KAJIADO MUNICPALITY: THE ADMINISTRATIVE CITY OF THE COUNTY

MANAGING SOLID WASTES AND ENVIRONMENTAL DECAY: A policy direction

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Contents

PREAMBLE

Kajiado town is fairly small. With a population of less than 40,000, the town does not suffer much environmental stress and consequences. However poor and lack of proper waste management systems has led to proliferation of wastes in many residential neighborhoods

Majengo, central and shapashina have witnessed huge mounts of wastes that subjects kids to great inconvenience and stench. In some residential units, poor design of septic tanks lead to discharge of water to the main roads, it is in this light that a clear direction needs to be shaped

In streamlining this anomaly, a management direction shall be well anchored on design of livable units, collection and disposal of un used wastes, process of disposal, prospects of reuse and recycle, and administrative proposals. Investment in awareness and improved collection systems in residential schools and churches/religious institutions shall not be overlooked to prompt a healthy state in residential and urban areas.

Stamping control may compel restricted movement and numbers of livestock herds. This shall not only cater for healthy parameters but perspectives in aesthetics. Ring fensing of funtions help to effectively implement the policies and management structure for a good living environment

Legally, the municipality has abundance of existing laws: EMCA 1999, public health Act 285, land Act 2012, Physical planning and Landuse Act 2019 all have a bearing on solid waste management.. this is complemented by individual units

Kajiado has a fairly large undeveloped area. Unlike Ngong the town that has limited space and strain in managing the wastes generated, Kajiado has vast space. The dumpsite has however been encoarched. Efforts to restore shall assist in working towards implementation of this policy. This shall be upgraded to respond to changing times and employ the best technology to enhance competitiveness

More important shall be to derive people friendly systems that ensures efficiency, effectives and ease of disposing wastes. Use of open tractors that increases danger and littering shall be discouraged

CHAPTER 1

BACKGROUND AND SITUATIONAL ANALYSIS

1.1 INTRODUCTION

Urbanization poses great challenges in managing solid wastes. Population growth and limited provision for waste management systems aggravates problems in urban areas and undermines eathetics on the urban landscape. It is a challenge both globally, national and at the county level. Solid waste is inevitable due to rapid growth and human activities such as industrial production, consumption at household level. Construction and commercial processes among others. However, managing solid waste has health, environmental, social and economic implications. Consequently, public interventions in solid waste management coupled with engagement with private actors are required in order to achieve optimal results.

This policy provides for the guiding framework for solid waste management in Kajiado municipality. The policy shall guide the municipal solid waste management actors provide effective, efficient and sustainable services while utilizing solid waste as an economic resource.

1.2 POLICY DEVELOPMENT PROCESS

This policy was developed through a consultative process. The key policy actors in solid waste management in Kajiado municipality were engaged during the preparation process. Specifically, the national and county departments that were involved in solid waste management, included National Environment Authority (NEMA), county departments in charge of public health, public works and trade were consulted. In addition, private actors in solid waste management such as solid waste collectors and transporters, resident associations, waste sorters and recyclers also participated in the process.

1. 3 B ASELINE INFORMATION

The name kajiado town municipality is meant to distinguish the area proposed for the municipality from the rest of the county. The township / municipality stretches between Loyangalani, losuyan, kiloriti, mabatini sajiloni, iseuri eiti and endareto. The area covers 104 square kilometer.

The designated boundary covers the previous town council jurisdiction. Kajiado town falls in the category of special areas earmarked for designation as municipalities. Its elevation is based special conditions granted to all county headquarters under the amended urban areas and cities act. Therefore irrespective of the population and level of capital investments, all county headquarters shall be granted municipal status. The evaluation of parameters that support and sustain municipal functions are not therefore important critical to determine their status.

However, the town should be planned to be able to achieve functional obligations and development requirements

1.4 1.5 SOCIAL AND ECONOMIC CONTEXT

1.4.1 Social context

a) Poverty index

The county population that lives in poverty is estimated to be 36.9%

b) Human Development Index

The Human Development Index (HDJ) is a summary measure of average achievements in key dimensions of human development, a long and healthy life (life expectancy at birth), knowledge (expected years of schooling) and a decent standard of living (Gross National Index Per Capita). The HDI of less than 0.550 signifies a low human development, 0.550 - 0.69 9 signifies medium human development, 0.700 - 0.799 for high human development and 0.800 or greater for very high human development.

