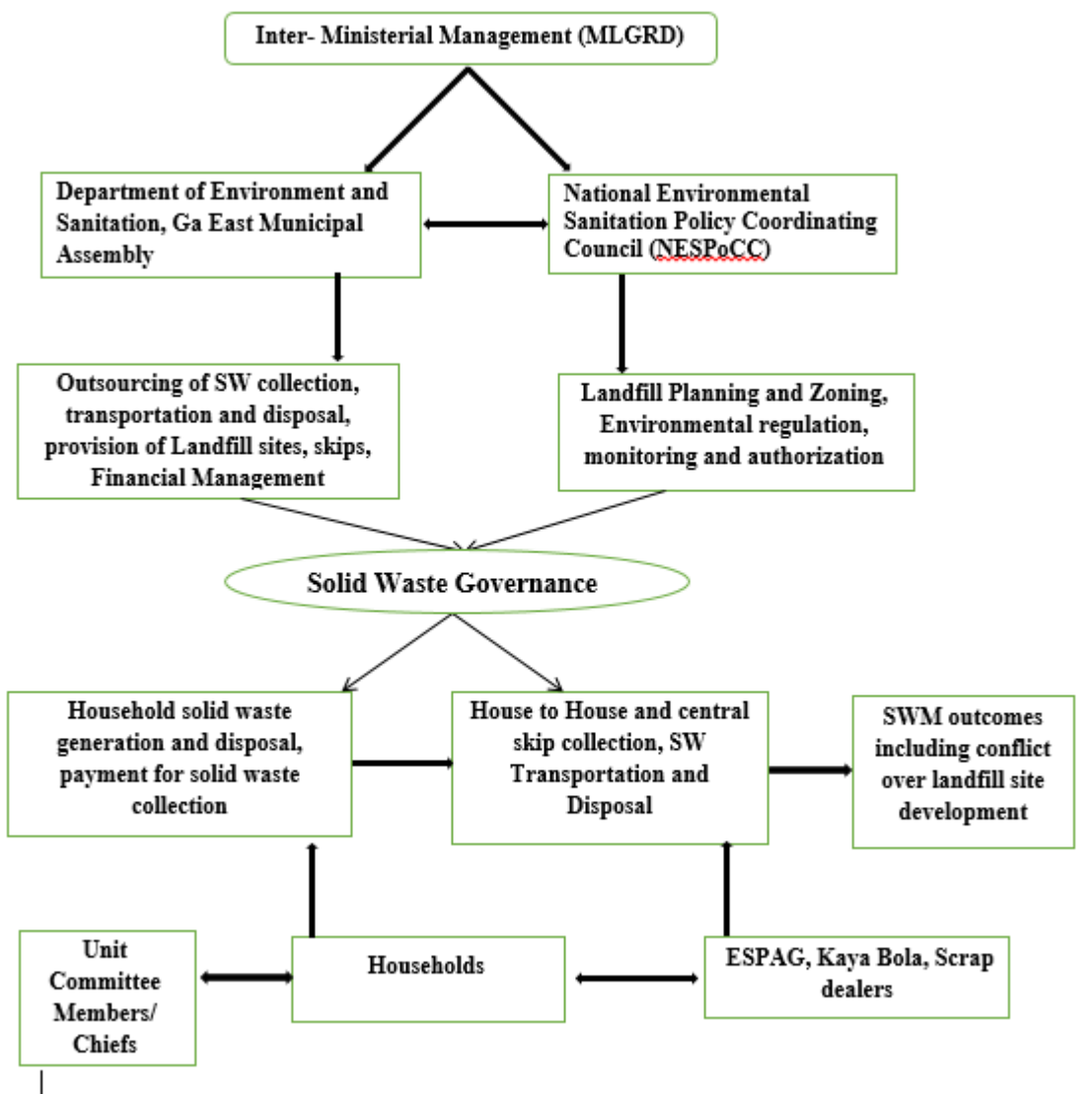
Source: Author's own construct based on the organization of Solid Waste Management in the GEMA.

The concept of governance as used in this analytical framework portrays the nature of the decentralized system of Solid Waste Management in the GEMA. The Ministry of Local Government and Rural Development (MLGRD) is responsible for most local matters including the management of solid waste. It has devolved powers to the Municipal Assemblies or the Local Authorities at the local level to formulate and implement solid waste decisions. This can be seen in the awards of solid waste management contracts, formulation of by- laws, deciding on user and collection fees among others. There are other state institutions including Environmental Protection

Agency, Town and Country Planning, Lands Commission, among other institutions acting on state (legislative) power and collaborating with these Municipal Assemblies at the local level. Institutional Pluralism used here emphasizes on the diverse strategies and roles employed by the various actors to enhance effective solid waste delivery. That is actors from their own interest play distinct roles in the management system. This is to promote accountability, mutual trust, and foster participation. Actor-Oriented Approach identifies the main actors involved in solid waste governance and how these internal and external actors interact in the study area. These actors are formal and non- formal institutions have different agenda including promoting good environmental health and urban quality, creating jobs and income as far as the management of solid waste is concerned.

CHAPTER THREE: RESEARCH METHODOLOGY AND METHODS

3.1 Introduction

Research Methodology is a set of guidelines or procedures adopted to develop or test a theory (Hubbard et al., 2002). It is much broader than research method(s) that is concerned with the techniques used in producing research data. Research Methodology extends its boundary to include the theoretical and conceptual underpinnings of the research, ways of analysing and interpreting data to produce results for the research problem (ibid; Kothari, 2004). This chapter discusses the general research approach (Qualitative Methodology) I chose to approach the research problem and its justification. I then presented the sampling techniques as well as the research methods used to produce data for the research. Subsequent discussions relate to how the data was analysed and interpreted as well as positionality, ethical, validity and reliability issues are included. The last part discusses some of the problems I faced when I was undertaking the fieldwork.

3.2 Justification for using Qualitative Methodology

Qualitative methodology is an organised way of producing and analysing data that is suitable for studying research problems that require a deeper understanding of social events (Teye, 2012). From an epistemological point of view, qualitative methodology dwells much on the actions of agency and the way in which individuals interpret their social world (Bryman, 2012; Owusu, 2015). Human actions and behaviour are dynamic and evolving and a result, qualitative methodology allow us to understand the various constituent of the real world by examining the emotions, meanings, and intentions of human (Clifford et al., 2010). The emphasis of qualitative methodology is on considering the different meanings people ascribe to their everyday lives and the processes, which operate in a particular social context. The strategy in a qualitative methodology is to allow important dimensions to emerge from analysis of the cases under study without supposing in advance, what those dimensions will be (Teye, 2012). In using the qualitative methodology, words (text), interviews (oral) and observations are used to capture the totality of the phenomenon under study (Crang & Cook, 2007). This helps to obtain profound knowledge concerning people and their everyday activities. Qualitative methodology helps to trace patterns and trends about the phenomenon under study (Grix, 2010) and is more flexible (Teye, 2012).

In using the qualitative methodology as part of my research, qualitative methods like interviews (semi-structured and unstructured), focus group discussions and field observations (participant and non- participant observation) will be used (Hay, 2010). The former two methods (interviews and focus group discussions) are essential in my fieldwork because they will allow for detailed narratives. My research participants will be able to communicate much more than the field observations. Research participants would have the opportunity to discuss the issue to the best of their knowledge and understanding. This will help me to understand the subjective views of my research participants concerning the research problem (Clifford et al., 2010). Further, this approach as indicated by Teye (2012), is flexible and will allow me to switch to other methods of data production. In addition, as it is very crucial for the researcher to be involved in the research (see Hay, 2010), the use of observation (participant and non- participant) would be helpful to achieve this aim. These methods (interviews, focus group discussion and field observation) will constitute my primary data source. Library research or documentary analysis will also be used, which will form the basis of my secondary source of data from. These methods will help produce data that would give me a detailed understanding of the research topic. On the other hand, my data could be subjected to personal judgements and values (Bryman, 2004). Furthermore, the limited number of variables associated with qualitative methodology can make it unrepresentative. Moreover, it will be difficult for me to make generalisation[13] beyond the research case area (Grix, 2010: Bryman, 2001).

3.3 Preparing for Fieldwork

Prior to my fieldwork in Ghana, I designed different sets of interview guides for the various officials at the Municipal's Environment and Sanitation Department or the Waste Management Department (WMD), the Environmental Service Providers Association of Ghana (ESPAG), Local Chiefs as well as Unit Committee Members/ Assembly members in the municipality. Albeit different sets of interview guides were designed for the different research participants, they carried similar questions. These questions reflected the objectives of the research. The questions were based on identifying the main actors, the roles that these actors play in solid waste management and the problems that affect good garbage governance in the Ga East Municipal Assembly. The interview guides served as a reminder when I was conducting the interviews (Bryman, 2004; Hay,

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[13] This aim of the research is not to make generalization but to serve as a case for further studies,

2010). This gave me a sense of direction when discussing the research questions with my research participants. In designing the interview guide, I took into account the following factors as illustrated by Bryman (2004).

➢ Firstly, questions asked were based on the research objectives
➢ In addition, it avoided "double-barrelled" questions. That is questions with no specific answers.
➢ The interview guide targeted specific research participants whom the information could be obtained from
➢ It gave consideration to the research participant's time, permission and anonymity

3.4 Sampling Techniques and Research Participants

According to Rice (2010), Sampling can be defined as the process of producing information about a relatively small part of a larger population with the aim of making an inferential generalisation about the larger population. In this study, it was not feasible for me to study the entire population. In this regard, sampling played a key role in producing information necessary for the research (ibid). Considering the purpose to which this research tends to serve, purposive sampling technique was used in reaching the right respondents. Tsumasi (2001), defined purposive sampling technique as the selection of research participants, which include households, organisations, and institutions who can best answer the research question. This sampling technique as used in this research was feasible because it helped me in identifying the key actors in the study area responsible for solid waste management issues. The actors that were reached through purposive sampling were:

➢ Municipal Chief Executive of GEMA[14]
➢ Ga East Municipal Chiefs Association/ Traditional Rulers (Kwabenya Chief).

The interview started with the booking of appointments. The interviews then followed up when permission was granted by these actors.

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[14] It is important to state that no interview was conducted with the MCE but the MCE helped me in reaching the department responsible for Environment and Sanitation in the Municipality, which is the Department of Environment and Sanitation (DES).

Snowball sampling was used in reaching the two private waste companies (ESPAG) and the Assembly members from both Dome and Kwabenya townships in the municipality. Gobo (2004), explains that snowball sampling technique is a means of selecting research participants who possess necessary characteristics of the research and through their recommendations, finding other research participants with the same characteristics. These research participants (Assembly members) identified by means of snowball sampling were contacted by the help of the Department of Environment and Sanitation. The department gave me an introductory letter to be given to other participants. Also, the Department of Environment and Sanitation was reached by the help of the Municipal Chief Executive (MCE) of the GEMA at Abokobi. Before starting the fieldwork (as stated in my proposal), I had the plan of using a purposive sampling technique but this was not the case on the field as I ended up using snowball sampling technique upon recommendations from the Municipal Chief Executive (MCE) and the Department of Environment and Sanitation.

At the household level, convenience sampling technique was used in reaching my research participants. Convenience sampling was used because it was less costly, in terms of time, effort and money and participants were easily accessible (Marshall, 1996; Sedgwick, 2013). The households were reached in townships like Kwabenya, Dome Pillar Two, Musuku and, Agbogba. Households that were targeted specifically in the low- income areas, were located close to the dumpsites and central containers. Seven (7) households in these low- income areas were selected randomly for the interview. In total, six (6) semi- structured interviews were conducted. 1 (one) semi- structured interview was conducted with the Department of Environment and Sanitation (Waste Management Department) at the Municipal Assembly. It then followed by two (2) with the Environmental Service Providers Association of Ghana thus ESPAG (Amanee Waste Services and Alliance Waste Service), two (2) with the Assembly members for Dome and Kwabenya townships and (one) 1 with the traditional leader at Kwabenya. These served as my key research participants (specialist knowledge). In addition, 7 unstructured interviews (informal conversation) were held with some households across the various towns in the municipality including Kwabenya, Dome Pillar Two, Taifa and Agbogba. The participants at the household level were all women[15] who were between the ages of 28- 60 years. In addition to the interviews, (two) 2 focus group discussions were undertaken. The purpose of adding focus group discussions to my data

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[15] Women were selected purposely for the interview because they are mostly responsible for managing household solid waste.

production methods was to gain a collective idea about solid waste practices in the municipality. I conducted one focus group discussion at Amanee Waste Services (a member of ESPAG). In this focus group, five (5) people including myself took part in the discussion. It included 2 males and 3 females. The ages range between 25 to 60 years. The second focus group discussion, held at a dressmaking shop at Dome, were made up of 4 married women between the ages of 28 to 40 years and myself, making 5 in all. (See Table 3.1 below).

Table 3. 1 Table shows the sampling techniques, methods and the number of Interviews

Sampling Techniques	Research Participants	Methods Used	Number of Interviews (Semi- Structured and Unstructured)
Purposive Sampling	MCE, Kwabenya Chief	Semi-structured Interview	1 interview with the Chief of Kwabenya
Snowball Sampling	Dep't for Environment and Sanitation (GEMA), ESPA, Unit Committee Members (Dome and Kwabenya)	Semi-structured Interview/ Focus Group	1 interview with the Dep't of Env't and San, 2 interviews with ESPA, (two) 2 with Unit Committee Members, 1 Focus Group
Convenient and Random Sampling	Households (Dome Pillar Two, Kwabenya, Musuku, Taifa, Agbogba)	Unstructured Interview/ Focus Group	7 unstructured interviews, 1 Focus Group Discussion

Source: Fieldwork, 2017

3.5 Research Methods (Producing Primary Sources of Data)

In this research, different methods of producing data were combined because each method possessed some advantages that helped offset the shortcomings of the other methods. Interview both semi- structured and unstructured (informal conversation) served as the main method but was supplemented by field observation and focus group discussions. The combination of different methods also helped me to verify the information produced during my fieldwork.

3.5.1 Interviews

Interviews are common among qualitative researchers when embarking on fieldwork. This provides the needed platform for the research participants to express their views, emotions, experiences, beliefs and perceptions concerning a research problem. Longhursst (2010), defines Interviews as oral interaction or verbal interchange which calls for the interviewer to seek information from the interviewee. With interviews, my research participants were able to discuss the issue by expressing their views, beliefs, practices, experiences and concerns in a detailed manner (Freebody, 2003). Interviews present some advantages. First of all, I had the opportunity to clarify questions that could not be understood by my research participants. Secondly, Interviews also ensure a high response rate from the research participants who took part in the research. This is because the technique ensured that all questions that were being asked were at least exhausted by my research participants (ibid). Moreover, new information was obtained as I observed the body language of my research participants. My research participants felt empowered when they were giving out information necessary for my research (Hay, 2010). For instance, the semi-structured interview conducted with a member of ESPAG, gave my research participant the platform to pour out his frustration on how the government has not fulfilled their promises (payment of contract fees). Furthermore, the usage of interview guides in my semi- structured interviews gave me directions as to how I asked questions. Semi- structured interviews also allowed me to be flexible and to adjust my questions to the research participants. This enhanced openness in the interview and that other information that were necessary for this research were obtained. In this research, I used both semi- structured and unstructured interviews (informal conversation) to produce my data.

3.5.1.1 Selecting Research Participants for Interviews

The fieldwork covered a duration of two months. It commenced on the 29th of June to the 18th of August, 2016. Prior to conducting the semi- structured interviews with my target groups, I began to contact the main institutions/ actors responsible for Solid Waste Management in the municipality. This was done a week after my research assistant[16] and I had undertaken a preliminary field observation in the various towns in the municipality. I first visited the headquarters of the Ga East Municipal Assembly at Abokobi, Accra to schedule the date for the interview. In so doing, I presented my introduction letter from the Department of Geography, NTNU to the head of the municipality thus the Municipal Chief Executive (MCE) who further directed me to the Department of Environment and Sanitation (Waste Management Department). Upon reaching the department, I greeted the director of the department and explained the purpose of my visit. I further presented my Introduction letter to him as well as my interview guide. After going through the interview guide and letter of introduction and, having a brief conversation with me, we scheduled a date for the interview. He further directed me by giving me another letter of introduction to be given to the various private waste management companies; thus Environmental Service Providers Association of Ghana (ESPAG) and a complete list of the names and contacts of the various Assembly members (Unit Committee) in the municipality. These constituted my next target groups. I contacted them on the phone who also scheduled a date for me to come to their various offices to conduct the interviews. Before going to their offices, to begin with, the interviews, I sent them my interview guide and the letters of introduction from the department Geography, NTNU and the Municipal Assembly via an email. I also sent them a reminder of our meeting two days before to make sure that they remembered the interviews (Crang & Cook, 2007). The same procedure was also used in reaching the two Assembly members from Kwabenya and Dome townships.

In reaching the traditional head of Kwabenya, I went to the palace of the traditional head to seek for permission to schedule a date for the interview. This was not an easy task especially when you want to see the chief. There are traditional procedures like buying of schnapps among other important procedures that one have to go through before he or she can see a traditional leader.

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[16] Research Assistant is a male graduate from the University of Ghana. He assisted in interviewing the households and taking pictures necessary for this research.

Moreover, my visit to the chief's palace coincided with the time when the chief and his people were preparing for their annual traditional "Homowo" festival. As a result, there were some delays in meeting him personally to book an appointment. However, the interview was then carried out as scheduled after I had met the traditional leader.

3.5.1.2 Conducting semi- structured and unstructured Interviews

The semi- structured interviews were carried out as planned with the Department of Environment and Sanitation and the two private waste management companies (ESPAG), using my audio recorder after they granted me their permission. The English language, however, served as the main medium of interactions. My position as a resident from the municipality was very helpful in the interview process because it helped me ask more questions with respect to the research problem.

The unstructured interviews were basically in the form of informal conversation with the households. I visited their residence (Kwabenya, Musuku, Dome Pillar Two, Taifa, Agbogba) in the afternoon. This was because it was the convenient time to reach the research participants and talk to them compared to mornings and evenings when people were busy with their daily activities. My visit to the households was without any prior notice, but the majority of the households were very welcoming. Before starting the interview, I normally greet the research participants or the households (shows a sign of respect in our local setting). After, I also explained the objectives of our conversation. I assured them of their anonymity in the use of the information they would provide. Moreover, I indicated my wish to use an audio recorder in the course of the interview. Even though I had the questions in English, I translated them to Ga and Twi (two dominant local languages in Ghana) and both languages formed the basis of our discussion. My position as an insider, allowed me to also use Pidgin English in cases where the participants did not understand both the Ga and Twi languages. The informal conversation also included talking while walking interview (observing their surroundings as we walked and talked at the same time) with some research participants. This was not planned as part of my interview process but it was later adopted in order to verify some of the issues raised by some of my research participants.

The interviews both semi- structured and unstructured, were very interactive and on face- to- face basis. This enabled my research participants to express their opinions. Vague responses were

clarified and this helped to unravel hidden meanings. Personal contact between me and the research participants resulted in more meaningful answers pertaining to the research problem. As the interview progressed, I realized that most of the research participants especially at the households highlighted the same points or issues concerning each question. Semi- structured and unstructured interviews also ensured that prompt questions were added to the main questions. Very few unstructured interviews were conducted because of acceptance, health, and time issues (see section 3.9).

3.5.2 Field Observations

Another important data production technique I used was observation. Observation helped me to acquire data that could not be produced from interviews, such as people's attitude towards waste management (especially disposal). This supplemented my data needs. In this study, both participant and non- participant observation was used. Hay (2010), defines participant observation as a fieldwork technique whereby the researcher studies a phenomenon or a group of people in the field while taking part in the event or group. The use of participant observation in this research ensured that I was able to observe the waste management practices of the people as well as interacting with some of them. In using participant observation in my data production techniques, I stayed with my parents in Old Kwabenya Town, a low- income town in the municipality. I engaged in a communal labour (communal cleaning exercise) organised by the government of Ghana every first Saturday of the every month. I also took part in a campaign lunch organised by the Assembly member on "Good Environmental Practices". This gave me the opportunity to interact with some of the residents of Kwabenya about solid waste management practices and also engage myself in communal cleaning.

Furthermore, non- participant observation was adopted as part of my fieldwork. With this type of observation, my research assistant and I were able to produce data on the field without the notice of the people around us. One advantage associated with this type of observation was that it was non-time bound as we stayed on the field as long as we wanted and observing the solid waste management practices of the people. Prior to this, we had already carried out with a preliminary non- participant observation within some low- income areas and middle to high- income areas in the municipality to observe the situation and taking photographs alongside. We also observed the current state of the central bins/containers, which were mostly dilapidated and overflowing with

solid waste. Other scenes showed how the community members were disposing of their waste along walkways, backyards of people's houses and the drains (see Appendix E below). This verified some of the issues raised in the interviews I had with the other actors (Department of Environment and Sanitation, the two ESPAG or private waste companies and the Assembly members). There were some situations in these towns were our presence were felt by some community members and had to be questioned for taking photographs of their communities without their notice. This, however, raises some ethical issues like informed consent here (see section 3.7 below for more details).

3.5.3 Focus Group Discussion

Focus group discussion was a very important method I used to produce data. In the field, I came to the realisation that solid waste is a social problem that needs the collective efforts of all members of the society. It was very relevant for me to understand how different groups or people interact or work out on certain social matters or problems (Crang & Cook, 2007) like solid waste. Focus group helped in the acquisition of collective knowledge, which was relevant for my data needs. Focus group discussion serve as an important method through which researchers are able to study and appreciate more the kinds of processes and interactions that exist in societies by providing the platform for groups of people to come together and deliberate on their experiences and thoughts about specific issues with the researcher (ibid). Gatrell & Elliott (2009), defines focus group discussion *as "a collection of a small number of people usually between 4 and 12 people that meet to discuss a topic of mutual interest, with the assistance of a facilitator".* In this research, two focus groups were organized. My first focus group discussion was organized at Amanee Waste Management Service (a member of ESPAG) where the head of the company together with some of his workers and I discussed the issues highlighted in my research objectives. I asked my research participants questions and at the same time observing and taking notes. My second focus group discussion was conducted with four (4) women between the ages of 28 to 40 years at Dome. I gave the women the opportunity to express themselves, also making sure that I get the right responses that I needed for my research. This I did by reframing or repeating the same questions. I also observed their surroundings and body languages as we discussed the issues. Focus group discussion helped to produce collective knowledge about that research question.

3.6 Secondary Sources of Data (Documentary Analysis)

In this research, secondary data was gained from the review of the relevant literature including country reports on Solid Waste Management. It also involved information from the print media thus graphic, radio country reports, television program and information from the internet (the web page of the Ga East Municipal Assembly). Journal articles on solid waste in Ghana and across the world cannot be left out. The usage of secondary data helped me obtain information about the background information concerning solid waste management as well as the review of relevant literature (White, 2010). Secondary data also provided me with the general overview of the profile and structure of the study area. Documentary analysis is a good place to search for answers and they help validate my primary information gathered through interviews, observation, Focus group discussions (Miller & Brewer, 2003). This enhanced the quality of data for my research (Silverman, 2013).

3.7 Data Analysis and Processing

The analysis of data is a very cumbersome and time-consuming stage in the research process (Crang & Cooks, 2007). It involves going 'in and out' of your data material repeatedly. Crang & Cook further explains that the data analysis stage starts right from the field as you make meaning out of your data. This could be when research participants point out important issues that could be verified in your subsequent interviews, jotting down important notes on interview guides, reframing your research questions etcetera (ibid). Crang & Cook (2007), defined data analysis process, which they termed as "Chaos Stage" as *"chopping up, (re)ordering, (re)contextualising and (re)assembling the data we have so diligently constructed. It's about translating a messy product into a neat product"*. Taking into account the research methodology, data for this research was analysed qualitatively. All interviews and focus group discussions conducted were listened to on several occasions. The ones conducted in the local languages were translated into English. Later, I then transcribed all data including the translated ones verbatim. Thereafter, I coded them into various categories using interpretative tags. These interpretative tags were based on the research objectives and were later examined based on the recurring themes that were identified (subject analysis). This was not an easy task because almost all the information given by my research participants were very important for this research. The analysis was put into three different chapters that reflected the research questions; including the identification of the various

actors and their roles in solid waste management, the current situation of solid waste management as well as the problems hindering the effectiveness of good garbage governance in GEMA. These questions are also related to the various theoretical approaches (see Chapter Two) used for this research. I further supported the relevant quotations or information from the research participants with secondary data sources and field observations I made regarding the solid waste situation in the municipality.

3.8 Positionality

Positionality refers to the fact that the status of the researcher which could be the age, gender, education, class, cultural and ideological background among other statuses in relation to the research problem can influence the researcher's access to research participants and the data that are produced (Mohammad 2001; Teye 2012; Owusu, 2015). Cotterill & Letherby (1994; see also Baabereyir, 2009), reveals that in a social research, a researcher's knowledge and identity in a particular research field or area stands the chance of influencing the quality of the data. In a situation whereby the researcher is familiar with the research area and participants, the researcher can get more information as the participants are known to him as well as the research area. That is, when the researcher is known to be an insider, more information can be obtained from the research participants because of his familiarity with the community members and research area. In contrast to this, Mensah (2006), contests that in a situation whereby the researcher is familiar with the background setting and the research topic, it can ruin the quality of the data produced. This is because the researcher will be very complacent of some relevant facts which he/ she might not know. In addition, in a situation whereby the research participant thinks the researcher knows so much about the research and area, the research participants will be reluctant to provide the necessary information needed for the research. Furthermore, in instances where there exist a lack of trust from the research participant towards the researcher, it can also prevent them from taking part in an interview. These issues related to positionality are very important for the researcher's data need.

In conducting this research, I was very mindful of these issue related of positionality especially in relation to my research participants, topic, and area. At the household level, though I was familiar with the research topic, area and some of the households (research participants), I did not consider

myself an insider. Moreover, it was also prudent for me not to challenge their ideas and their everyday processes. I was very careful with my choice of words when we were deliberating on the topic. In interviewing the elite groups (the head of Environment and Sanitation, GEMA, and the two ESPA companies), they regarded me to be a knowledgeable person. Nevertheless, I still decided to keep myself unaware of the solid waste situation and how they go about with their daily activities. I paid much attention to the discussions because they were much experienced and knowledgeable concerning the issue. I only asked questions when I needed further clarification on an answer provided. I did this because, I was aware of the fact that, a societal way of life is not static and continue to evolve which sometimes contradict or disprove the theories and knowledge that I might have learned. These together with my prior knowledge about the research area and problem gave me more insight.

3.9 Ethical Issues

In every research, it is expected that researchers heed to some ethical principles. According to Robson (1993), the following factors have to be considered by the researcher when dealing with ethical issues. Among these are access, acceptance and approval, confidentiality and anonymity and, informed consent. Access, acceptance, and approval have to do with allowing the researchers into a given geographical space and giving them the chance to undertake the research in a particular way (see Homan, 2001). In this research, before I was able to carry out my interviews and focus group discussions, I sent prior notice to my key research participants, which are the Municipal Assembly and its department of Environment and Sanitation, the two Private Waste Companies (ESPAG), Assembly members and traditional leader. This was done by sending letters, emails, phone calls and visitation to seek for their permission. I then went ahead to carry out with my interviews as scheduled by these institutions after I was given the approval. At the household level, I normally go to the various houses and talk to them about the purpose of the research. Though prior notice was not given, I negotiated my access with some of them.

As part of confidentiality and anonymity, research participants' names were not included during the research interviews. In designing my interview guides, I made no provision for that. Also, in presenting my finding highlighted by these research participants in the analysis, only their sex and age were taken into account. In addition, the information given by the research participants were

treated with care and not disclosed to other people. Most of my key research participants hold high positions in their respective institutions and to disclose their details to other people can be damaging to their careers.

Informed consent as explained by Robson (1993), has to do with letting known the purpose or objectives of the research to the research participants. The purpose to which the research is to serve is to be disclosed to them. In this direction, after I gained the approval of my research participant, I made sure that I discussed the aim of the research to them. I assured them that, this research was for studies purpose only which they confirmed for themselves after they had taken a look at my student ID and letters of introduction. At the household level, though some were very sceptical about taking part in the research, majority obliged to take part in the research after I explained the purpose of my research to them.

3.10 Validity and Reliability

In academia, the role of a research is to generate knowledge that is reliable and non- distorted. Qualitative research is inter- subjective in nature and as a result help to produce knowledge based on the encounter between the researcher and the research participants. The quality or strength of knowledge produced from a research can be tested based on its validity and reliability. Validity is defined as the establishment of truth and authenticity in the research (Kapborg & Berterö, 2002). Validity also denotes that what is observed and measured reflects reality or the experiences of the research participants. Reliable accounts can be given when there are mutual trust and rapport between the researcher and the research participants (see Acquah, 2015).   In order to gain the trust of my research participants so that I get the right information, I spent time conversing with some of them on other similar important issues related Ghana's developmental challenges even before the interviews started. This helped to develop the rapport that created a good atmosphere for the discussions. Some of my respondents were proud of me considering my vision of attaining greater heights in academia. This idea is captured in the conversation with one household I interviewed in Dome. *"I wish you were my son…how did you make it to this far. Don't relax at all and continue to give out your very best"*. I used that opportunity to discuss to them the purpose of my research as being for academic purpose and was a requirement for my master's degree. I also assured them of their anonymity and confidentiality. Also, participating in their communal labour and the

Assembly man's campaign on "Good Environmental Practices" gave me the opportunity to know more people who helped by taking part in the interview (informal conversation).

Moreover, the usage of different qualitative methods helped me to cross check and verify some of the information I had from my research participants. For instance, in the course of the fieldwork, my inclusion of focus group discussion as part of my data production methods helped me to get a collective idea (community perception concerning solid waste partnership) concerning solid waste which attested to the information I had gotten from the interviews conducted earlier on. At the community or household level where some members did not understand and communicate well in the English language, I used Twi, Ga and Pidgin English to clarify the questions that were asked. In both focus group discussions and interviews, I also took good notice at research participant's body language and words, making sure they were not contradicting each other. Furthermore, before embarking on the fieldwork, I gave my interview guide to my supervisor to crosscheck the nature of the questions that were to be asked. My supervisor provided constructive criticisms and feedbacks which were very beneficial.

I combined information through the use of both primary and secondary sources of data to validate the responses given by informants (Miller & Brewer, 2003; Bryman, 2012). I used and compared data produced through interviews, focus group discussion with information from journal articles, reports, internet sources etcetera. In conducting my interviews, I verified some information that had been stated earlier by a research participant by asking the same question or reframing the questions to other participants. This was done to prevent or clarify issues, understand conflicting information and ascertain earlier information produced (Boeije, 2002). For instance, I asked the Private Waste companies about the activities or performances of the Municipal Assembly, Assembly members and Community to solid waste management in the municipality. This was done to enhance its validity and making the data reliable for my research. Likewise, in that same manner, I did with my other research participants. In the course of the interview (both semi-structured and unstructured), I came to the realization that the research participants were giving similar answers to the same questions (saturation stage). This also helps to ascertain the reliability and validity of the data.

3.11 Problems Encountered on the Field

In producing data for this research, some problems were encountered. One of such problems had to do with my health. Though the fieldwork was supposed to last for two to three months, I used less than a month on the average to produce my data. After I had arrived in Ghana in June, 2016, I started with a preliminary non participant field observation of the low income areas (Dome Pillar Two, Kwabenya Old Town, Musuku, Taifa, Agbogba) as well as the some few middle to high income areas (The uphill areas of Ashongman Estate, Atomic Energy and Paraku Estate). My intention was to follow up with interviews with the households within these settlements a day after. However, I was struck down by an abdominal pain, which made me visit the hospital week after week. Although I finally succeeded in conducting my interview with some households, I could not conduct more interviews as planned before embarking on my fieldwork. The abdominal pains kept me in great distress, which influenced the number of hours I spent on the field.

Secondly, another issue has to do with time and wrong contact information. After conducting my first interview at the Municipal Assembly's Department of Environment and Sanitation, my next target group was the members of the Environmental Service Providers Association of Ghana (ESPAG). According to the MA, there are currently five members of the ESPAG group in the municipality. My intention was to interview all the five members. I only managed to interview only two members because I was given wrong contacts by the MA in reaching the other ESPAG participants. This did not aid in booking for an appointment earlier.

Finally, the issue of acceptance and access especially at the household level in the low- income areas was another major problem I faced. Poor solid waste management had been a major issue to these households. Residents mostly find their settlements next to the dumpsite or are generally underserved by poor waste collection services from the MA and the ESPAG members. When I visited one household in Dome, I greeted them and introduced myself to them. After explaining the purpose of my visit to them, some of the women got very angry because I mentioned I am a researcher working on solid waste. With this, they explained that my research would not yield any change in their solid waste situation. As furiously said by one of them after asking my first question concerning the current situation of SW, she answered by quoting *"...are you blind or can't you see things for yourself? When you go back, tell the president and his ministers that they are not serious at all and we are seriously disappointed in them. For you, I am not in any mood to*

talk to you now because you always come here and we don't see any improvement in our living conditions". This depicts the severity of the problem of solid waste. It has further translated or caused other problems like flooding, diseases and sickness outbreaks like cholera in Dome as well as in other underserved areas in the GEMA. Because of this statement made by the woman, my field assistant and I had no option than to leave their residence. Furthermore, with one of my non-participant field observation, some residents within this same town (Dome) forced me to delete the pictures I had taken with my camera, thinking I was a reporter from a radio or T.V station. Though I showed my student ID to them, they did not reach any agreement with me than to have me delete the pictures taken. The people doubted our credibility, intimating that we worked for the government. The tension or doubt from the community members could be because of lack of trust in the government's and their inability to fulfill some of their promises they have made to them during electioneering campaigns.

CHAPTER FOUR: PROFILE OF THE STUDY AREA

4.1 Introduction

This chapter gives the general background of the study. It starts by arguing for the selection of the study area. This is followed by a description of the social, economic and political features of the study area.

4.2 Selection of the GEMA

The selection of the Ga East Municipal Assembly as my study area was informed by the galloping nature of urbanization process, which is above the national average of 43.4% (GSS, 2014). With the majority of its population living in the urban centres of the municipality, there is a clear indication of a densely populated urban area with it's often- related pressure on social infrastructure and land (ibid). The increasing level of encroachment on the few open spaces in the low- income areas has translated into poor environmental conditions like rapid waste generation and indiscriminate refuse disposal. This has led to increasing urban problems including urban flooding, disease outbreaks: all having impacts on the health of the people as well as reducing the beautification of the municipality (ibid; Addae, 2014). Furthermore, I am familiar with the municipality because it is my home area and I am much concerned about the poor environmental conditions that are unequally distributed among the rich and the poor marginalized population in the low- income areas of Dome, Old Kwabenya Town, Musuku etcetera.