Kajiado County has a Human Development Index of 0.5910. This implies extent to which the county population meets the three criteria of HDI of a long and healthy life, knowledge and a decent standard of living. From the HDI categorization, the county is a medium human development.

c) Education

In terms of education, A total of 28% of Kajiado County residents have a secondary level of education or above. Kajiado North constituency has the highest share of residents with a secondary level of education or above at 49%. This is almost five times Kajiado South constituency, which has the lowest share of residents with a secondary level of education or above. Kajiado North constituency is 21 percentage points above the county average. Ongata Rongai ward has the highest share of residents with a secondary level of education or above at 59%.This is 30 times Mosiro ward,which has the lowest share of residents with a secondary level of education or above. Ongata Rongai ward is 31 percentage points above the county average.A total of 42% of Kajiado County residents have a primary level of education only. Kajiado South constituency has the highest share of residents with a primary level of education only at 47%. This is 9 percentage points above Kajiado West constituency, which has the lowest share of

residents with a primary level of education only a total of have secondary level education. The level of education has implications to the level of uptake of the solid waste management policy measures such as information, adoption of modern solid waste management practices and investment in solid waste management.

d) Demographic context

According to Kajiado County development profile (2013-12), Kajiado North had a population of 202,651 in 2009 while Kajiado West had a population of 106,933 with a population density of 1369. It was projected that the population will grow to 173,135 in 2017 for Kajiado West and 294,857 for Kajiado North.

1.5.2 ECONOMIC CONTEXT

Kajiado is an admoinstrative capital of national and county Government functions. The town depends heavily on service provision, as a headquarter of county and National government services, as a provider of Government services. Security, land registries registration of services are key governments that anchor focus and drives its economic prosperity. This has supported and encouraged residential development. The town has small and and medium enterprises like groceries, wholesale, supermarkets and retail shops. Agricultural activities like chicken farming, dairy cattle, green houses and crops like vegetables and tomatoes form another key local economic activity in Kajiado municipality. Transport business, mainly ferrying passengers to and from Nairobi is also very popular and is found to employ many youths across towns across towns. Hotels and guesthouses, water kiosks, fish farming, bars, butchery shops, milk vendors, real estate, microfinance institutions, banks, artisans and schools employ many other individuals across the region. There is some public sector too.

1.5.3 URBANIZATION

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Urban Population

Kajiado county urban population is 395,051 representing 35 percent of the total population. This constitutes of 199,738 males and 195,314 females. The urban population is projected to increase to 439,700 in 2020 and 689,399 in 2022 as shown in Table 3

Table 1: Population Projections by Urban Centres

Urban Centres	2009			2018 Projections			2020 Projections			2022 Projections		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Kitengela	30088	28079	**58167**	48715	45463	**94178**	54221	50601	**104822**	60350	56320	**116670**
O/Rongai	19271	20907	**40178**	31202	33850	**65052**	34728	37676	**72404**	38653	41935	**80588**
Ngong	52453	51620	**104073**	84926	83578	**168504**	94525	93024	**187549**	105209	103538	**208747**
Kajiado	7458	7173	**14631**	12075	11614	**23689**	13440	12926	**26366**	14959	14387	**29346**
Loitoktok	4645	4565	**9210**	7521	7391	**14912**	8371	8227	**16597**	9317	9156	**18473**
Namanga	4684	4382	**9066**	7584	7095	**14679**	8441	7897	**16338**	9395	8789	**18184**
Isinya	4765	3905	**8670**	7715	6323	**14038**	8587	7037	**15624**	9558	7833	**17390**
Total	**123364**	**120631**	**243995**	**199738**	**195314**	**395051**	**222313**	**217387**	**439700**	**247440**	**241958**	**689399**

Source: Kenya National Bureau of Statistics, 2018

Population density and distribution

There is a marked variation in population density in the county. The county's 2018 average population density stands at 51 persons per square kilometre with Kajiado North with the highest density at 2217 persons per KM^2 and Kajiado West with the lowest density at 20 persons per KM^2. There is a big difference in urbanized zone. Densities around towns increase sharply. Kajiado town equally has a fairly high density.

Table 2: Population distribution and density by Sub-county

Constituency	2009 Census		2018 Projection		2020 Projection		2022 Projection	
	Population	Density	Population	Density	Population	Density	Population	Density
Kajiado North	202651	1369	328111	2217	365196	2468	406472	2746
Kajiado Central	102978	24	166731	40	185576	44	206551	49
Kajiado East	137254	53	222227	85	247344	95	275300	105
Kajiado West	106933	14	173135	20	192703	23	214483	25
Kajiado South	137496	21	222619	35	247780	39	275786	43
Total	**687312**	**31**	**1112823**	**51**	**1238600**	**57**	**1378592**	**63**