Figure 4. 1 Map showing the Study Area
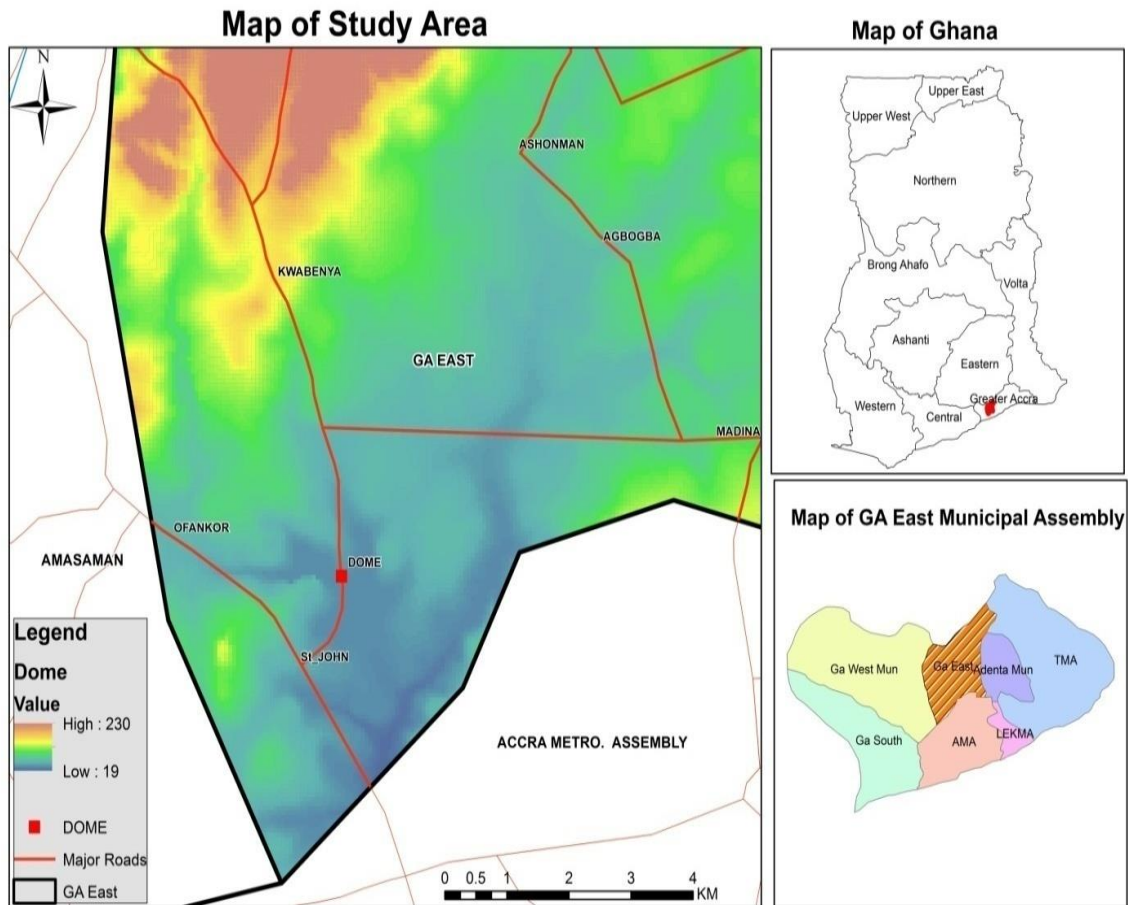
Source: GIS Drawing Room, Geography Department, University of Ghana.

4.3 Geographical Profile of the GEMA

The Ga East Municipal Assembly is located at the northern part of Greater Accra Region and among one of the sixteen municipalities in the Greater Accra Region. It covers a land area of about 85.7 square kilometres. The Municipality has its capital as Abokobi. The Ga East Municipal Assembly is boarded on the west by the Ga West Municipal Assembly (GWMA), to the east by La - Nkwantanang Municipal Assembly (LNMA), Accra Metropolitan Assembly (AMA) to the south and at the north by the Akwapim South District Assembly (ASDA). The Municipal is divided into two administrative areas, namely the Abokobi Zonal Council and the Dome Zonal Council (GSS, 2014; Yoada at al., 2014). The Municipality has about 52 settlements with about 90% of the population living in urban areas. The remaining 10% occupies the rural areas. The municipality's large towns include Dome, Kwabenya, Taifa, Haasto, Abokobi, Kweiman, New Ashongman,

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Musuko among other settlements (GSS, 2014). Dome is the largest in terms of population and basic facilities and services. Dome being a major commercial hub in the GEMA is due to its substantial population size that can support almost all economic activities as well as its proximity to the nation's capital Accra.

4.4 Political Organization and Governance

In 2004, Ga East Municipal Assembly was established by an Act of Parliament (Legislative Instrument 1864) as a district. It was accorded Municipality status in 2007 through LI 2061. It has deliberative, legislative and executive powers. In July 2012, the Municipality was demarcated into two, thus Ga East and La-Nkwantanang Madina Municipalities by LI 2136 (GSS, 2014). It is the highest political authority in the municipality that has the powers to deliberate, legislate, plan and develop the entire municipality through the preparation and effective implementation of development plans and budgets (GSS, 2014). The National Development Planning System of 1994 (Act 480), empowers the Municipal Assembly to also formulate programmes, strategies and projects (including Solid Waste Projects) as well as seeing to their implementation, monitoring and evaluation using available resources. The Assembly can be regarded as a legislative body making by-laws for the Municipality (GSS, 2014). The Municipality runs a decentralized system of governance together with some elected Assembly members and traditional leaders of the various towns who collaborate in the discharge of developmental programs within the various towns in the municipality. The Ghana Population and Housing survey or census conducted in 2010 shows that the GEMA is made up of 10 electoral areas and it is represented in the General Assembly by elected and appointed Assembly members (GSS, 2014). The composition of the Assembly is made up of 10 elected members, 4 appointed members, the Member of Parliament representing Abokobi and Dome- Kwabenya constituency and the Municipal Chief Executive. The General Assembly is therefore made up of 16 members. The 10 electoral areas are as follows: Taifa South, Taifa North, Abokobi, Agbogba, Kwabenya, Haatso, Atomic, Dome East, Dome West and Abladjei (GSS, 2014). Moreover, an elected Presiding Member (PM) is the head of the General Assembly with the Municipal Coordinating Director as the Secretary. In order to promote sectoral development in the municipality, there are departments and sub- committees responsible for this; to enable the Assembly to perform its function of overall development of the municipality. These decentralized departments and sub- committees are the Development Planning Sub-committee, Finance and Administration Sub-committee, Justice and Security Sub-committee, Works Sub-Committee and

Social Services Sub-committee (GSS, 2014). At the community or local level, traditional rulers and their elders or sub- chiefs also holds some power. The traditional chiefs are vested with some amount of power and have the capacity to contribute to or influence decision- making, which cannot be disregarded. However, their ability to organize and rally their people to support development programmes is being undermined by their involvement in various chieftaincy disputes and land litigations, with urbanization processes being responsible for this, where the chiefs sell lands for personal gains. The division of power among the traditional leaders and these government institutions makes the formulation and implementation of development policies including solid waste very difficult.

4.5 Demography, Migration and Social Organization (Ethnicity)

According to Ghana's 2010 Population and Housing Census analytical report published in 2014, the population of the GEMA is 147,742, which represents about 4% of Greater Accra region's total population. Forty- nine percent (49%) of the population are males and females make up 51%, with 90% of the population in the Municipality dwelling in urban areas whiles only 10 percent are in rural areas. The population density of the Municipal stands at 1,725 persons per square kilometre (GSS, 2014). As a result of migration process, almost all the ethnic groups in Ghana exist in the district with the Akans having a slight majority over the indigenous Gas. Others are the Ewes, Dangbes and the Gurs. This situation is very common in areas like Dome, Taifa and other urban communities. In the rural and peri-urban communities like Abokobi, Kwabenya (Old Town) however, the Gas form an overwhelming majority though other ethnic groups continue to reside amongst them. Ghana Statistical Service (2014), indicates that about 72% of the total populations of the Municipal are migrants. A higher proportion of migrants from Eastern Region, representing 22% have stayed in the Municipality for more than ten years. The process and level of urbanization is above the national average of about 44% with the urban population residing in about 65% of the total land area of the district. This depicts a densely populated urban area with its associated pressure on social infrastructure and land. Land litigation, encroachment on the few open spaces, rapid waste generation, indiscriminate refuse disposal, and construction of illegal structures are some of the development challenges the Municipal Assembly faces (GSS, 2014; Addae, 2014).

4.6 Households and Housing

According to the census, the Municipality has a total household population of 144,863 with 130,701 in urban and 14,162 in rural areas. In addition, there are 37,415 households comprising of 33,736 urban households and the remaining, 3,679 are rural households. The average number of households per house is 1.6 while the average number of persons per house is about 4%.The housing stock of Ga East Municipal is 23,424 that represents 5% of the total number of houses in the Greater Accra Region. In the Municipal, the population per house is 6.3 persons and it is lower than the regional average of 8.4. With regards to the tenancy arrangement and ownership of the houses, about 32% of households in the Municipal live in compound houses (houses with shared facilities including kitchen, bathroom and toilet) with 30% living in separate houses (detached and semi- detached houses). More than one-third thus about 39% of the dwelling units in the Municipal are owned by members of the household. 11% are owned by a relative who is not a member of the household and 44% are owned by private individuals. Only 1% is owned by public or government thus Ghana Atomic Energy Commission (GAEC) (GSS, 2014). Within these households, about 8% of households in the Municipal do not have access to toilet facility in their homes. Most households use water closets (42.9%). In the rural areas, 45.2% of the proportion of households, using water closets are slightly higher than those in urban areas 42.6% are. Pit latrines (22.7%) are the second most commonly used toilet facility by households with almost equal proportions in both localities, 22.3 percent in rural areas and 22.7 percent in urban areas (GSS, 2014).

4.7 Economic Activities and Employment

The infrastructural set up of the GEMA and its proximity to the nation's capital Accra, makes it one of the highest economic migration destination for both Ghanaians and non- Ghanaians. There are four major economic activities in the municipality: Agriculture (animal production, agro processing), Industry, Service and Commerce (GSS, 2014). The employment sector, which constitute where one works covered in the Population and Housing Census were public, private formal, private informal, semi-public/parastatal and NGOs (international and national) (ibid). In the Municipality, service and sales workers, constitutes the largest occupational group, employing over 35% of the population. Craft and related trades workers forms the second majority employing over 23%, while professionals constitute 11% of those employed. Plant and machinery operators and assemblers makes 8% while Managers formed 7% and elementary occupations make up 7%. Other occupations employs less than 1% (GSS, 2014). The private informal sector dominates

employing majority of over 70% of the population with females having a higher proportions of 78% (engaging in street hawking, hair dressing, dressmaking, shop attendance etc.) in relation to the 64% for males (carpentry, masonry, street hawking, transport services, solid waste collection and transporting etc.). The private formal sector employs 19% of the population with males and females constituting 23% percent and 14% respectively. The public (government) sector employs 9% of the population with males and females accounting for 10% and 7% respectively (GSS, 2014).

CHAPTER FIVE: MAIN ACTORS AND THEIR ROLES IN SOLID WASTE MANAGEMENT

5.1 Introduction

My first objective identifies and discusses the various actors involved in the management of solid waste and their respective responsibilities. These actors are municipal institutions, people, and organizations who have a stake in solid waste management and participating in various activities. These consist of enterprises, organizations, households, and other stakeholders involved solid waste reduction, segregating, reusing and recycling activities. This chapter describes their role and activities in the overall solid waste management within the GEMA. It starts with a discussion about the Municipal Assembly (MA) who acts on behalf of the central government's Ministry for Local Government and Rural Development (MLGRD). The MA oversees the general management of solid waste in GEMA by developing strategies that are implemented by the other actors including members of ESPAG, informal waste pickers (kaya bola, scrap dealers), Civil Society Groups together with their respective local communities. It further takes a critical look at the MA's decentralized TESD Plan[17] on Environmental Sanitation.

5.2 The Department of Environment and Sanitation

Conventionally, in all municipalities in Ghana, the Department of Environment and Sanitation or Waste Management Department (WMD), is responsible for the management of solid waste. As part of the decentralization reforms, the 1993 Local Government Act of 462, empower MAs to oversee to the provisioning of public goods and services, which includes solid waste management. According to the Sanitation Country Profile of Ghana (Ghana SCP, 2004), in waste management, there is a policy framework called the National Environmental Action Plan (NEAP) which guides the management of municipal solid waste, liquid waste as well as radioactive and nuclear wastes. There is also the National Environmental Sanitation Policy of 1999. With this policy (NESP), the MA is responsible for initiating and implementing programmes that ensure the collection, transportation, and disposal of solid waste in the municipality. Municipal Assemblies in Ghana are

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[17]The Town Environmental Sanitation Development Plan (TESD Plan) was to develop or map out a strategy for improving environmental conditions by gradually and incrementally limiting the poor environmental burdens due to the indiscriminate disposal and littering of refuse (GEDA, 2008).

entrusted with the tasks of promoting waste segregation, arranging for house-to-house collection, enforcing by-laws to prohibit littering of street, funding and conducting awareness programmes to disseminate information to the public and to promote public provisioning of adequate community storage facilities like the central container. In addition, the MA together with the WMD are also responsible for identifying and defining land that can be allocated to the development of landfill (engineered) sites (Joseph, 2006). The NESP further empowers the MA to specify the roles and responsibilities assigned to communities, departments and agencies and the private operator on environmental management and protection, legislation and law enforcement and the criteria for specifying services and programme, funding, equipment and supplies (Ghana SCP, 2004). From the National Environmental Sanitation Policy (NESP), the MLGRD has also developed a technical guideline document titled "The Expanded Sanitary Inspection and Compliance Enforcement (ESICOME) Programme guidelines". The programme guidelines are implemented by the MA, which basically looks at four areas consisting of Effective Environmental Health inspections (Sanitary Inspections) locally termed "saman saman", dissemination of sanitary information (Hygiene Education) through its department for Environmental Health and Management (EHM), pests/vector control and law enforcement. Following the policy framework, the MA has gone into a partnership agreement whereby they have employed the services of private waste management companies (ESPAG) by means of contracts to help in the collection, transportation, and disposal of solid waste. This also includes some informal waste collectors, Assembly members as well as the chiefs and the local communities. This is regarded as a way of promoting good garbage governance through the participation of the various actors, improving service delivery and ensuring a good solid waste management system. This was highlighted in an interview conducted at the WMD of GEMA:

"…our responsibilities are numerous. What we are doing now is, because the amount of solid waste generated cannot be collected all by the MA's own efforts, we have laid down policies that will attract private investors to invest and help in the collection of the waste. We have also contracted some people in the informal sector to help deal with the waste at the commercial centres and within some households. The MA also plays the role of defining the final disposal site. We also make sure that the communities are well informed so that they avail themselves for registration by the Private waste contractors. So you realize that we don't work alone but we work with the private waste operators, other government institutions, Assembly members, the local chiefs and the households. This is geared towards a better service delivery. All these are stipulated in our policy framework of the National Environmental Action Plan" (The WMD, GEMA, interview, 2016).

Furthermore, in connection with governance, the GEMA Town Environmental Sanitation Development Plan (GEMA- TESD Plan) of 2008, section 5.1 stipulates that:

"...In line with National Policy, the GEMA will gradually move away from direct provision of environmental sanitation services and instead, will promote active involvement of both communities and the private sector in service delivery. As part of its functions, the GEMA will refine and periodically update the TESD Plan, mobilise resources to implement it, supervise the design and construction of the facilities, oversee service contracts, and set and enforce regulations on waste discharges" (GEDA, 2008)

The MA and its department for Environment and Sanitation aims at following the recommendations of the World Bank in ensuring good garbage governance by allowing for the participation of the other actors involved in the management of solid waste. On the whole, the MA and its department, by virtue of legislative state power are generally regarded as the master planner of solid waste activities in GEMA.

5.3 Private Waste Management Companies (ESPAG)

The private waste contractors are registered profit oriented business organizations who have entered into waste management business to help fill the gap in service delivery (Oteng- Ababio, 2010). The potential role of the private sector includes the collection, transport, processing and disposal of solid wastes (Cointreau- Levine, 1994). Local/ municipal government create competitive conditions, write and award contracts as well as monitoring and regulating the services offered by the private formal waste companies (Joseph, 2006). The investment made by the private waste companies (ESPAG) are recovered through the collection, transportation and disposal costs on user charges. In this research, it was observed that the 5 (five) main private formal waste contractors engaged themselves in house-to-house collection as well as communal container point collection. The five private companies identified are Amanee Waste Service Limited, Honest Waste Services, Asadu Royal, Alliance Waste Service Limited and Zoomlion Ghana Limited. The house-to-house collection system is used to provide solid waste collection services for the high-income areas (Paraku Estates, Regimauel Grey Estate) and some parts of the middle-income areas (Kwabenya New Town, parts of Ashongman Estate, Haatso ECOMOG). In these areas, standard plastic containers are used as storage receptacles. These areas have easily accessible roads and identifiable houses, which make it convenient for the private waste company to work.

As part of my field observation and interviews, it was observed that four out of the five waste management firms consisting of Asadu Royal, Honest Waste, Amanee Waste as well as Alliance Waste Limited mainly operated within the middle to high- income areas and these had a control over their areas of operation. However, Zoomlion Ghana operated in a much bigger territory that consisted of most of the low- income areas and some few middle to high- income areas (including the areas of operation of the other waste operators) as well as the commercial areas. The observation made also revealed the dominance of Zoomlion's collection equipment consisting of waste trucks, compactors, tricycles as well as personnel in every part of the municipality. In addition, some of the other ESPAG members normally outsourced their responsibilities to Zoomlion Ghana who carried out the waste collection, transportation, and disposal activities on their behalf. This was expressed by the subsidiary firm[18] of Zoomlion Ghana:

"...our responsibility is not solely for the community to come and dump the waste into them, but rather what ZOOMLION is doing is actually an initiative together with the help of the central government and the various MA across the country. Our operation is in a way that we don't segregate the areas allocated to us: whether rich or poor. What we do is that, because most of these private operators we have in the country do not have the necessary logistics, financial and human capacities to effectively carry out their duties, what they do is to outsource their duties to us because they know we have the expertise. When we get a contract, what happens is that, based on the nature of the area, we know the expertise and the kind of logistics to deploy in such areas. For instance, in areas where the layout does not allow the penetration of the larger tracks, we deploy the bola taxi." (ESPAG members, interview, 2016).

The study revealed that the other waste management firms had their contractual agreements directly with the MA. In this direction, the MA is mandated to offer payment services to these companies and renew contractual agreement. In some cases, the non- fulfillment of contractual agreements in terms of early payment of service fees lead to the non- collection of solid waste by these private waste companies within their allocated jurisdiction. Zoomlion Ghana deals directly with the central government and in most instances have no contractual agreement with the MA (see also Mariwah, 2012). Monitoring and evaluation activities are carried out by the MA as part of the TESD Plan (see section 6.4). This expects the progress activities of the contracted ESPAG members to be tracked by the WMD of GEMA. In addition, in a situation whereby the WMD fails

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[18] An interview could not be held with Zoomlion Ghana Limited because of issues relating to wrong contact and time factor.

to monitor the activities of ESPAG members, the local communities have also been mandated to embark upon this task. In instances whereby there is a non- collection of solid waste by ESPAG members on a particular day came, penalty is attracted. Notwithstanding this, monitoring and evaluation activities of the WMD is considered poor because of issues related to poor logistics, lack of dedicated personnel as well as the lack of community support.

5.4 Informal Waste Operators

In this research, different types of informal solid waste operators were identified. These include the Informal waste collectors that render services to residents in the community especially those living in the low-income areas and at the commercial centres. This supplements the waste container system arranged by the MA. In the high-income areas, the houses are easily accessible and identifiable. Therefore, the house-to-house system is easily carried out by the private company. On the other hand, in the low-income and some middle-income areas, the collection of solid waste has been a problem. As a result, residents/ households seek to get services from those who operate the informal waste collection. This first group is the "Kaya Bola" operators. Within this group, there are some informal collectors who operate at the commercial centres of the study area. These are the ones that have been registered by the MA. The other collectors have no registration with the MA and operate on their own. I also observed that there is also another group of informal waste actors who are normally involved in the buying and the selling of old electronic parts and other forms of metals (scraps). These are the Scrap collectors and dealers. They visit the households to buy spoilt electronic gadgets or other metallic substances at cheaper prices. After acquiring the metallic substances (scraps) from the household or sometimes at the dumpsite, they do a further sale of the scraps to industries involved in the recycling of scrap metals in the city centre of Accra. In addition, there is also the female group, mostly adults who are involved in collecting sachet and plastic waste from the households. In some situations, these female group buys the sachet and plastic materials from the households. These sachets are gathered in a huge plastic bag that is finally sold to recycling plastic companies. This is a way of diversifying the household income. These informal waste collectors consisting of the kaya bolas, metal scrap collectors and dealers, and plastic waste pickers are also involved in waste recovery. They sort and recover reusable and recyclable materials from the waste before disposing it off (Oteng- Ababio, 2011; 2012). From the above, informality helps in some waste reduction as well as generating employment and supplementing household income.

5.5 Civil Society Group Organizations

As a way of promoting grass root participation, decentralization and good governance in the process of development, the Local Government Act 462 calls for the inclusion of Assembly members or unit committee members in the prioritization, implementation, and monitoring of central government programmes and policies. Assembly members work with the MA to ensure that development agenda is benefited by every member of the community. Practically, Assemblymen/ women or Unit committee members are the ones who help to implement decisions from the higher level of government thus the MA. For instance, Assembly members enforce by-laws formulated by the MA. In SWM, the Assembly member plays some important roles in order to ensure good urban health and environmental quality. They serve as an advisory committee to public services including solid waste by reporting to the MA some of the challenges facing the community and the management of solid waste (Fobil et al., 2008). Analysis of the TESD Plan of GEMA entreats the unit committee members/ Assembly members together with their chiefs to be the first-line institution responsible for dealing directly with the community. The TESD Plan outlines this in its Establishment Instrument (EI)

"....the council is responsible for validating data and designs; community mobilization; identification of needs and appraisal of applications concerning latrine promotion activities; validating type of on-plot sanitation technologies and their suitability; soliciting community views and comments on capital and, operation and management costs of facilities; responsible for managing franchises and quality of services by operators under guidance of EHMD; validate completion of projects and programmes; managing participatory monitoring and evaluation of programmes and projects" (GEDA, 2008).

In my interview with the Unit committee members in Kwabenya and Dome, I decided to find out the functions played by them. It was revealed that their roles confirmed the Establishment Instrument of the TESD Plan:

"...I am a member of a committee called the Social Service Committee. With this committee, when people are facing any problem within the community, I make sure I send their plea to the MA after discussing them with my chiefs and the people in this community" (Kwabenya Assembly Man, interview, 2016)

"...as part of the National Sanitation Day, which is the first Saturday of every month, I normally mobilise the community members and the needed resources so that we can embark on a communal

labour. This is to clean the community we live in. It is for our own good" (Dome Assembly Man, interview, 2016).

Currently, the Establishment Instrument of the TESD Plan has not yielded the needed results because it has not lived up to expectation. It is expected of the MA to provide the needed resources (finance, logistics etc.) that will enhance its fruition. As expressed by one Assembly member, the lack of support from the MA has been a major challenge to their operation. In some situation, they have to use their own resources to that effect.

"... in events where community members show up in their numbers for the clean- up exercise, we mostly fall short of equipment and other resources to do the clean- up. When we forward this complaint to the MA, they tell us to wait for one community to finish so that we also clean ours the following week. I through my own efforts and resources have established the community information centre that announces the days for the clean- up exercise. I constantly make an announcement to remind them before the day comes. I have also used my own money to procure some equipment. These should be done by the municipality and not me" (Kwabenya Assembly Man, interview, 2016).

Within the TESD Plan, policy guidelines expect the MA to provide the needed platform including the financial, among other important resources for the operation of the other actors. However, limited finance, skilled personnel among other important factors (Fobil et al., 2008) are limiting the operations of the MA. As a result, the MA is not able to achieve its expected responsibilities. This has however affected the operations of the other actors including these Civil Society Group Organizations, who are also responsible for the management of solid waste within the municipality.

5.6 Households

The households form the majority group in the solid waste management system that generally produces solid waste. They are also the beneficiaries of solid waste collection, transportation and disposal services. According to Joseph (2006), in the developing world, this group of actors plays some important roles in the management of solid waste. Households are responsible for managing the collection of garbage, monitoring the activities of each other towards waste disposal, solid waste sorting and segregation among other important activities (ibid). On the other hand, they are also responsible for the poor urban environments through their behaviour and attitudes toward solid waste management (Yoade et al., 2014). As shown by Acquah (2015), the households are responsible for deciding how to dispose of their solid waste. They decide whether to go in for

house-to-house services or communal container system, burying or burning of solid waste. The decisions made are based on their location and income status. In the fast developing towns in the municipality including Kwabenya, Dome, Musuku, the central container system and house-to-house services serve as the main medium for waste collection. In other towns like Abokobi, Teiman where urbanization and land encroachment tend to be low, burying and burning of the solid waste are usually preferred by the households. In this research, it was identified that solid waste management had a gender face whereby young and old female groups are responsible for the management of household waste. They are responsible for cleaning their homes and disposing of the waste based on their preferred mode of disposal. It was also identified that they are responsible for sorting of the solid waste products as well as selling of old electronic gadgets (e-waste) to scrap dealers.

In order to encourage household support towards solid waste management or in playing their expected roles, it is important to recognise that within a neighbourhood community, there are inter-household differences and may belong to different social or religious groups, cultural/ religious beliefs, and practices, major occupations, income and expenditure patterns, access to community and infrastructure services, gender and age. Household, community, as well as religious leaders, should endeavour in initiating practices that will serve as a guideline for others. They can for instance start by deposing refuse in containers, engaging and participating in community clean-ups and street exercises, paying their collection bills on time without complaint. Religious leaders also can play an equally important role by supporting in cleanliness campaigns through their religious preaching and teachings held in churches and other places of worship. Within the educational settings, the MA through its agency on education should intensify awareness- raising programmes not only targeted at school going children but also to the school leavers and children who are unable to attend school (Joseph, 2006). This can empower them to play an active role in the management of solid waste.

5.7 Chapter Summary

As part of the decentralized approach towards solid waste management in GEMA, it was seen that different stakeholders and organizations play important roles in ensuring a better solid waste delivery system. The Municipal Assembly, as a result of its legislative power, controls most of the affairs in relations to the management of solid waste. They do this by developing strategies that are mostly followed and implemented by the other actors in the municipality. Other actors playing equally important role in solid waste management include the private sector operators, informal operators, civil society groups as well as the household. Furthermore, the policy framework guiding solid waste management seems to promote good governance but however, the reality is far from what is being achieved as the political culture limits participation, coordination, transparency, and accountability (see chapter seven for more details).

CHAPTER SIX: SOLID WASTE MANAGEMENT PRACTICES IN GHANA

6.1 Introduction

My second objective is to explore the current situation of solid waste management in GEMA. This chapter starts by giving a historical account of solid waste management practices and how that has shaped the current methods of solid waste collection, transportation, and disposal within the study area. It then concludes by discussing the general perceptions and attitudes of people towards the current organization of solid waste management practices in the municipality.

6.2 Before Solid Waste Governance: Pre- Structural Adjustment Era

The management of solid waste until the Structural Adjustment Programme period has been in the hands of the central government. In Accra, just like the major cities in Ghana, including Kumasi, Sekondi- Takoradi, Tamale, it was incumbent upon the Municipal Assemblies (MAs) and their departments of Environment and Sanitation thus the Waste Management Department (WMD) to collect, transport, and dispose of solid waste. In the words of Asomani- Boateng (2016; see also Asomani- Boateng, 2007; Asomani- Boateng & Haight, 1998), this centralized approach was based on the British model that was used during the colonial era. This was described as effective and efficient considering the size of the population, the financial, human and technical base as well as the political will of the British colonial government (ibid). This model was embraced in the post-independence era but this produced a different story. It was characterised by ineffectiveness and inefficiency in the light of rapid urban growth, limited budgetary allocation to the solid waste sector, lack of political will and limited skilled personnel: all of which undermined its effectiveness and efficiency (AMA, 2009). Poor solid waste management (SWM) became the order of the day, reaching a "peak crisis" as termed by Benneh et al., (1993) in the year 1985 (Boadi & Kuitunen, 2003; Fobil et al., 2008). In response to this crisis, the government of Germany funded the establishment Waste Management Department (WMD) of the Accra Metropolitan Authority (AMA) (ibid). However, the department has been characterized by poor performance because it was capable of collecting only 60 percent (60%) of the 1200 tons of solid waste generated daily in the city (Benneh, 1994; Boadi and Kuitunen, 2003). The failure of the MA's and their Waste Management Departments to improve upon waste management services led to the introduction of the private sector through the Economic Recovery Programme (ERP) initiated and implemented

by the International Financial Institutions (IFI's) including the World Bank and International Monetary Fund (IMF) (Fobil et al., 2008).

6.2.1 Post- Structural Adjustment Program Era

In recognition of the problems facing the centralized approach towards SWM in Ghana's major cities, the private sector entered the scene of SWM. The shift towards privatization can be attributed to the economic crisis that struck the country's economy in the 1980's. This led the then PNDC government led by Flight Lieutenant Jerry John Rawlings to adopt the Economic Recovery Program, which metamorphosed into Structural Adjustment Policies in subsequent years. A major tenant of such Economic Recovery Programme (ERP) was increased private sector participation in the development agenda (see Konadu- Agyeman, 2000). The private sector was regarded as effective and efficient just like the colonial period model because of their political independence, economic advantage and innovation (Asomani- Boateng, 2016; Fobil et al., 2008; Post & Obirih- Opareh, 2003). Since then, privatization has been one of the models embraced in the management of SW in all Municipalities in Ghana including GEMA. This model focused on the collection, transportation, and disposal of solid waste. Privatization has been described as one of the efficient models because it was able to produce the expected result at the year 2008 (AMA, 2009; Asomani- Boateng, 2016). With this, the Waste Management Department of the AMA including other MA's in Ghana has privatised over 80 percent (80%) of the collection, transportation and disposal of solid waste (AMA, 2009). Household and Municipal solid waste collection, transportation, and disposal based on privatization are organized in terms of house-to-house collection system. There is also the central skip or container method, where waste containers are placed at vantage points for community members to dump their solid waste into them. This is very predominant in the majority low-income areas of most municipalities across the country Ghana. These containers when full to capacity are collected by the contracted private waste management companies and disposed of (Oteng- Ababio, Arguello & Gabbay, 2013).

In recent years, the private sector contribution to solid waste management remains questionable. It's capacity to collect, transport and dispose of solid waste is regarded unsatisfactory (Post, 1999; Boadi & Kuitunen, 2003; Oteng- Ababio, 2010, Asomani- Boateng, 2016). Financial and human resources have been identified as major factors hindering the smooth operation of the private sector (Post & Obirih- Opareh, 2003, Asomani- Boateng, 2016). Obirih- Opareh & Post (2002), also

elucidates the inability of households in paying the fees charged for solid waste collection by the private sector. Moreover, most of these private firms lack collateral security to access bank loans. This hinder their capacity to purchase mechanized equipment and hire and pay qualified personnel. Other problems have to do with the inaccessibility of some of these low- income, the poor nature of the waste collection vehicles, the often limited and far location of the final landfill sites for disposal (Boadi & Kuitunen, 2003). There is also an increased competition from the unregulated informal sector who charge cheaper service fees for solid waste collection, transportation, and disposal. This has diverted the household attention in seeking for the services of the informal collector. The lack of political will on the path of the central government towards waste management cannot be overemphasized in this regard (ibid).

6.2.2 Towards Solid Waste Governance: A Multi- Actor Policy Framework

The management of solid waste in Ghana is currently under a decentralised Metropolitan Municipal District Assembly's (MMDA's) program (Ghana SCP, 2004). The MMDA's are responsible for the collection, transportation, and disposal of solid waste through their Waste Management Department) (ibid; Mariwah, 2012). There are other state institutions like the Lands Commission of Ghana (LCG) as well as the Town and Country planning (TCP). These are responsible for the mapping of land to be used for a landfill site. The Environmental Protection Agency (EPA), which is an agency of the Ministry of Environment, Science and Technology (MEST), is vested with environmental regulatory and monitoring power to enhance environmental sustainability and compliance to environmental regulations. The activities of these institutions are captured under the National Environmental Action Plan (NEAP). This is geared towards an effective service delivery in waste management as described by Ghana's sanitation country profile (2004). In making decisions, these institutions come together with other state agencies like the Ghana Health Service (GHS), Ghana Education Service (GES), Council for Scientific and Industrial Research (CSIR), CBOs, NGOs and the private sector (ESPAG members). These form a coordinating council called National Environmental Sanitation Policy Coordinating Council (NESPoCC), established in 2000 (Crook & Ayee, 2006). Their mandate is to formulate and expedite the implementation of the National Environmental Sanitation Policy (1999) of the MLGRD. The NESPoCC is also responsible for coordinating the policy and ensuring effective communication and cooperation between the different agencies/ actors involved in environmental

management in their respective districts (Ghana SCP, 2004). This was captured in my interview conducted at the office of WMD, GEMA:

"…the management of SW in this municipality is based on a decentralized approach. Specifically, if we are talking about those responsible for such task, it lies in the hands of the Municipal's Environment and Sanitation Department. We do not do this alone. We work in conjunction with the EPA that sees to it that all the practices relating to the collection, storing, disposing and treatment of SW are in line with the stipulated environmental guidelines. We also have the private sector that has been contracted to provide services to the communities. The Lands Commission and Town and Country Planning departments are responsible for planning and zoning of sites and infrastructure for waste disposal. These together with other state institutions and the various communities through their chiefs and Unit Committee members, I must say are responsible for the management of solid Waste within this municipality" (WMD, GEMA, interview, 2016).

The above statement also corresponded with the Town Environmental Sanitation Development Plan (TESD Plan) that was formulated and implemented by the GEMA. The purpose of the Town Environmental Sanitation Development Plan with the first phase spanning from 2008-2015, was developed for improving environmental conditions by gradually and incrementally limiting the poor environmental burdens due to the indiscriminate disposal and littering of refuse. The purpose of this plan was influenced by the results of the Environmental Sanitation Assessment and Audit (ESAA) undertaken in GEMA as part of preparatory activities. The TESD Plan was strategic in nature: in the sense that it covered all the key categories of environmental sanitation and identifies the facilities, resources and stakeholders needed to provide comprehensive services. It further describes the implementation and financing arrangements for each component and sets the agenda for attaining the overall goal of the relevant sector policy, as well as plans and programme of the Ga East Municipal Assembly (GEMA) (GEDA, 2008).

6.3 Organization of Solid Waste in GEMA

The introduction of decentralized waste management system in GEMA has led to the re-organization of solid waste in the municipality. Solid waste in the municipality is now being managed at different levels based on household accessibility, income status and the economic benefits (in terms of job creation and revenue generation).

6.3.1 Primary Collection of Solid Waste

6.3.1.1 Central Container System and House-to-House Service (Low- Income Areas)

The first level organization of solid waste is in the low-income areas. With respect to their poor planning layout and inaccessibility by large waste collection trucks, the MA through funds from the international community and the central government has mobilized central skips or containers. These are placed at vantage points in these low- income areas (Asomani- Boateng, 2016) for the households to dump their household solid wastes into them. The containers are emptied by the contracted waste management company when full. This was reflected in the words of the WMD

"…now as we know, the planning of residential areas is very important to ensure the accessibility of solid waste equipment. So what we are doing now is that we have identified the indigenous communities in the low-income areas where we have placed communal containers. Here I am talking about areas like Ashongman village, Agbogba, Kwabenya Township, Musuku, Dome, and Abokobi. These are communities that are not well planned and secondly, income levels in these areas are very low. So we have given them the central containers for them to dump their waste" (WMD, GEMA, interview, 2016).