Source: Kenya National Bureau of Statistics, 2018

1.5.3. Population projection for special age groups

Table 3: **Population projection by special age groups**

Age Groups	2009 census			2018 projections			2020 projections			2022 projections		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 5	66992	64996	**131988**	108466	105235	**213701**	120726	117129	**237855**	134371	130367	**264738**
Grade 1-Grade6 Pop (Age 7-12)	70732	69417	**140149**	114522	112393	**226914**	127466	125096	**252561**	141872	139235	**281107**
Junior and Senior High School Pop(Age 13-18)	26950	26793	**53743**	43635	43380	**87015**	48566	48283	**96850**	54056	53741	**107796**
Youth Pop (Age 15-29)	101969	113738	**215707**	165097	184153	**349250**	183758	204966	**388724**	204527	228133	**432659**
Female Reproductive Pop (Age 15-49)	-	178547	**178547**		289084	**289084**		321758	**321758**		358125	**358125**
Labour Force	192998	192516	**385514**	312482	311702	**624184**	347800	346932	**694732**	387110	386144	**773254**

Pop (15-64)												
Aged Population 65+	7212	8135	**15347**	11677	13171	**24848**	12997	14660	**27657**	14466	16317	**30783**

Source: Kenya National Bureau of Statistics, 2018

This population dynamics and growth has a great bearing on services and development needs. It is with this focus that plans should be put in place to provide and sustain at different levels of growth

al level. The level of waste generation is directly related to population size, human behavior such as production (including production processes) and consumption patterns and management, recovery or utilization' of waste products at the point of production or intermediate level, Waste generated at one point may be raw materials for another production process.

1.6.1 Waste Streams and Sources

Solid waste management is based on identifiable waste streams from the various identifiable sources. Waste is ordinarily classified according to the waste streams for purposes of effective management. A waste source may produce different waste streams e.g. a household may produce food and kitchen waste, agricultural waste, papers and e-waste... There are different methods of collecting, recovering, processing, treating and disposing the various waste streams. The common waste streams are outlined in table below;

Table

Waste streams
Food, kitchen and garden waste
Automotive waste(oil, tyres, end of life vehicles(or vehicle parts)
Paper and card board
Agricultural waste
Textiles
Mining waste
Electrical and electronic waste(e-waste)
Ferrous metals(iron and steel)
Non-ferrous metals(aluminum, copper lead)
Construction and demolition waste
Special health care waste
Sewage sludge

Batteries
Expired chemicals and pharmaceuticals

The most common waste sources are outlined in the table 2 below

WASTE SOURCES
Households
Fishing and fish processing facilities
Offices
Cafes and restaurants, hotels, food stalls
Schools, universities, laboratories
Retail operations (eg shops, supermarkets, warehouses)
Markets
Public facilities(sports grounds, street sweeping and cleaning)
Hospitals and other health care facilities
Mines and mineral processing facilities
Agriculture and food processing facilities
Forestry operations
Building sites
Manufacturing facilities
Water treatment and sewage treatment facilities
Land transport facilities(e.g. truck deports, bus and train stations and terminals)
Car yards and care repair shops
Ships and aircraft (airports ,ports, marinas)

Whereas there are different waste streams, waste is normally divided into hazardous and non-hazardous waste. The manner of managing the two types of waste is very (different due the potential health risks and hazardous. Waste may in addition be classified broadly as municipal solid waste or industrial waste and post-consumer waste.

One of the key concepts in solid waste management is municipal solid waste. Municipal solid waste is regarded as waste generated by households and waste of similar nature generated by commercial and Industrial premises, institutions such as schools, hospitals and other facilities inhabited by people,

construction and demolition of buildings and for, public spaces such as streets, markets, slaughterhouses, public toilets, bus stops, parks and gardens.

1.6.2 Functional Elements of a Solid Waste Management System

Functional elements of a solid waste management system describe the value chain in the core functions of a solid waste management system. Regulatory and management system for solid waste management is mainly based on the functional elements.

Table 3 below describes the functional elements of a solid waste management system (or waste elements system)

Functional element	Description
Waste generation	Encompasses activities in which materials are identified as no longer being of value and are either thrown away or gathered together for disposal
Waste handling and separation, storage and processing at source	Involves activities associated with managing wastes until they are placed in storage containers for collection. Handling also entails the movement of loaded containers to the point of collection. Separation of waste components at source facilities effective handling and storage of waste, particularly for recycling and reuse purposes.
Collection	Includes gathering of solid wastes and recyclable materials and the transport of these materials after collection to the location where the collection vehicle is emptied, such as materials processing facility, a transfer station or a landfill.
Transfer and transport	Involves two steps(a) transfer wastes from the smaller collection vehicle to the larger transport equipment (b) subsequent transport of wastes, usually over long distances to a processing or disposal site. Transfer normally takes place at a transfer station.
Separation, processing and transformation of solid waste	Entails separation of waste and recovery or processing waste materials, which had been separated at source. This takes place at materials recovery facilities, transfer stations, combustion facilities and disposal sites. Transformation processes are used to reduce the volume and weight-requiring disposal and to recover conversion products and energy. Combustion (to produce energy) and composting are some of the most common transformation processes.
Disposal	Disposal by landfill or land spreading is the ultimate destination of solid waste whether its waste collected and transported from sources or

	from transformation facilities (e.g. residues of composting or combustion). The best practice is to dispose waste through sanitary landfill, which prevent public health hazards and nuisance.

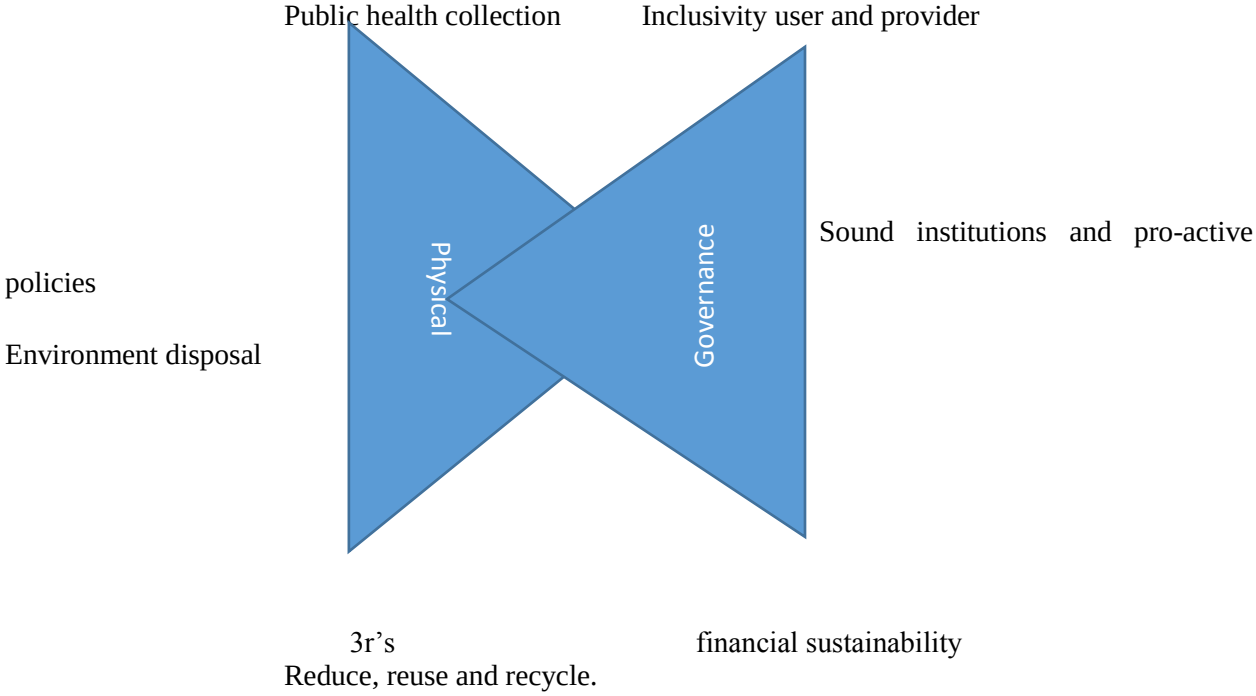
1.6.3 Integrated Solid Waste Management (ISWM)

The modem approach to effective and sustainable waste management is what has come to be commonly referred to as the Integrated Solid Waste Management (ISWM). This integrated approach has been advanced by United Nations Environment Programme (UNEP) and the UN-Habitat. The approach may be viewed from different analytical frameworks. The UNEP and UN-Habitat have developed two complementary analytical frameworks on ISWM. The analytical frameworks are the "two-triangles"

a) Two-triangles" ISWM analytical framework.

The "Two triangles" analytical framework categorizes solid waste management system into two pillars (triangles) i.e. the physical elements and governance features Table 4 below outlines the "Two-triangles" analytical framework.

Figure 1: "Two triangles" Analytical Framework



The first triangle comprises the three key physical elements of the ISWM

System, which are-

i) **Public health**, which entails maintaining healthy conditions in cities and urban areas through a good waste collection service

ii) **Environment, which** entails protection of environment throughout the waste chain, especially during treatment and disposal

iii) **Resource management** which may be described as 'closing the loop' since it entails returning both materials and nutrients to beneficial use, through preventing waste and striving for high rates of organics recovery, reuse and recycling.