The communal container collection system provides services for some parts of middle-income areas as well as the entire towns in the low-income areas including Dome market (biggest commercial centre in the municipality). In these areas, they use temporary storage receptacles such as polythene bags, cardboard boxes, old buckets etc. These are later disposed of into the central skip when full. It is the duty of the MA to manage the communal container system and see to it that collection of the containers is done frequently. The study revealed that the frequency of solid waste collection at the communal container system is twice a week. The mode of payment at the central container is the "pay as you dump system". There is a toll officer assigned or employed by the local authority or MA to collect money from the community members who dump their solid waste into the central container. Payment is done according to the quantity of solid waste disposed into the container. This ranges from 1- 5 Ghana cedis (3 US cents to USD 2). In the communal container collection system, the local authority pays the private contractor for emptying the container. However, the private company is also expected to pay a dumping fee[19] at the final disposal site at Pantang in GEMA or Kpone in the Tema Metropolitan Assembly (TMA). These

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[19] Price of dumping fee was not asked during the interviews

private waste operators normally run at a loss if the households in the low-income areas refuse to pay for the services rendered (Oteng- Ababio, 2010). In the occurrence of this, the smooth collection, transportation, and disposal of solid waste from the container is halted.

In addition, the kaya bola collector/ operators (some not registered with the municipality) serve as an alternative mode of solid waste collection in these low- income areas. The introduction of neoliberal policies into solid waste management has attracted this informal solid waste operators including the kaya bola. These groups move around the low- income areas with their tricycles "bola taxi" to collect the solid waste. Other collection materials include sacks, baskets etc. (see Oteng- Ababio, 2010). They also engage themselves in door-to-door collections in some few households in the low- income areas including Dome Pillar Two and Konka, Old Kwabenya Town, Abokobi, Adjei Mensah (households are able to negotiate the collection fee with them). Furthermore, these informal waste collectors "kaya bola" are also charged a dumping fee when they go to the final disposal sites to dump the solid waste. Their activities help minimize the pressure (amount of uncollected solid waste) at the household level. However, it was observed that most of these kaya bola operators do not dispose of the household waste legally. In many cases, they dump household solid wastes at the backyard of residents and other unauthorized locations at night. Furthermore, dealing with the kaya bola operators has been more problematic. This is partly due to the dumping fees charged at the final dumpsite. This compels these kaya bola operators to dump the solid waste at unauthorized locations like bushes and abandoned drains in the municipality. This is creating problems for the ESPAG members and the MA by increasing their cost of operations. Thus, they spend more resources in collecting the solid wastes from these unauthorized places as highlighted in the research of Altaf & Deshazo (1996). This remark was made by a member of ESPAG when asked about their perception of the operation of the kaya bola operators:

"...you know my brother, in this life if you know you cannot complete a task, never venture into it in the first place. I am not saying this because they offer any competition to us and which they cannot. But they rather complicate our work. They pick waste from some households at a black market price and because they do not want to pay any money at the final dumpsite, they go about disposing the waste at any place they find convenient. This is something that the MA has to work on if they want to see an improvement" (ESPAG member, interview, 2016).

In addition, personal observation and a walk along interview conducted at the household level in Dome ascertained how some of these kaya bola operators collect solid wastes from some households and dump the solid waste some few meters from the residents:

"...some of them (Kaya bola) come for our waste and dump them for us. But it is unfortunate that the backyard of my house has been the major receptacle for all the solid waste in this town. Whenever it rains it produces a foul smell to the extent that I can't even sleep in my own room" (Female Resident, Dome, Interview, 2016).

The operation of the kaya bola operator cannot be disregarded. Nonetheless, their operations are some consequences both to the environment and the private waste sector. Policies such as tax holidays with their operations should be implemented by the MA. An effective registration system that sees to it that every informal waste collector is enmeshed into the management system should be effected. This can see to it that, their solid waste collection activities are in line with the needed environmental guidelines as in the case of the private solid waste operators.

6.3.1.2 Private Sector Collection in High-Income Areas

At the second level, members of the ESPA have been contracted by the MA. This is part of the public- private partnership agreement. In line with their Memorandum of Understanding (MOU), contracted member of ESPAG are to register households in the high- income areas. This is to facilitate the collection of solid waste from these households to the final waste disposal sites. Waste collection in these areas is a direct system in which, the private waste companies collect the waste from households directly with compactor trucks for dumping (Boadi & Kuitunen, 2003). The WMD of GEMA spoke this in our interview:

"...at the second level solid waste organization, we have contracted out households in the high-income areas, assigning contracts and blocks to the private sector where they move from house to house to collect their waste. The contractors which are the ESPAG go to these households, register them and go for their waste" (WMD, GEMA, interview, 2016).

In these neighbourhoods, residents involved in house-to-house services are expected to pay a user fee of GH₵30 (USD 7) per month for waste collection. In my interview with a member of the ESPAG, it was informed that the user fee charged was the sole decision of the MA. The ESPAG members are expected to collect the user fees as decided by the MA. According to members of ESPAG, this user fee is too minimal and does not cover their expenditure or investment made. In

this situation, they do not have enough financial resources to cover their cost of operations. Moreover, residents or households have not been supportive of the operations of the ESPAG members. Residents are sometimes unwilling to pay the user fees charged. This together with the minimal user fees are not making them effective in their operations. This was stated by a member of ESPAG:

"...one major problem which is from the MA is the service fee that the MA approve for us to take from the communities we serve. To us the private operators, it is not the very best at all. Already, the cheap service fees we are collecting from them are woefully inadequate and they (households) are not willing to pay. So just imagine what will happen if the MA is to increase the price? They will certainly not pay and if they do not pay, there will be so much pressure on the central containers. Unauthorized dumpsites will spring up everywhere in the communities. This will make our job more difficult" (ESPAG member, interview, 2016).

This same opinion was also shared by another ESPAG member:

"...the MA has the political will to dictate the amount we are to charge. We do not get enough money and besides, even when the Assembly increase the prices charged, our customers do not want to pay for the services offered them. They will rather keep their waste and whenever it rains, they see that to be an opportunity for them to dump their waste, thinking it will be carried away by the runoff water. This is the problem we are facing now. No wonder we experience flooding anytime it rains. You see how unserious we Ghanaians can be?" (ESPAG member, interview, 2016).

In order to ensure effective privatization, policy frameworks that seek to safeguard the private sector interest devoid of any political interference need to be put down in order to ensure a better service delivery (see Post, 1999). One could also argue that the state with its power can create the best conditions that can harmonize the interest of the private sector in getting an increased fee as well as the households who patronize the services of these private waste operators.

6.3.2 Secondary Collection/ Transportation of Solid Waste

To facilitate the collection and transportation of solid waste, the MA have their central containers placed in commercial centres like market places, public transport terminals to collect, transport and dispose waste from such areas. This is different from the primary collection method that deals mainly with the households. Here, commercial areas have been targeted for this purpose. This is done, with the aim of creating employment for the youth as well as generating revenue for the MA. Traders including market men and women who have their businesses within these commercial

areas are expected to dump their waste into these central containers. In my interview, Zoomlion Ghana has been contracted by the central government (Zoomlion deals directly with the central government) to lift most of the central containers from these commercial centres. At the moment it collects and transports the majority of the solid waste in the GEMA, lifting about 16 containers from the commercial areas of Dome and its environs in the municipality. This was acknowledged by the WMD in our interview:

"...at the third level of solid waste organization is where we do the business in the municipality especially in the commercial areas. For instance, in the market areas, the MA has placed central containers where the traders who do business in these areas are charged a fee for their waste disposal. Such people pay a toll to the Assembly for using our facility. For the lifting and transportation of the solid waste, it has been the responsibility of Zoomlion Ghana waste company Limited in our case to lift the waste from the various commercial centres and towns in the MA. Currently, they are lifting about 16 containers from the commercial areas in the municipality" (WMD, GEMA, interview, 2016).

Here, different kinds of collection and transportation vehicles are used. Zoomlion Ghana operates with its compactor trucks, mini trucks, tippers, skip trucks, tricycles among others. In areas where the compaction trucks cannot access, they have their own tricycles that access such areas in the market. It was identified that there are no transfer stations in the municipality. In this view, solid waste collected from such areas are sent directly to the final dumpsites to be disposed of.

6.3.3 Solid Waste Disposal in GEMA

The current situation of solid wastes disposal can be described as very poor. Solid wastes are increasingly being dumped in open areas, poorly regulated landfill sites drain, bushes among others. In my personal observations, open dumps are located along roads, walking paths and backyards of some households in the low- income areas. In addition, burning and burying of solid waste serve as other means of disposal. These are very rampant in the newly developing areas of Teiman, Oyarifa, Abokobi were urbanization tends to be minimal. In the fast urbanizing areas of Dome, Kwabenya, Haatso, these methods of waste disposal (burning and burying) is very less. Open dump method is very common in such localities. The proliferation of open dumping method, if not curb can have an adverse effect on the environment. This could include groundwater pollution, breeding grounds for mosquitoes and the tendency of developing respiratory diseases as a result of the constant smoke emanating from such disposal system (Osei et al., 2011). In line

with this and as a way of controlling the growth of open dumpsites, the identification of lands or sites to be used as a sanitary landfill has been of major concern for the Municipal Assembly. The intensification of globalization processes has led to rapid increase in urbanization phenomenon and economic development. There is high demand for land for housing and real estate, industrial and infrastructural developments. The increased competition for lands especially in the newly developing areas in the municipality has also brought some implications for MAs who want to improve upon solid waste disposal by developing an improved sanitary landfill sites. They continue to face competition and resistance from local communities who also have concern for their environment and health (Owusu et al., 2012). This has sometimes resulted in clashes between MA and some local communities. The existing land landfill site at Pantang in my field observation and interview with some households portrayed how the landfill is managed without concern for the stipulated environmental guideline. In 2012, there was a conflict between the MA (GEMA) and the residents of Pantang who objected to the further dumping of solid wastes in their neighbourhood. In response to this act (conflict and demonstrations), the MA explains that, the actions of the local community is not making the landfill facility to operate at its full capacity and that there is a "Landfill crisis" in the municipality.

"…*the communities have not shown any goodwill from the beginning. Instead of them sitting down with us to dialogue, they rather demonstrate against us. For example, somewhere in 2012, the residence of Pantang took arms against us by demonstrating against us on the street. There was a time we sat down with them together with some private investors and the committee to oversee the operations of the landfill project because there is a landfill crisis, which we must address, but no interest came from the local communities"* (WMD, GEMA, interview, 2016).

However, reports from the media also revealed that government officials who managed such facility did not conform to the environmental guidelines as stipulated in the Ghana Landfill Guidelines of Environmental Protection Agency. A publication by Ghana News Agency, dated 2nd April 2014, intimated that the MA does not want the facility to be closed down because they continue to gain enough revenue from every dumping truck that comes to dump waste at Pantang Landfill. It was further informed that successive governments for two decades now have promised for the closure of the facility. Nonetheless, the facility continues to operate because the government has not gathered the political will to listen to the plight of the people of Pantang. Following this report, it can be deduced that the facility is working under its capacity because community

members through threats and demonstrations, continue to oppose to its full operation. The resistance from the people of Pantang in preventing further dumping has brought some dissatisfaction to the MA. The opposition from the community further reduces the revenue that the MA receives from the Pantang Landfill. The loss of revenue and control of the Pantang Landfill is what the MA describes as a "Landfill crisis". In line with this, Solid waste operators who undertake in solid waste collection, transportation, and disposal activities have to travel all the way to Kpone in the Tema Municipal Assembly (TMA) to dispose of their waste. The prices charged by the TMA for waste disposal coupled with transportation cost like high prices of fuel have affected their operation. In my interview with an ESPAG member, instead of them undertaking three waste collection and disposal trip a day, they end up with only one trip, due to the transportation cost involve. This is making them ineffective. With this, solid waste collection becomes unattended to with my field observation portraying scenes of overflowing central containers in public places like the markets, on the streets, schools, and households living very close to this facilities.

6.3.4 Recycling and Reusing of Solid Waste in GEMA

The recycling of solid waste helps in the recovery and reusing of important waste materials. This helps to reduce the quantity of solid waste that needs to be collected, transported and disposed of. This also helps in saving money to the waste management departments. Furthermore, reusing and recycling of solid waste has the potential benefits of redirecting huge tons of solid wastes away from landfills and incinerators. This prevents the emission of greenhouse gases and water pollution, conserve huge energy as well as limiting the need for new landfills and combustors (Agarwal et al., 2005). Ogwueleka (2010), goes on to demonstrate that reusing and recycling of solid waste should be encouraged because this approach helps in attaining sustainability in the waste management sector. As it stands now in GEMA, there is no formal methods or procedures in reusing and recycling of solid waste. Those involved in this aspect of solid waste management are dominated by the informal sector; especially the scrap collectors. They use their pushcarts, barrows etcetera in collecting and transporting the solid wastes. Most of these informal waste collectors (scrap collectors) operate as a result of poverty. They earn a living by collecting reusable products (Ahmed & Ali, 2004). It also serves as a means of diversifying the household income. With the aim of making the waste management sector more viable, The GEMA is currently soliciting for more funds from private investors and the international community through the central government to develop a recycling plant. It was disclosed that most of the revenue

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generated from the waste contracting business activity could be used together with the funds from the private investor to embark upon the recycling project. This, as described by the MA, is an innovative way of providing employment and revenue[20] for the unemployed youth and the MA respectively. The solid waste sector can be made very attractive through such recycling project. This will help involve many people, which can reduce the number of uncollected solid waste in the municipality. It was also disclosed that revenues are being invested into other business so as to generate more money to embark upon the recycling project. This is reflected in the words of the MA's WMD:

"*...we have opened our doors to any stakeholder to help in Public Private Partnership arrangement so as to secure funding to establish a recycle plant. I believe if we begin to use a recycle plant, that will generate income and employment and this issue of SWM will interest community members in the municipality. As we begin to recognise the idea of waste segregation, there will be enough labour to do this work because the work will be less tedious and harmful. So we are calling on the investors to come so that we can secure a waste recycling plant*" (WMD, GEMA, interview, 2016).

This initiative by the MA is very important in building a sustainable urban environment in GEMA. However, studies on solid waste collection, transportation, and disposal depict how unsustainable most solid waste departments in some developing countries have become without integrating the informal sector (see Oteng- Ababio, 2010). In order to make the intended recycling project in GEMA sustainable, there is the need to establish a recycling system by taking into account the informal sector that already exists. This means that there is the need to fully integrate the informal sector into waste management planning, improving upon their practices and experiences as well as their living and working conditions. Nonetheless, it was informed that some members of the informal sector have refused to register their names with the MA because of the tax they are expected to pay. This could be due to the lack of trust from some members of the informal sector towards the municipal government (MA) as to how revenues from solid waste activities are managed. This further pose a major challenge to this project because this aspect of solid waste is dominated by the informal sector.

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[20] Much information were not disclosed by the WMD as to how the revenue is managed and the participating partners involved.

6.4 General perceptions of the current condition of solid waste management

The increasing quantity of solid waste generated and uncollected in the municipality necessitated the MA to come up with the reorganization of solid waste. This was done to reduce the amount of uncollected solid waste in the municipality as well as preventing its subsequent health and environmental impacts. This action taken by the MA has generally not improved upon the situation. The quantity of uncollected solid waste in most areas especially in the low-income areas of the GEMA continue to rise considering the high rate of urbanization. Households and solid waste contractor's satisfaction and perceptions about the general situation of solid waste in the municipality has been described as poor. As stated by a member of ESPAG, the MA has set out policies, which prevailing circumstances such as lack of political will, monopoly over revenue, registration system and the awards of contracts. Added is the lack of skilled personnel, disregard for ESPAG in decision- making process among others: all of which have not helped in the effective management of solid waste in the GEMA:

"…the way and manner the organisation of solid waste is carried out in this municipality, I would say, is not the very best, in the sense that I don't think any proper or professional waste management scheme which needs the effective registration of customers, distribution of bins, frequent collection of waste and the payment for the service given is effective. It is currently underperforming. It is a situation not only in GEMA but the nation as a whole cannot be excited about. If you consider those with whom we have registered and doing business with, their attitude towards waste management is extremely bad. The Municipal Assembly's own attitude towards the situation is not the very best. The other private companies with whom we work hand in hand with, I can say are not up to the standard. Holistically, the situation is not very good at all from my opinion" (ESPAG member, interview, 2016).

This idea was shared by another household in Kwabenya:

"…it is very bad. At times, when you go to the central container, you see waste of all sorts all over the environment for a very long time. You also realise that the container is full and overflowing. It will take several weeks and months for the people to empty it" (Female respondent, interview, 2016).

Though the general situation has been described as poor, others also ascertained that the situation is improving:

"…before God and man, it is not very good but day in day out, I think there are some improvements. Because as at now, aside from the central container collections, some private waste

collectors come around to collect the waste. The problem is that when the central container if full of rubbish, you still see people sending their waste there causing so much pressure. Because of that, you see the container overflowing and heaps of rubbish all over the place" (Kwabenya Traditional Leader, interview, 2016).

Generally, interviews and field observations revealed that the MA has not lived up to expectation. The policy guidelines of the MA together with the central government have not been embraced by the participating actors and stakeholders considering their level of capacity, financial resources, information, and political autonomy. However, the practice of good governance is very imperative because it describes how institutions can control their actions to ensure that its constituents follow its established policies. It is not easy to ensure compliance with the policies formulated without involving all the stakeholders. Also important is that stakeholders should have the required capacities in order to accomplish the laid down policies (Abas & Wee, 2015). In most municipalities in developing countries including the GEMA, the inevitable role of politics plays a large role in solid waste management systems. Citizens and stakeholder participating roles in policymaking processes and policy implementation are in great doubt. An effective policy implementation is however encouraged to involve all actors in this regard. Much importance should be paid on striking the right balance within the public institutions/ actors and citizen perspectives for an effective good garbage governance (Konteh, 2009).

6.5 Chapter Summary

The chapter started by identifying the various phases or stages of solid waste management in Ghana. It then followed with a discussion on the current decentralized process of solid waste management, which is part of the governance approach being implemented by most Municipal Assemblies in Ghana. It also discussed some of the strategies currently used in solid waste management in GEMA. It then concluded by giving the general perception of people about the current solid waste management system.