The second triangle comprises of the governance features of the ISWM system, which supports sustenance of the first triangle. The governance features entail a system that-

i) **Is inclusive**, providing transparent spaces for stakeholders to contribute as users, providers end enablers

ii) **Is financially sustainable**, which implies cost-effective and affordable waste management system

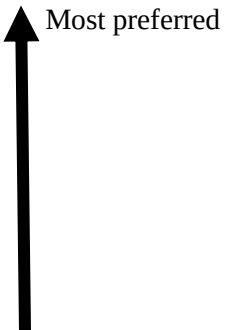
iii) Rest on a base of **sound institutions and pro-active policies**

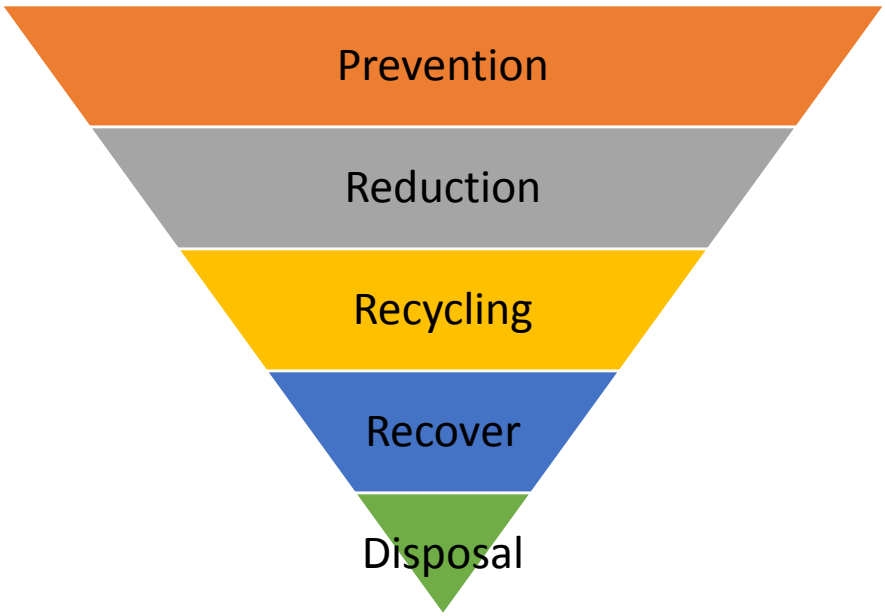
Waste management hierarchy

The waste management hierarchy indicates an order of preference for action to reduce and manage waste. The waste hierarchy is presented as an inverted pyramid with the most preferred action being prevention of waste generation followed by reduction of waste generation (e.g. through re-use), followed by recycling (including composting or anaerobic digestion), followed by material recovery and waste-energy processes such as combustion and pyrolysis and the final action being disposal either in landfills or through incineration without energy recovery for waste that was not prevented, diverted or recovered

The ISWM system forms a good foundation for solid waste Management policy framework and strategy development.

Waste management hierarchy





Least preferred

1.7 POLICY AND LEGISLATIVE FRAMEWORK ON SOLID WASTE MANAGEMENT

The policy and legislative framework for municipal solid waste management consist of the constitution of Kenya and various statutes, sessional papers and sectoral plans among others. This part highlights the laws and policies that relate to solid waste management at municipal level.

1.7.1Constitution of Kenya

Article 10 entrenches sustainable development as one of the national values, Solid waste Management is one of the key drivers of sustainable development.

Article 43 guarantees the right to highest attainable standard of health, reasonable standards of sanitation and clean and safe water. Solid waste is a major contributor to prevalence of risk factors to communicable and non- communicable diseases and conditions. Consequently, effective, efficient and sustainable management of solid waste especially in urban areas will drastically

reduce incidences of communicable or non-communicable diseases and conditions and related health care burden as well as reduce associated public nuisance of unmanaged solid waste.

Article 69 of the Constitution provides for encouragement of public participation in the management, protection and conservation of the environment; establishment of systems of environmental impact assessment, environmental audit and monitoring of the environment; elimination of processes and activities that are likely to endanger the environment.

Section 2 (g} of the Fourth Schedule assigns to the municipal government the function of refuse removal, refuse dumps and solid waste disposal.

1.7.2 The Environmental Management and Co-ordination Act {Cap387)

The Environmental Management and Coordination Act, Cap 387 including subsidiary 1egislatlon is the main national statute that governs environment protection, conservation and management, which includes solid waste management. In regard to solid waste management, the Act provides among others for;

a) Development of municipal environment action plans which provide for environment management systems

b) The standards of. Waste including issues such as handling, storage, transportation, segregation and destruction of any waste

c) Prohibition of handling dangerous waste

d) Classification and management of hazardous and toxic waste

The Environmental Management and Coordination (Waste Management) Regulations, 2006, and Environmental (Prevention of Pollution in Coastal Zone and Other Segments of the Environment) Regulations, 2003 seek to implement the statutory requirements on solid waste management.

1.7.3 Nationa1 Environmental Policy, 2013

The policy provides for governance framework for environment management. In regard to solid waste management. The policy recognizes inefficient production processes, low durability of goods and unsustainable consumption and production patterns lead to excessive waste generation. In order to address these challenges, the policy provides for development of an integrated national waste management strategy, promotion of use of economic incentives to manage waste and promotion of establishment of facilities and Incentives for cleaner production waste recovery, recycling and re-use.

1.7.4 Integrated coastal zone management (ICZM) policy

In regard to solid waste management, the Integrated Coastal Zone Management (ICZM) Policy, Sessional Paper No. 14 of 2014 provides for pollution control and waste management practices. The policy seeks to improve the management of municipal solid waste through empowerment of county government to effectively manage urban waste, promotion of public private partnership in waste management, strengthening of county governments to enforce laws for regulating municipal waste and enforcement of Environmental Management and Coordination (Waste Management) Regulations, 2006.

1.7.5 Kenya vision 2030

The Kenya Vision 2030 lays the foundation for social and economic development in Kenya. In regard to solid waste management, Kenya Vision 2030 provides for development of solid waste management systems in at least 5 municipalities, and in the proposed economic zones, regulation on use of plastic bags, development and enforcement of mechanisms targeting pollution and solid waste management regulations , strengthening of institutional capacities of multi-sectoral planning and strengthening linkages between institutions of planning and environment management, development of national waste management system and use of market-based environment Instruments for providing incentives or disincentives in solid waste management and establishment of initiative to clean the Nairobi River as well as rivers and water fronts in Kisumu, Mombasa and Nakuru

1.7.6 The National Solid Waste Management Strategy, 2015.

The National Solid Waste Management Strategy, 2015 is anchored on the Kenya Vision 2030. It lays the foundation for strategic management of solid waste in Kenya. The strategy provides for among others;

a) Definitions and classification of solid waste

b) The national context and status on solid waste management

r.) The common waste management practices in Kenya

d) The challenges facing solid waste management in Kenya

e) Integrated solid waste management

f) The waste management cycle and ideal approaches applicable to Kenya

The national strategy sets the foundation for development and adoption of municipality solid waste management policies and strategies.

1.7.7 Global policy related to solid waste management

The global policy related to solid waste management is mainly contained in the United Nations conventions and policies that provide for framework for solid waste management and which have implications on municipal solid waste management policies and laws. They include-

a) **United Nations Convention on Climate Change**.

Article 4 on commitments provides for promotion and cooperation in development, application and diffusion including transfer of technologies, practices and processes that control reduce or prevent anthropogenic emissions of greenhouse gases in sector such as waste management sectors

b) The Kyoto Protocol to the United Nations Convention on Climate Change.

Article 1 (viii) provides for States' obligation to limitation and or reduction of methane emissions through recovery and use of waste management. The Protocol obligates States to formulate and implement solid waste management programmes that are intended to mitigate climate change

c) **The Basel convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposals**. However, the control of international movement of hazardous waste is a mandate of the national government

d) **The Rio Declaration on Environment and Development (Agenda 21-Global Programme of Action on Sustainable Development).** Chapter 7 provides for sustainable human settlements which includes provision of basic services such as waste collection, Chapter 20 provides for managing hazardous wastes and Chapter 22 provides for managing solid wastes and sewage which encourages waste minimization and increase reuse and recycling

In addition, the United Nations' Sustainable Development Goals (SDGs) establishes a global framework and commitment for sustainable development. Specifically, key SDGs that have direct implications on solid waste Management and which shall be integrated in the Kajiado Municipality model policy shall include -

a) Goal 3: Ensure healthy lives and promote wellbeing for all at all ages

b) Goa1 6: Ensure availability and sustainable management of water and sanitation for all

c) Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

d) Goal 11: Make cites and human settlements inclusive, safe, resilient and sustainable

e) Goal 12: Ensure sustainable consumption and production patterns

1.7.8 Other policies and laws with implications on solid waste management policies and laws

There are other national policies and laws that have implications on solid waste management (or the process and institutional frameworks for county policies and laws} these include-

a) **County Governments Act, No. ·17 of 2012**, which provides for the governance and management system and process in the county including development planning, decentralization, citizen participation and policy development among others

b**) Public Finance 'Management Act, Cap 412 C**, which provides for, financial planning and management at the national and municipal levels including linkage of development planning, budgeting and public expenditure

c) **Urban Areas and Cities Act, Cap 275**, which provides for integrated development planning in urban areas. The Act provides for development of urban integrated development plans for urban areas and cities which includes planning for solid waste management

d) **Physical Planning. Act, No. 6 of 1996**, which provides for physical planning and development control in Kenya, which is mainly a county and a municipal function. Integrated Solid Waste Management System requires functioning and effective spatial planning, zoning and land laws.