CHAPTER SEVEN: PROBLEMS FACING GOOD GARBAGE GOVERNANCE IN GEMA

7.1 Introduction

This chapter brings explores the main challenges involved in achieving good garbage governance within the solid waste sector of GEMA. It discusses issues related to limited participation, lack of trust and partisan politics, lack of transparency, lack of coordination and communication among the various actors. It then relates how these issues have affected the development of the donor funded engineered landfill site in Kwabenya. It also discloses how the issue of power has affected the management of finances, awards of contracts and the employment of skilled personnel for the WMD.

7.2 Lack of Transparency

Transparency is about openness and accountability among social actors and as an important democratic value, it develops as a result of the interaction between these actors. These social actors might have different perspectives or views but might work together to accomplish a particular task (Meijer, 2013). Transparency does not only ensure or promote good governance or democratic process but should be seen as an outcome of good governance (Roberts, 2006; Hood & Heald, 2006). Transparency has received considerable attention over the past few decades as a result of new legislation policies like the Right to Information Bill (RTI Bill) as in the case of Ghana[21], technology, among others. In this research, Transparency is used in two different ways and how it is expressed among the different actors involved in the governing of solid waste in GEMA. Firstly, Transparency is understood as the exchange of information among social actors. Information exchange is very crucial especially for the subject of transparency[22] who monitors and evaluates the object of transparency[23]. As indicated by Meijer (2013), Transparency is about the representation of reality, thus information given should be accurate and complete and be made readily available to the public or subject of transparency. This can help or serve as a basis for

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[21] The RTI Bill is a fundamental human right of every Ghanaian to have access to information held by government agencies. It is based on a democratic principle that the sovereignty of the nation is in the hands of officials in whose name and on whose behalf government exercise power. The RTI Bill serves as the basis to which accountability, transparency, participation and check of corruption among public officials can be carried out.

[22] Actors who monitor and evaluate the performances of public servants or those responsible in the management of resources (Meijer, 2013)

[23] Actors who are monitored and evaluated by the public or individuals outside the agency's operations

making further decisions by the public. Following this line of argument, I intended to find out how the exchange of information was carried out by the various actors. It was informed that public workshop and seminars were rarely organized by the MA. The Assemblyman for Dome further expressed that, the little amount of information they receive from the MA prior to any public hearings hinders them from making meaningful contributions at public meetings and hearings.

"*... I am not happy about the way public meetings are held in this municipality. Meetings are not organised frequently and when we attend meetings at the MA, sometimes the issues discussed are not to the best of my understanding. I have little information as to how the Local Assembly (MA) sometimes operate. I remain shut throughout the entire public meeting when some issues are being discussed. I do not know the head and tail of such issues as an Assemblyman*" (Assembly Man, Dome, Interview, 2016).

This also helps explain that effective public participation is reduced by limited transparency; especially when there is the poor flow of information among the actors. That is, the lack of information flow among actors could produce disinterest on the part of actors (subject of transparency) in taking full part in public discussions. Secondly, Transparency in this research is understood as an institutional relationship among actors. Here, transparency is further portrayed in terms of existing power relations among actors, rules, and interaction (ibid). Advocates of transparency allow the subject of transparency to monitor and evaluate the activities of the object of transparency. In this study, it was revealed that the existing power relations gave the subjects thus the households, Assembly members as well as the ESPAG member limited opportunity to monitor the affairs of the MA. Power relation operated in terms of work experiences and skills, educational levels, and legislative state power. As expressed by the Assemblyman of Kwabenya, the MA invites them for public hearings. Nonetheless, final decisions are made by the MA without any recognition of their knowledge and contributions given at previous public hearings or meetings. This he stated when asked about how decisions are made in the municipality:

"*...hmm!!!, not really because there are some departments in the MA that is responsible for making final decisions. What goes into the final decision-making process, I have no idea. Like I said earlier, as a member of the social service committee. I make sure I send the problems of the people to the MA. That is what I am noted for*" (Kwabenya Assembly Man, interview, 2016).

In my Focus Group Discussion with the women at Dome, this view was also expressed:

"...who are we to tell the MA what to do? Just as some community members make a "Mugabe" (master) out of their own selves, that is how the MA also relates to us. They do not care about us. The MA decides to come to us at their own convenient time and impose any levy or policy on us for us to comply" (Focus Group Discussion, 2016).

As indicated from the above, the MA because of its legislative power has tended to consider public information its own property. In this view, they have been hesitant to make some information available to the public. Furthermore, in events where the information are accessed by the public, the timing and quality of the information remain questionable. This could have implications for other democratic values like cooperation, mutual trust, and respect as well as participation. Community members seem uninterested in the public developmental course, because of the way public hearings and transparency is carried out in GEMA. This was also ascertained by Turner (2014) when he pointed out that the public shows little interest in community gathering because of the poor and limited information they receive from officials as well as little time for dialogue.

7.3 Limited Public Involvement in SWM Decision- Making Process

In understanding how decisions are made concerning the management of SW, a careful analysis of the Establishment Instrument (EI)) of the TESD Plan of the municipality was carried out. Section 5.3 of the EI of the TESD Plan mandates the effective participation of the council in decision-making, from its formulation to implementation. The EI also entreat all members of the community to contribute to sanitation development by participating in workshops and seminars and community gatherings. The aim is to help bring on board important decisions that will be of benefit to all members of the society. The plan also declares unit committee members and the traditional chiefs as the frontline actors who represent the people (community). Following this, my interview with these actors depicted different role. According to the Unit committee members (Assembly members) and traditional head, they are involved in mere informing, consultation and placation. These Arnstein (1969) terms "tokenism"[24] (see Text Box 7.1 below). As expressed by the chief of Kwabenya, they are allowed to be present at public hearing and meetings.

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[24] Tokenism is whereby the citizens are invited for public gathering and asked to contribute their views but their views are not taken into the final decision making process. People participate by being consulted or by answering questions at public hearing. External actors facilitates the gathering and information-sharing processes, and further control what goes into the final decision-making process. Such a consultative process does not allow for citizen's knowledge and experience and the external actors are under no obligation to consider people's views (Jones, 2007).

Nevertheless, when asked about their full participation in decision-making process, the chief states:

"…oh yes, they (MA) do involve us and just recently there was a council meeting but I could not attend. Any meeting that is organized by the MA, we are allowed to partake in it. For instance, in this municipality, there exist the Ga East Municipal Chiefs Association (GEMCA) which is made up of a collection of chiefs within this municipality. Every chief who is a member is supposed to represent his community at any council meeting. Sometimes, if I am unable to go, they send the minutes of the meeting to me or I also tell the Assemblyman to represent me… but before God and man, the MA is in charge of everything and is responsible for the management of the town's developmental needs. We do not have any say in decision-making processes though we are invited to their meetings" (Kwabenya Traditional Head, interview, 2016).

It is informed by the interviews that, the MA's Establishment Instrument (EI) of the TESD Plan, tends to portray to the masses that representative democracy is the right way of making decisions. This is not, however, the case as disclosed by the interviews. In addition, there also exist a disinterest on the part of some community members towards participation, which was also expressed by an aged woman. She cited economic factors and lack of respect for the ordinary citizen as the reasons why the community members do not participate in the decision-making process:

"…in this current economic condition, why should I leave my business behind and sit with people who do not respect our views. I have a family to take care of. The meetings are no benefits to me because the Assembly and their people have already made up their mind. They know what they want to do. So why should I waste my time and go for their meetings?" (Female respondent, interview, 2016).

In Kwabenya for instance, it was revealed that the Kwabenya Town Development Association (KTDA) is a local community-based organization formed by some households. In recent years, this association has not been able to achieve much because of division among some households who are divided along chieftaincy lines. The presence of two chiefs in the same traditional settings, struggling for power and resources has put to bed most of the traditional customs and laws that regulate people's ways of life. It was observed that traditional laws that governed societal affairs are not working because of the chieftaincy issue. As a consequence, the improper disposal of solid waste is one of the problems in this regard.

Text Box 7. 1 Arnstein Ladder of Citizen Engagement (1969)
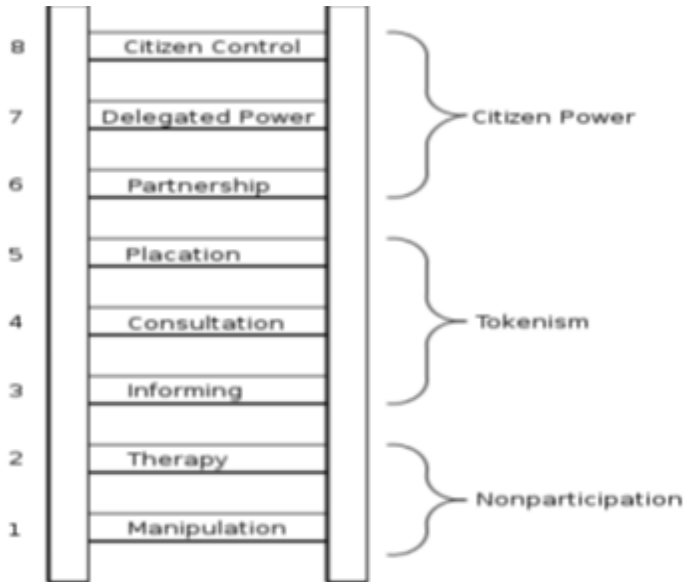
Source: Adapted from Arnstein (1969).

In the words of Tritter & McCallum (2006), participation is measured by ones power to make decisions. The various rungs on Arnstein's ladder is linked to the degree to which citizens have attained decision- making power. Participation is essentially a power struggle between citizens trying to move up the ladder and make decisions and some controlling/ powerful individuals or organizations who intentionally or otherwise limit the rise of the citizens to the top rung, hence restricting citizen's ability to make decisions for themselves because of lack of power (Collins & Ison, 2006). The top three rungs (8- 6) of the ladder, is where citizens have the control or the power to make decisions for themselves (citizen control). Descending down from rungs 5- 3, is what Arnstein terms tokenism. The bottom rungs (2- 1) of the ladder is where citizens lack the capacity or power to take part in decision- making process. Arnstein describes that stage as the stage of non- participation. Here citizens are sometimes represented and in most instances, decision have already been made by higher officials. They are allowed

Community members do not find the need to come together and participate in community development projects. In understanding how traditional and the by-laws of the traditional authority and MA was effected respectfully, it was disclosed by some households that there was no law

working though this was stipulated in the National Sanitation Policy of the MLGRD. In instances where the by-laws should work, environmental offenders caught disposing of waste in unauthorized places or committing other forms of environmental offences are freed by higher traditional powers. These traditional leaders by the will of their traditional powers are able to pay for the freedom of the offender so that legal actions cannot be taken against them. This was disclosed in one of the Focus Group Discussions held:

"...in this town, because of the chieftaincy issue here people do whatever pleases them, knowing that they have someone (higher traditional authority) who will save them in times of trouble. If that lady should be caught disposing of waste in unauthorized places, she has a leader who will come to her aid. Everybody here is a master of his or her own self so who am I to tell him or her what to do? Do you want them to insult me? In this community, we don't care and respect each other so it is very difficult for us to unite and embark upon any developmental program" (Focus Group Discussion, 2016).

In achieving good garbage governance and participation, mutual trust and respect play a crucial role in this direction. As intimated by McAreavey (2009), collective actions are hindered when social actors share different views or ideologies. These views or ideologies are power-laden which can bring disagreement and conflict among these actors. However, respecting the views and ideologies of each other can foster cooperation that can lead to full participation by actors. Furthermore, participation should include all groups within the society. It should not be only limited to actors within the formal decision- making process of the Municipal Assembly as well as the central government. O'Riordan & Stoll- Kleeman (2002), indicated that participation should not be regarded by formal institutions as the total transfer of power to the civil society groups but rather a compliment to it. In achieving participation, the elite class should realize that decision-making process is not their sole responsibility. Individuals regardless of their status should be made part and parcel of decision- making process (Jones, 2011). In addition, there should be the harmonization of both traditional powers of the local chiefs and the legislative power of the state. Solid Waste problems affect all members of the society. In this view, actors without the necessary knowledge and skills should be taken through capacity- building programmes that can help them make relevant contributions when it comes to decision- making process. This capacity- building programmes can promote trust and respect among the various actor; all strengthening and promoting good garbage governance and representative democracy.

7.4 Lack of Trust and Political Will

Another important issue that is affecting the efficacy of good garbage governance is a lack of trust on the part of the community members toward the government. This is important because of the need to understand the stalled donor funded landfill project in Kwabenya. The poor management of solid waste is only not an issue of local concern but of global, considering the significant amount of green- house gases (GHG), about 5% that are emitted from solid waste into the atmosphere. This is expected to increase to about 9% in 2020. This, however, has implication for the most discussed issue of global climate change (Singh et al., 2014). In line with this, national governments across the globe are entreated to adopt an environmentally friendly strategy to the management of solid waste that must go beyond the technical knowledge and expertise guidance in the development, operation, and monitoring of solid waste disposal sites (Owusu- Sekyere et al., 2015). In Ghana, and as a way of shifting from the crude open dump method of solid waste disposal, the 1999 National Environmental Sanitation Policy of the MLGRD, ascertains that the proper disposal of solid waste is an important aspect of environmental sanitation and sustainability, and offers an avenue for income generation, improvements in health and environmental quality as well as reducing the vulnerability of citizens (Oteng- Ababio, 2011). This can be achieved through the development of a properly monitored engineered landfill sites. The policy further entreats all MAs to procure adequate lands and secure the needed land title agreements including the payment of compensation to affected communities for its current and future use. Following this, two MAs in Kumasi and Tamale have been able to secure such facility in 2004, with Sekondi-Takoradi Municipality almost due completion. In Accra, such facility which was supposed to be constructed in Kwabenya has come to a standstill, regardless of securing two huge funding investments from international financial organization including the UK's Department for International Development (DFID) and the World Bank in 1991 and 2001 respectively. The World Bank, for instance, approved of a USD 62 million to cater for the completion of the project (ibid). The stalling of the engineered landfill facility is a reaction from the indigenous community members who expresses issues of lack of trust and environmental concern associated with the establishment of landfill facility. In my interview conducted with the traditional chief of Kwabenya and the Assembly member, the resistance (power as mode of resistance) from the side of community to the establishment of the international donor funded waste facility was as a result of the government's non- fulfilment of conditions associated with the establishment of an earlier donor funded nuclear

reactor currently located in Atomic- Kwabenya.[25]. This issue of lack of trust was raised in an interview conducted:

"...there is a misunderstanding between Kwabenya residents and the government. I remember before we gave our lands to Ghana Atomic Energy Commission for the nuclear reactor project, according to the agreement, they (G.A.E.C) were supposed to provide us with some infrastructural developments but up till now, they have not. This community has made G.A.E.C what it is today but we the people of Kwabenya who gave the lands to the government have nothing to boast of, not even a portable drinking water for this community. There is nothing here to boast of and we blame the government for that". (Kwabenya Traditional Head, interview 2016).

"...the government has forgotten about the promises they made to us when they were seeking for the land to establish the nuclear reactor at Atomic. They promised our elders massive infrastructural development in those days but I tell you up till now nothing has been done. Electricity came to this town because of the tireless efforts of the then-Assemblyman. The government, both past, and present have never been concerned about us. Any project that is harmful or hazardous should come to Kwabenya community. You see how the government treats us? Already, we have one hazardous project here (nuclear reactor) and we will not sit down for them to bring another one regardless of the job opportunities they promise (engineered landfill site)....no way!!" (Kwabenya Assembly Man, interview, 2016).

The non- fulfilment of government promise to the people of Kwabenya has resulted in a distrust on the side of the community towards the government. This has prevented them in playing an active role in the development of the landfill site by demonstrating against the government. This also has implication for promoting good garbage governance in GEMA. In addition, it can also be understood that, for a community to benefit from social services and infrastructure, it should bear the brunt of accepting a hazardous facility like a nuclear reactor and a waste facility. Environmental equity and justice are of the notion that communities should prevent the siting of hazardous projects like a nuclear reactor or waste dump amidst health and environmental consequences. This should be regarded to the extent that, the communities are unequally and unfairly burdened by environmental problems or if such facilities should be of environmental burden. As propounded

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[25] The earlier development was the establishment of a nuclear reactor on the land of Kwabenya by the international Atomic Energy Agency (IAEA) based in Austria together with the central government thus the government of Ghana. This nuclear reactor is currently managed by an institution of the Ghana government which is the Ghana Atomic Energy Commission (G.A.E.C). The establishment of this nuclear reactor plant, expected the government to fulfil some obligations as stipulated in their MOU including the provision of basic facilities like good drinking water, electricity, improved sanitation among other special benefits like job creation.

by Bullard (1994), such instances should be considered as an "Environmental Blackmail", a typical example of environmental injustice and inequality between the rich and the poor.

Furthermore, a study of the Ghana landfills Guidelines (GLG), portray that, a timely and a broad-based consultative work should be done with community members in the selection of the location to be used as a landfill. This was to be done with the view of reducing environmental conflicts with households occupying such areas. In addition, this is in recognition of the governance approach to development agenda. In connection with this policy framework "The Ghana Landfills Guidelines", I tried to understand how the land was procured in order to establish the stalled engineering landfill site in Kwabenya. In my interview with the Chief, it was understood that Kwabenya lands belonged to several chiefs with some residing in the capital Accra. These were the chiefs that the central government contacted when acquiring the land. The chiefs and the inhabitants of Kwabenya were side- lined by the government. This further triggered the chieftaincy dispute among the chiefs of Kwabenya and in chiefs in Accra[26]. This was highlighted in my interview conducted:

"...Kwabenya lands do not belong to one chief. Because there are two chiefs in this town, there is a division among the people as to who is to rule the land. The government did not consult any of us before acquiring the land. They (government) claim that they had acquired the land through the chiefs in Accra who do not live here but have affiliations with the people of Kwabenya. They gave the government the land but we are the ones staying on the land. This is where my ancestors are and this is where I have lived all these years, so I will not allow anybody to take what our ancestors left for us" (Kwabenya Traditional Head interview, 2016).