1.8. KAJIADO MUNICIPALITY CONTEXT ON SOLID WASTE MANAGEMENT

Solid waste management remains a major challenge to Kajiado. The most common forms of solid waste generated in the town is the organic waste which is mainly generated at household level and agricultural produce/food markets hotels and restaurants Inorganic waste such as e-waste, plastics, construction waste and junk are also produced but in low quantities. Public and private health facilities generate biomedical waste.

Solid waste generated in the rural parts of the municipality is disposed within the households mainly through disposal in pits or open burning. Most of biodegradable waste such, as agricultural or human food waste is re-used as food for farm animals or is composted to produce manure for agricultural production. Non-biodegradable waste such as containers are reused for other household uses such as storage. Urban areas in the county generate most of the municipal and industrial waste in substantial quantities.

Most of the solid waste generated in urban areas is disposed in open grounds including dumping areas. Most solid waste is disposed in the same form as it was generated without being recycled, reused, or recovered. Open disposal of solid waste has continuously posed negative environmental health impact

through leachate and direct flow into water sources. In addition, the disposal methods in the county have been a contributor to public nuisance. There is limited investment in solid· waste recycling and recovery systems in the county.

Collection and transportation of solid waste generated at household, commercial and industrial level Ngong municipality is mainly undertaken by private sector. Ngong municipality management provides solid waste collection and transportation services from the public areas. Ngong municipality management has put in place light waste collection bins and waste collection containers in strategic places in urban areas. This however is below the desired optimal level. Budgetary allocations have been made for solid waste collection but have been below the desired financial investment for solid waste management

1.9 POLICY RATIONALE

Ngong municipality seeks to establish an effective, efficient and sustainable solid waste management in order to facilitate realization of its development goals. This solid waste management policy will be instrumental in advancing Ngong social and economic development. This policy is therefore developed in order to -

a) Provide for a policy mechanism for implementing municipal functions related to solid waste management as assigned under the Constitution of Kenya

b) Provide for adoption of Integrated Solid Waste Management system and processes in the municipality

c) Facilitate adoption and compliance with relevant international and national standards for solid waste management

d) Facilitate the realization of Kenya Vision 2030 as it relates to solid waste management

CHAPTER TWO
Policy Framework

2.1. Introduction

In order to comprehensively address solid waste management, a framework setting the policy direction to be pursued by Ngong municipality management and other stakeholders is essential. This chapter describes the policy framework consisting of the core policy measures to be pursued. In addition, the chapter lay out the policy vision, mission and guiding principles.

2.2. Policy Goal

To minimize waste generation and promote re-use, recovery and recycling of waste materials and sustainable waste disposal,

2.3. Policy mission

To promote a sustainable, effective and integrated solid waste management system

2.4. Policy objectives

The policy shall pursue the following objectives-

a) Delivering a waste management system that is effective, equitable, responsive and sustainable under the prevailing conditions

b) Provision of public services (e.g. Waste collection, transport, treatment and disposal) suited to the needs of and affordable for local users

c} Protection of public and occupational and the environment

d) Contributing to sustainable use of natural resources, e.g. Through materials recovery and recycling, soil improvement, energy generation

e) Contributing to economic development, through fostering resource efficient production and developing waste recovery and recycling operations

t) Providing employment and enterprise development opportunities

g) Deploying technologies appropriate to prevailing conditions

h) Building the capacities of those forming part of the waste management system

o) Encouraging and inviting research and development into technologies and governance approaches for sustainable resource and waste management

2.5. Policy principles

The following shall be the guiding principles for the solid waste management policy-

a) **Proximity principle**, which 'implies that waste should be managed close to where it is generated

b**) Self -sufficiency principle**, implies that where possible and practical, each urban area or zone should manage its own waste

c) **Polluter pays principle** whereby those who generate waste should bear the cost of managing the waste to minimize risk to human health and the environment

d) **Precautionary principle** whereby appropriate policy measures may be taken in order to safeguard human health and environment. Even if scientific evidence were not conclusive it would be essential to adopt precautionary approach

e) Sustainable **development**, which is development that meets the needs of the present without compromising the ability of future generations to meet their own needs

f) **Inter-generational equity**, which implies that waste, should not be managed in a way that bequeaths legacy problems to subsequent generations

g) **Intra-generational equit**y which implies that waste management resources and services should be equitably accessible to all citizens or residents in the same generation. All interested parties should have equitable possibilities to provide services and equitable burden sharing in terms of waste management facilities (environmental justice)