It can be understood that the Kwabenya lands have multiple owners. As revealed by Oteng-Ababio's work in 2011, the lands of Kwabenya are controlled by virtue of long occupancy, ancestral relations, and traditional power, which give chiefs and individuals the capacity to control the land. In acquiring the land by the central government, only the chiefs in Accra were consulted by the government. This depicts that the government together with the MA, in acquiring the Kwabenya lands to embark on the engineering landfill project, did not engage themselves in broad-based consultative work with all members who had a stake in the affairs of Kwabenya. This also includes individuals owning and selling of the family lands. Moreover, the chief of Kwabenya

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[26] The chiefs in Accra trace their ancestral home to Kwabenya and have equal entitlements like the chiefs currently living in Kwabenya.

stated that they were not contacted at the right time. They were only contacted when the project was about to kick-start. In response to not being informed about the proposed project in a timely manner, the people of Kwabenya together with the support of international and national human and environmental activists including the Centre on Human Rights and Eviction, the media and important stakeholders took to demonstrate on the streets and also seek for legal actions. According to the Assemblyman, the project demanded about 1000 acres of land be used as a buffer zone in order to ensure environmental safety and quality. In addition to the 1000 acres of land, about 200 acres were demanded by the central government to be used for the proposed project. Albeit proper land valuation could not take place, the initial land valuation was made without the concern of the chiefs and people living in Kwabenya. The lack of trust, transparency, and accountability among actors affirm the weak urban governance system in GEMA and in most African cities as a whole.

7.5 Lack of cooperation and coordination among actors

The policy framework or guideline for improving environmental sanitation in the GEMA emphasizes the need to enhance cooperation and coordination among the various actors involved. Governance concept and Institutional pluralism stress on the need to build and promote coordination, communication and mutual trust among actors; both state and non- state actors in the provisioning of a public good. These are said to enhance an effective and efficient service delivery (Blair, 2001; Cohen & Petersen, 2001; Tukahirwa et al., 2013; Abas & Wee, 2014). In addition, transparency and accountability cannot be underestimated as they promote cooperation, responsiveness, and trust among the various actors. My analysis of secondary data portrayed that within the Ga East Municipality, there was little coordination among the actors especially with the acquisition of the landfill site. Oteng- Ababio (2011) opined that the land to be acquired for the landfill was led by the central government and the Accra Metropolitan Assembly (AMA) who communicated little with the GEMA and the chiefs in Kwabenya. It was also revealed that some portions of the land that were to be used for the project were already contracted out by the GEMA (also responsible for giving out residential permit) to private owners and real estate property developers after buying the community lands from the chiefs. The conflict situation could have been reduced if there were to be some form of communication between the chiefs, the MA, AMA, and the central government. Furthermore, my interview with the Assembly member of Dome also showed that communication and coordination are very limited with regards to the waste collection contracts and agreements. The Assembly member further disclosed that they usually deal with the

MA and not with the ESPAG member. Some members of ESPAG on the other hand also highlighted how the local communities and the informal waste collectors especially the kaya bola operators have made their operation very frustrating and burdensome because they do not comply with the various environmental procedures.

"...it is not my responsibility to deal with the private waste operators. I do not know what goes into the contract they sign with the Municipal Assembly. As to where they collect the waste from and dump them, it is not my interest. The Municipal Assembly takes care of that" (Assembly Member, Dome, interview, 2016).

"…The communities including their traditional leaders have not been helpful at all. They are always in opposition whenever we talk about waste and lands for landfills. They are always against our efforts, pulling us back with our operation. If you go to these communities to tell them about waste, they tell you, they do not want any waste near their dwelling but they forget about the fact that, they themselves generate the waste. You see how illogical this can be?" (ESPAG member, interview, 2016)

It is important that enhanced coordination and cooperation sustained by reciprocity, trust building should be given due attention in order to make good governance and institutional pluralism more achievable. The issue of little cooperation and coordination between the central government, the MA, chiefs and the entire communities poses a major problem towards an effective good garbage governance. The problem, in addition, is further heightened by the lack of appropriate legislation which would facilitate the coordination and harmonization of development planning policies.

7.6 Financial Constrains

In organizational management, it can be said that an organization is financially viable if it has the needed financial means to sustain itself and daily operations (Post & Obirih- Opareh, 2003). My analysis of the budgetary allocation of the TESD Plan showed that the solid waste management sector received little financial allocation (about 12% of the first phase of the plan) from the MA. The TESD Plan was financed jointly by different donors. The WMD or Department of Environment and Sanitation (DES) is under the MA which is controlled by the MCE. In this view, the MA have the overall mandate to decide which amount of money that goes to the waste management department under the plan. The percentage given to the WMD gives us a better understanding of how the city government leaders perceive solid waste management. In addition to the budgetary allocation to the TESD Plan, I decided to delve into the annual budgetary

allocation to the WMD. Though I did not succeed in getting any information about the annual budgetary allocation, it was understood that the MA managed revenues as well as its investment. The WMD is financially depended on the MA. This was expressed by the WMD:

"...the allocation of funds and the deployment of resources to the various department in the MA is the responsibility of the committee together with the Municipal Chief Executive (MCE). However, allocations are made based on important or pressing issues that the various departments face every year" (WMD, GEMA. Interview, 2016).

The WMD lacked immunity from the MA in terms of the management and control of financial resources. Financial problems are also reflected in the operations of the ESPAG members. As pointed out by a member of ESPAG, in an interview, it has been difficult for some of them to secure financial supports from financial institutions in Ghana. Investment rates from the financial institutions like the banks are very high. Further, the banks normally do not want to invest in the waste management sector as stated in my interview. In this case, the little finances they (ESPAG members) invested into the business yields little interest, which affects their profit margins. This has translated into other problems including their inability to employ and train skilled labourers, securing sophisticated waste management equipment like waste trucks which, was estimated to be over GH₵ 200,000 (USD 44,985). In addition, they (ESPAG members) do not receive enough support from the central government. Government fiscal policies do not favour their growth. A report by the Ghana Statistical Service shows that inflationary rate stood at 15.4% at the end of the year 2016 (GSS, 2017). High-interest rates from financial institutions coupled with high government levy on the energy or power sector are raising their cost of operations. Moreover, the government current signatory to IMF conditions in a form of debt relief does not favour the growth of the local industries including those involved in the solid waste sector. This was noted in our interview when asked about the problems they face:

"…per this current economic situation in the country, we do not have enough finance, labour and other resources for our operations. Our profit margins are affected which prevent us from employing skilled labourers to do this work. No one wants to invest in solid waste. Now, as I speak, a waste track is over GH 200,000 and who will invest his money in such an activity when Ghana's economy is in shamble. Current government policies as a result of IMF conditions, do not allow banks to release money at a lower interest rate for people to venture into such an activity. Interest rates and inflation is running. It is putting us out of operation" (ESPAG member, interview, 2016).

Their activities are further compounded by the attitudes of some households towards the payment of waste services. As indicated by some households in towns like Dome, they will rather stick to the traditional methods of disposing of solid (burning and burying) than paying for a waste collection fee. They were of the view that, the current economic crisis does not allow them to spend on "unwanted stuff" like solid waste when this same money can provide for their breakfast. However, it is important that the MA irrespective of the current economic conditions should continue to raise awareness and sensitise the people on the importance of good sanitation practices.

7.7 The Problem of Corruption

The problem of corruption is one important issue that cannot be left out when dealing with solid waste management problems in GEMA. In academia, corruption manifest itself in several ways to include political corruption where there is an abuse of public office for personal gains. Also, there is Economic corruption whereby there is the payment of money to other individuals for a particular gain or benefit. In addition, there is a private form of corruption whereby scarce goods are hoarded by private firms in order to hike the prices of the goods (Bardhan, 1997). In this research, political corruption and economic corruption were used in order to understand the various degrees of corruption in the waste management sector. However, they were used interchangeably. According to a member of ESPAG, in order to earn a contract from the WMD, one needs to develop a so-called "financial rapport" with the Local authority/ MA. This means that ESPAG members have to cooperate with the MA by offering regular benefits and other forms of financial entitlements. In addition, the financial monopoly by the government and its subsidiary MA, also implies that the money received from these international organizations are not used for the intended purpose of improving solid waste. As explained by the ESPAG member, grants and loans received from donor agencies are channelled into other projects like road infrastructure, school buildings. He goes on to state that, infrastructural development has the potential to attract votes for the politicians during electioneering periods. Others also redirect the funds into their own businesses or are used as means to fund political campaigns in election years. Central government support for privatization is very poor. This has caused most ESPAG members to close down operations in the GEMA. As expressed by some ESPAG member, government both previous and current have misappropriated funds because they channel some of the donor funds into other personal activities and allocate fewer finances to the WMD.

"*…when the IMF and World Bank finance come in to support the waste management departments, the government of Ghana does not care about the private "bola" man and his working conditions. They do not use the money for the intended purpose. Currently, companies who work as private operators are closing down because this venture is not attractive anymore. We used to be more than seventeen (17) members but currently, we are five (5). Some are actively in it now because those are the ones that have the support of the government. We are in it because of humanity sake, we see that to be a calling. The Municipal's waste trucks have all broken down because they import cheap Chinese trucks at lower costs and keep the rest of the funds for their own benefits. That is why we are all suffering. We do not care for each other*" (ESPAG member, interview, 2016).

Another member of ESPAG also expressed that:

"*…the government is also to be blamed. They rather prefer making a cheap investment in infrastructure like the building of roads, schools, hospital. Because they (governments) know that Ghanaians do not complain about waste until there is an outbreak of diseases, they invest cheaply in road infrastructures and other social amenities in order to win the support of the public during elections. They do not use the loans for the intended purpose. Ghanaians overlook the health problems that comes with the poor management of waste thinking it is normal. They do not care when governments do not invest in solid waste. So you realise that the problem is beyond us because we do not get the support*" (ESPAG member, interview, 2016).

In the award of solid waste collection, transportation, and disposal contracts, it was also disclosed that Zoomlion Ghana enjoyed much benefits from the government than the other ESPAG members. According to an ESPAG member and information from the Ghanaian media, Zoomlion Ghana is a quasi- governmental organization that had top politician as its frontmen, giving it some immunity in terms of non- fulfillment of tax obligation and not contributing to the Social Security and National Insurance Trust (SSNIT). A leading Ghanaian newspaper, The Ghanaian Chronicle in its Business and Finance section, on the 3rd of August 2009, published that Zoomlion Ghana had the names of some top politicians on their payroll. It also claimed that the government has gone into a contractual agreement with Zoomlion to implement an employment policy. It intimates that the National Youth Employment Programme (NYEP), which has employed over 24,000 people, was a programme proposed by Zoomlion to implement the sanitation module of the youth and employment programme (Boateng, 2009). With this, one important question that prompted me was to understand whether the right group of people with the required skills and qualification were employed, or whether the employment was based on political affiliation? This is discussed in the following section (Section 7.8). However, it was also observed that the awards of contracts were based on the firm's capacity and reputation. In my interview with a subsidiary firm of Zoomlion

Ghana[27], it was revealed that the company had the necessary capacity and resources in terms of logistics, labour, finances and, assisted other ESPAG members who lacked such resources. In this regard getting more contracts from the government is not politically motivated but rather based on one's capacity to produce a good result.

"...my brother, contracts are awarded us based on your level of competence, logistics, facilities and others. If you do not have these or up to the standard, how can they award you with a contract? So if Zoomlion is getting all the contracts, I think they are up to the tasks. There is no foundation for politics but rather standards. That is why some of these companies, even if they win a contract, they outsource the contract to us because we have what it takes to deliver. Zoomlion has the reputation for a good job. That is why they always win a contract" (ESPAG member, interview, 2016).

Corruption has detrimental effects not just on efficiency but also on investment and growth in the solid waste sector. Paying bribes as a form of "financial rapport" in order to get a contract reduces the ability of other firms to invest. This can also reduce efficiency because of the relationship that exists among the actors involved. Bardhan (1997), points out that, when public resources meant for building productivity capacities of a sector are channeled for political gains/ reasons (private purposes), the growth rate of the sector dwindles. In addition, new entrepreneurs are at the mercy of corrupt bureaucrats, because they will need government (public official) assistance in the acquisition of permits and licenses (ibid). Corruption, in general, stifles the entry of new ideas, technology, and resources. As a result, good garbage governance is undermined as well as improving service delivery.

7.8 Limited Skilled Personnel

In ensuring the effective implementation of good garbage governance policy, stakeholder skills, competence and ideas are very crucial (Abas & Wee, 2015). Competence and skills are needed because actors or stakeholders need to be updated on current issues, technology as well as the complexities involved in the management of solid waste. Governance stresses the important roles and skills of various actors in achieving the aims and objectives in a development agenda (ibid). Within the GEMA, the needed expertise tends to be very limited with both the WMD and ESPAG members facing similar problems. The limited amount of financial investment made by the

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[27] Interview could not be arranged with Zoomlion Ghana because of time factor but its subsidiary company granted an interview.
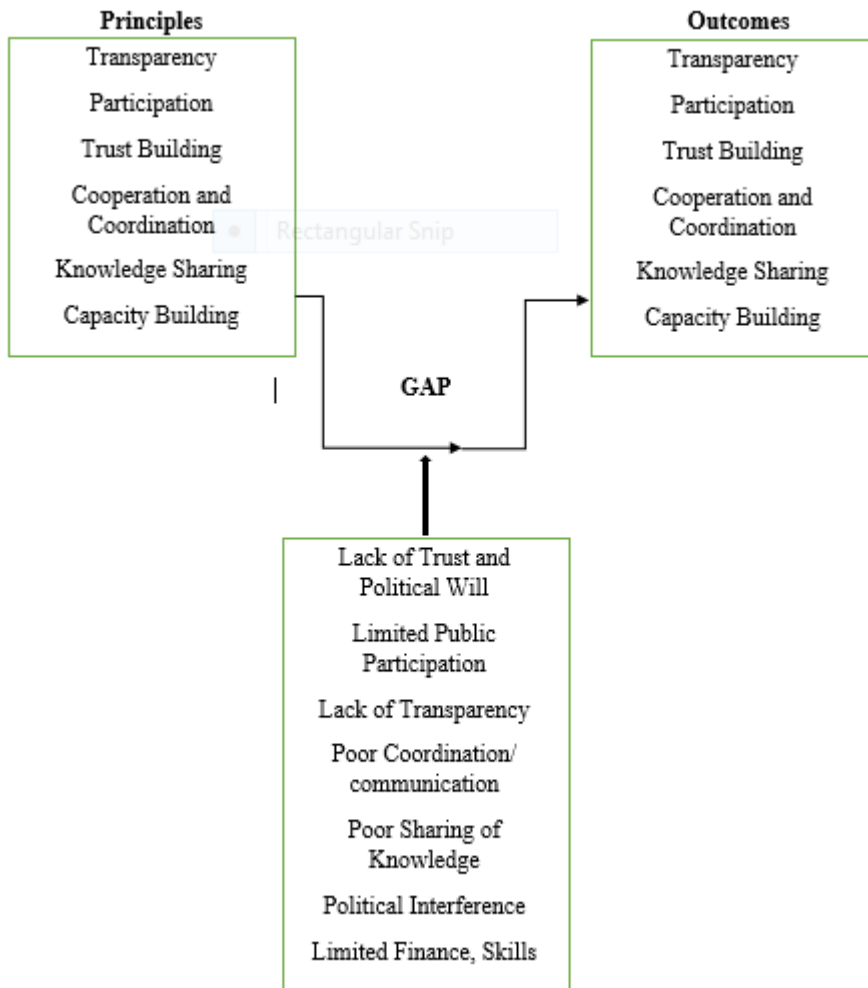
government into the solid waste sector does not attract much skilled personnel. In this direction, the majority of labourers employed in the sector are those with high school certificate or individuals with limited technical know-how. As indicated in an FGD held with an ESPAG, some technical positions at the MA and its WMD are being managed by individuals who lacks the needed qualification. These individuals were identified as foot soldiers (political party loyalist) of previous and current governments, with some rising through the ranks. This also deals with the youth employment module implemented by Zoomlion Ghana in collaboration with the government of Ghana. Furthermore, section 4.5 of the TESD Plan ensures that capacity- building programmes should be made available for the various frontline stakeholders involved in the plan. This would be achieved by financial supports coming from different sources that will ensure the implementation of such programme. However, this has not been the case for some of the key actors involved in the management of solid waste. With little financial support and investment, it was evident that some of the ESPAG members have not been able to achieve the objective. In order to save more financial capital, solid waste workers for most of these private firms are not highly educated and therefore not up to the tasks. In most instances, the limited qualified workers who have been trained in Environment, sanitation, and management courses are remunerated based on the profit margins made by these firms. This register some dissatisfactions among the workers. The majority of them have no option than to leave the waste management sector for other sectors of the economy. This was stated by an ESPAG member:

"...we pay our workers (both skilled and unskilled) based on the profits we get and, because of that, they do not stay for long in this operation. The waste sector is not a lucrative sector. Nobody wants to invest or have anything to do with waste. Those who stay long in this business are those with little education because the economy might not absorb them when they leave such operation. In this way, we spend our resources training them and this has been a major challenge because the finance is not there" (ESPAG member, interview, 2016).

In building the capacity of the actors involved in the implementation of the TESD Plan, the plan also entreats that the council/ unit committee members, as well as the local chiefs at the lowest level of governance, should play an active role in initiating or conducting seminars or workshops that will impart more knowledge to the community members. Organization of such capacity-building programmes continue to remain questionable. This is because of the limited financial support to organize such programmes. As opined by a unit committee member (Assembly Man),

there are instances where the programme financing has to come from their own personal income. Furthermore, though stakeholder's competency can be developed through participation and collaboration with all relevant actors, including government, Non-Governmental Organizations (NGOs), community groups and the private sector (Konteh, 2009), there is the need to make available the needed resources including financial sponsorship that will ensure that the organisation of such capacity- building programmes becomes successful. This will foster experience building, attitudinal change as well as skills development that can be harnessed in ensuring effective good garbage governance and solid waste service delivery. The problem facing SWG in GEMA is summed up in the schematic diagram below.

Figure 7. 1 Problems Facing Good Garbage Governance in GEMA

Principles	Outcomes
Transparency	Transparency
Participation	Participation
Trust Building	Trust Building
Cooperation and Coordination	Cooperation and Coordination
Knowledge Sharing	Knowledge Sharing
Capacity Building	Capacity Building

GAP

Lack of Trust and Political Will

Limited Public Participation

Lack of Transparency

Poor Coordination/ communication

Poor Sharing of Knowledge

Political Interference

Limited Finance, Skills

Source: Author's own construct based on findings.

The diagrams show the pathway to achieving "good garbage governance" in the GEMA. Box A outlines the various principles or procedures that would help achieve the outcomes in Box B (good garbage governance). However, there are some factors, as presented in Box C that distorts the municipal government ability to achieve the outcomes in Box B. These factors (in Box C) present a policy gap between what governance seeks to achieve (normative perspective) and what governance actually achieve in practice.

7.9 Summary of Chapter

This chapter discussed some of the major problems that undermine the effectiveness of good garbage governance in GEMA. This answers the third research question in this study. This it achieved by using interviews, field observation as well as secondary sources of data. It identified issues including lack of transparency in decision- making process, lack of trust and partisan politics, limited public participation among other important issues to be responsible for the poor decentralized waste management scheme in GEMA. Other equally important factors revealed are limited finances, limited skilled labour as well as poor coordination and cooperation among the actors involved in the sector.

CHAPTER EIGHT: SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

8.1 Introduction

This research explored UNDP's concept of good garbage governance in the Ga East Municipal Assembly based on three main objectives. These objectives included the identification of actors involved in the management of solid waste and their respective roles (Chapter 5). Secondly, the research also explored the current situation of solid waste management practices (Chapter 6) and finally, it answers the third objective by identifying and examining the factors that undermine the effectiveness of good garbage governance in the study area (see Chapter 7). These objectives were achieved by means of qualitative research methodology. This chapter concludes the study and based on the research findings, it offers some recommendations for policy- makers and the general stakeholders for decision- making process.

8.2 Summary of Findings

8.2.1 Main Actors Involved in Solid Waste Management and Roles

This study like most studies on solid waste management in most developing countries also affirms that the generation of solid waste has exceeded the capacity of local authorities or municipal Assemblies to effectively manage solid waste. As a way of dealing with the problem and its associated health hazards, the Ministry of Local Government and Rural Development (MLGRD) has decentralised waste management to lower levels of government. The decentralisation process has brought in new actors into the management system. In this study, different actors were identified to be responsible for the management of solid waste.

Firstly, the Department of Environment and Sanitation or the Waste Management Department of GEMA was identified to be the actor responsible for the overall management of solid waste. The department formulates and implements policies that see to the collection, transportation, and disposal of solid waste in the municipality. They do this by promoting waste segregation, arranging for house-to-house solid waste collection, awarding of solid waste contracts to the private sector waste operator, implementing by-laws to prohibit littering of street, funding and promoting awareness programmes to disseminate information to the public. In addition, there are other state institutions that are involved in the management of solid waste. These include the Environmental

Protection Agency of Ghana (EPA), Lands Commission of Ghana, Town and Country Planning and other important state institutions. These institutions act on legislative state power and come together to form the National Environmental Sanitation Policy Coordinating Council that coordinates activities related to waste management in Ghana.

The second group of actors is the private formal waste management operators. These form an association called Environmental Service Providers Association of Ghana (ESPAG). They are responsible for the collection, transportation and disposal of solid waste from the household, central containers and the commercial areas to the final disposal sites at Kpone and Pantang. They do this by means of a contract with the MA and the national/ central government. However, their operations are undermined by a lack of autonomy from state institutions, financial constraints, logistical problems as well as limited skilled personnel.

Thirdly, the study also identified the informal solid waste operators as important actors in solid waste management. These group of actors, mostly unregistered individuals have entered into waste management in order to earn a living. They mostly collect solid waste from the households and commercial areas for a fee. In GEMA, some informal collectors especially the kaya bola group have some contractual arrangements with the MA whilst others also operate on their own. They are also involved in the reusing and recycling of solid waste. The study identified the kaya bola, scrap collectors, and dealers as well as the plastic waste pickers as the main constituents of the informal sector.

Furthermore, civil society groups consisting of the traditional authorities (chiefs) and Unit Committee members/ Assemblymen or women as used in this research are identified to be frontline actors who play a liaison role between the MA and the community members. They also enforce programmes and policies on behalf of the MA. For instance, they initiate community development programmes like community clean up exercise for the communities they represent. Households also form the last actors involved in the management of solid waste. The household generally is the one that generates the largest proportion of solid waste in the municipality. They also represent the largest beneficiaries of solid waste services. They are responsible for deciding the right mode of disposing of the solid waste. In this study, it was revealed that households living in areas with a low rate of urbanization normally resorted to burning and burying of the solid waste. House-to-

house services and the central container system are very common in areas with high rate of land encroachment, due to the process of urbanization.

8.2.2 The Current Situation of Solid Waste Management in GEMA

The poor management of solid waste in GEMA has led to the reorganization of solid waste by the MA in conjunction with the other actors involved. To make the solid waste collection more effective, the MA has divided solid waste collection into primary and secondary collection/ transportation. The Primary collection system target households in the low-income areas where central containers are placed at vantage points. These containers are emptied by private waste management firms when full. The study also identified that the kaya bola operator also collects solid waste from the household at a subsidized fee. In addition, households in the high-income areas enjoy a direct service from the contracted private waste operators. This direct service is aided by their layout which makes the compaction trucks of the waste companies access such locations. A secondary collection system is organized in the commercial areas of the municipality. Here central containers are used as storage receptacle that is transported by the contracted waste management companies when the containers are full. There is a task force team employed by the MA that collects a fee on behalf of the MA. These private operators collect and transport the solid waste and are later paid by the MA. Zoomlion Ghana has been contracted by the central government to lift most of the central containers from these commercial centres. In the transport of solid waste, waste lifted from these areas are transported directly to the final dumping site. No transfer sites that serve as temporary storage locations were identified as part of this study.

The study also revealed that several methods of solid waste disposal existed in GEMA. These included crude methods like burning of solid waste, burying of solid waste and the open dumping methods. The open dumping method formed the commonest way of dumping solid waste, with waste being disposed along walkways, backyards of residents, drains among others. The study also showed that open dumping sites are very common in both high and low urbanizing communities in the municipality. The Pantang Landfill site is the main landfill site in the municipality. In reducing the problem of solid waste disposal, the MA together with the government tried developing an engineered landfill site at Kwabenya. However, this project has come to a standstill because the residents of Kwabenya objected to this development amidst issues of trust, lack of political will from the government and environmental concern. Further, residents of Pantang are

against the dumping of solid waste at the Pantang landfill. This has created a problem for the MA and its contracted private waste operators in dumping the solid waste collected from households and the commercial areas.

Recycling and reusing of solid waste are also carried out predominantly by the informal sector in the research area. These consist of the scrap collectors and dealers and the plastic waste collectors who collect and later sell these waste products to recycling firms in Accra Central. The study revealed that there is no recycling plant in the municipality. Nonetheless, the MA is currently soliciting for funds from private investors and the international community through the central government to develop a recycling plant. This is seen as a way of also creating employment for the youth as well as revenue for the government. This will start by recognizing the important roles played by the informal sector in solid waste recovery. However, the lack of trust from some members of the informal sector towards the MA (they refuse to register their activities with the MA) has been identified to pose a challenge to the proposed project (recycling plant).

Added to this, the study revealed that the current situation of solid waste management in the municipality is generally poor with field observations and walk along interview portraying scenes of overflowing central containers in public places like the markets, on the streets, schools, and households living very close to this facilities. The location of these improperly managed disposal sites in the low-income areas also raises issues about environmental justice and inequality. Crude dumping methods continue to remain the order of the day in these low-income areas.

8.2.3 Problems Facing Good Garbage Governance in GEMA

The research revealed that several factors undermined the effectiveness of good garbage governance in the research area. These factors include lack of transparency, limited public participation in decision- making process, lack of trust and political will, poor coordination among actors, financial constraints among others. Lack of transparency especially with the exchange of public information was identified as being the main factor affecting good garbage governance in the study. Public Information is considered to be the property of the MA. In situations where information is released to the public, the timing and quality of the information remain in doubt. Furthermore, institutional relations among these actors influenced the way that decisions were made. Unequal power relations in terms of knowledge and skills, work experience, level of education and political power, meant that decisions made are based on the views of the bureaucrats

and elites. Decision-making process does not give much attention to the views, knowledge, skills and experiences of the ordinary citizen. This causes disinterest on the side of the other actors including the Assembly Members, chiefs, and the community members to participate in active decision-making process.

Limited public participation was also identified to be responsible for the poor governance of solid waste in GEMA. The study showed that households are not consulted in the decision-making process. In additions, the chiefs and the Assembly members that constituted the Civil Society groups in this research were merely involved in active participation. They were considered in informing and consultative works. These lacked autonomy or control when making decisions.

Lack of trust and political will is important in understanding good garbage governance in GEMA. The study revealed that the government together with its MA, have shown little concern for the waste management sector. The waste management department receives little financial support from the MA and the national/ central government. The political neglect of the government is also reflected in how waste management is perceived. Current and previous governments allocate many financial resources to the other sectors of the economy than the waste management sector. Loans and grants that are meant for the WMD are channeled into infrastructural developments. This serves as the basis to which these politicians can retain political power. Furthermore, governments both previous and current, refuse to fulfill the promises that it has made to some communities concerning the development of hazardous facilities in such areas. This ascertains the fact that governments since independence have failed give priority to urban environmental challenge and this has been responsible for the poor urban environment we see in most municipalities in Ghana. The waste management policy framework for the organization of waste management is very poor with the little legislative power given to lower levels of government. The lack of concern by politicians and bureaucrats expressed in the inadequate resources allocation, needed for the planning and running of waste management sector coupled with poor coordination and cooperation among the actors, have been responsible for the existing poor urban environmental problems and the management of solid waste in particular. Other factors included the misappropriation of finances by the government officials and their corrupt practices in the awards of contracts, employment of personnel for the waste management department as well as poor public attitude towards solid waste management.

8.3 Conclusion and Recommendations

The poor management of solid waste has been baffling the WMD of GEMA for some decades now. Government both national and municipal adopted several policies including central government control and privatization of solid waste management activities. Nonetheless, the problem continues to exist. Governance is seen as an important way of bringing development and improvements in solid waste management to the ordinary people through its policies like decentralization. In a normative sense, this policy of governance is capable of dealing with the complexities and problems involved in the management of solid waste through the integration of non- state actors like the private sector and civil society group organization. Governance broadens the intellectual space by providing a framework that allows for deliberation on government roles and responsibilities in dealing with public issues as well as the contributions made by other actors. It reflects on the activities embraced by other social actors in instances of government incapacity. It broadens our horizon on the idea that other non-state institutions may have a better way or role of dealing with societal issues. Most discussions about governance are geared toward partnerships among different actors in society and, more importantly, an effective public participation in decision-making (Graham et al., 2003). However, the management of solid waste in GEMA does not reflect the policies that governance seeks to promote and achieve. Since the adoption of solid waste decentralization by the MA, the only change in the management process is the integration of other actors, with the national and municipal government (MA) still in control of waste management affairs. The research identified the lack of transparency, limited public participation, lack of trust and political will among other important factors that undermined the effectiveness of good garbage governance in the study area. This research further ascertains that there is a huge policy gap in what governance seek to achieve and what it actually achieves. As long as the political culture coupled with the lack of transparency and accountability, participation, corruption etcetera exist, there is a limited evidence that governance will improve solid waste management in the study area, especially the low-income areas that are unequally burdened by poor sanitation. Drawing on the findings discussed above, the following recommendations are made to make good garbage governance more viable in most developing countries as well as improving service delivery in the GEMA.

Firstly, the study recommends that there is the need to have a deeper understanding of the power dynamics at play among the various actors. In this case, the various sources of power need to be identified and tackled by the various actors. In GEMA, power expresses itself in terms of knowledge, experience, and legislative state power. In making the ordinary citizen being capable of taking an active part in decision- making process, households and civil society group organizations need to undergo an effective capacity-building programme. This will impart to them the requisite knowledge, skills, and experiences that can make them capable of making equal and firm decisions like the elites class. The National constitution should equally empower local actors in making good and well-informed decisions. That is, there should be an effective legislation planning that can give special attention to the local level ingenuity and skills and equally for all men and women. This new legislation planning can make locals independent and immune to external political powers or institutions. This can foster checks on the abuse of state power.

In addition to the above, the environmental sanitation policy needs to be revised, and must take into account the active roles played by all stakeholders including the key ministries (inter-ministerial management going beyond both Local government and Environment ministries to include Finance, Works and Housing, Tourism, Youth and Sports etcetera), agencies, departments, civil society groups and households. This must be done in a strong participatory-grounded manner and not mere consultation of citizens. Government and household need to understand that solid waste is a societal issue that needs the conscientious effort of all members in the society. Furthermore, decision-making process and the sharing of information should be carried out in a transparent manner among these actors. This can promote actors' interest in decision- making process hence fostering active participation, trust building, tolerance and proper coordination and cooperation.

Finally, this study further recommends that there should be an attitudinal change as to how solid waste is perceived by governments as well as households in most developing countries. The government needs to give topmost priority to the waste management sector. In this view, the necessary resources including finances, human and logistics should be effectively allocated to the waste management sector for it to perform effectively. Furthermore, the Ministries for Local Government and Environment needs to place much emphasis on sanitation education. Households need to be conscientize effectively, not only about the negative aspect associated with the poor

handling of solid waste. Individuals should be educated more and made to act proactively on the prospects of managing waste in terms of job creation, as sources of energy provision, fertilizer production for farmers among others. This, when done, can effect a change in the way households perceive and treat solid waste in general. Solid waste handling and segregation can be achieved at the household level when this is done.

8.4 Limitation of the Study

This study has been able to answer the research questions that it sought to address. However, some limitations are pointed to serve as a guide for future research. Firstly, the research relied on small sample size in producing data necessary for the research. The small sample size (households) interviewed raises some concerns about its generalisation (although the aim of this research was not to generalise). A larger sample could have captured the views of more households thereby increasing the representation and generalisation of the research. Added to this, the research was not able to reach other key state institutions responsible for the management of solid waste in GEMA. These include the EPA, the Lands Commission of Ghana, Town and Country Planning and other important government agencies. Furthermore, the duration of the research especially the time allocated to the production of data also presents some limitations to this research.

8.5 Areas for Further Studies

Solid waste management and its associated problems is a broad issue that cannot only be addressed from a single perspective. This study identified a number of themes that can serve as a guide for future researchers. These include the level of household and civil society commitment to solid waste management, Landfill governance, solid waste management financing, solid waste management planning, among others. These are very important especially in our quest to achieve a sustainable urban environment.

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APPENDICES

APPENDIX A: Interview Guide for the Municipal Waste Management Department

This Interview is part of a research being conducted in connection with a graduate (masters) dissertation at the Department of Geography of the Norwegian University of Science and Technology, Trondheim. I will be grateful if you could respond to these questions. The research is solely for academic purpose and that all information will be treated as confidential and beside your anonymity is guaranteed.

1) What are the main institutions responsible for the management of solid waste in this municipality? What are their main responsibilities?
2) How would you describe the current performance of these institutions in managing solid waste?
3) What factors limits the smooth operations of the waste management department?
4) Is there any form of collaboration between these institutions and the communities you serve?
5) How often do you collaborate and are there some factors that restrict your partnership with the communities you serve in the municipality?
6) Strategy plan for the future?

APPENDIX B: Interview Guide for Private Waste Companies in the Municipality

This Interview is part of a research being conducted in connection with a graduate (masters) dissertation at the Department of Geography of the Norwegian University of Science and Technology, Trondheim. I will be grateful if you could respond to these questions. The research is solely for academic purpose and that all information will be treated as confidential and beside your anonymity is guaranteed.

1) How would you describe the current situation of waste management in the municipality?
2) What role do you play in the management of waste in the municipality?
3) What major challenges that affect your day to day operations or activities?
4) Has the community been helpful with your daily operations and in what ways, if yes?

APPENDIX C: Interview Guide for the Civil Society Group Organization

This Interview is part of a research being conducted in connection with a graduate (masters) dissertation at the Department of Geography of the Norwegian University of Science and Technology, Trondheim. I will be grateful if you could respond to these questions. The research is solely for academic purpose and that all information will be treated as confidential and beside your anonymity is guaranteed.

1) How would you describe the current situation of solid waste management in this community?

2) Do you collaborate with the main waste management institutions in this municipality and in what ways?

3) Are you involved in decision making concerning the management of solid waste by the municipal assembly?

4) Does the community have any initiative(s) to manage waste and how often do you implement this initiative(s)?

5) What factors hinder community involvement in managing solid waste?

APPENDIX D: Interview Guide for Households

This Interview is part of a research being conducted in connection with a graduate (masters) dissertation at the Department of Geography of the Norwegian University of Science and Technology, Trondheim. I will be grateful if you could respond to these questions. The research is solely for academic purpose and that all information will be treated as confidential and beside your anonymity is guaranteed.

1) How would you describe the current situation of solid waste management in this community?
2) Do you collaborate with the main waste management institutions in this municipality and in what ways?
3) Are you involved in decision making concerning the management of solid waste by the municipal assembly?
4) Does the community have any initiative(s) to manage waste and how often do you implement this initiative(s)?
5) What factors hinder community involvement in managing solid waste?

APPENDIX E: Field Photography

An unauthorized dumpsite at the backyard of residents

Source: Fieldwork, 2016

Dumping of solid waste in drains

Source: Fieldwork, 2016

An aerial view of a Low Income Settlement in GEMA

Source: Fieldwork, 2016

Water sachet bags collected for recycling

Source: Fieldwork, 2016