2.6 Policy measures

Kajiado municipal shall adopt an integrated approach to solid waste management as described in chapter 1 as well as the principles of solid waste management that form the foundation of this policy. The policy measures shall be based on a combination and integration of the functional elements in solid waste management, solid waste management hierarchy and the two-triangle framework both of which form the integrated solid waste management system. This part shall prescribe the policy measures that the government shall pursue. The policy measures shall be in the form of policy statements, which prescribe the appropriate policy instruments in solid waste management. In addition, the policy measures are based on the constitutional functional assignment of county governments as well as constitutional provisions.

2.6.1 Solid waste generation

Context

Generation of waste depends on product demands, production processes, consumption demands, behavior and patterns among others. Waste generation has implications on resources used for production of products, which result in varying levels of waste generation. Waste generation exists throughout the product lifecycle.

Most waste generated in Kajiado municipality consists of municipal waste, which emanates from consumption of processed products at household, commercial and industrial levels. Some processes or activities such as industrial ones contribute to high waste generation. Whereas, Kajiado municipal

management has no legal mandate to regulate production processes, which would reduce amount of waste generated, it has a duty to promote appropriate production processes, change in consumption behavior and patterns. The aim is to prevent generation of waste where possible through appropriate means.

Policy measures

In order to promote and facilitate prevention of solid waste generation through sustainable waste generation processes, Kajiado municipality department responsible for solid waste management shall -

a) Promote prevention of waste generation among product users through awareness creation on behavior change, consumer choices and consumption practices to reduce excessive consumption or use and waste of diverse products

b) Collaborate and coordinate with the county, national government and other stakeholders in adopting measures for promoting resource conservation and management to prevent or avoid excessive utilization of resources, which lead to excess generation of solid waste

c) Establish partnership and collaboration with manufacturers wholesalers and retailers in adopting appropriate measures and strategies for preventing waste generation

d) Engage with county and national government to adopt appropriate measures for preventing waste in the product value chain and life -cycle such as product and packaging design, manufacture, distribution and product use

e) Promote in collaboration with the county government, national government and relevant stakeholders the adoption of modern technology in product manufacture to reduce excessive generation of solid waste

f) In collaboration with other relevant public and private stakeholders, promote reuse of products or materials e.g. Containers or packaging materials in order to reduce generation of waste

g) The department responsible for solid waste management shall establish an inventory for all the waste streams, which shall be disaggregated according to the respective sources

2.6.2 Solid waste handling and separation, storage and processing at source.

Context

Waste handling and storage before collection and transport determines the effectiveness of the rest of solid waste management system. Waste handling storage at point of generation requires adoption of public and environmental health standards. In order to facilitate reduction, recycling and recovery of solid waste, waste separation or segregation at source is essential. Currently, Kajiado municipality experiences poor solid waste handling, storage and separation at the sources. This is mostly common

in the urban areas due to high population density and low awareness of sustainable waste handling, separation and storage processes. Other challenges faced by the municipality include storage of organic and inorganic waste in the same containers, open storage of waste or disposal of waste in outdoor open places directly from the source/point of generation or storage of waste in open spaces within premises which is a threat to public and environment health.

Policy measures

In order to ensure effective and appropriate solid waste handling, storage and separation, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall in collaboration with relevant stakeholder's carryout awareness creation and capacity development to waste generators on handling, storage and processing of solid waste at source

b) Solid waste shall be segregated or separated at source or point of generation into dry (recyclables) and wet waste (food waste and organic matter) and stored in appropriate receptacles in accordance with the prescribed guidelines and standards

c) The department responsible for solid waste management shall in collaboration and coordination with the county government, national government, generators of solid waste and relevant stakeholders develop and adopt strategies, measures and standards to promote and facilitate segregation of solid waste at source or point of generation

d) In accordance with the building code and development control laws and policies, owners or occupiers or residential, commercial or industrial premises shall install appropriate containers and spaces for waste handling and storage within the premises for purposes of ease of collection and which meet public and environment health standards for purposes of ease of collection

e) Solid waste generated from any premises or source shall be separated and stored within the premises before being collected and transported for recovery and final disposal.

f) The department responsible for solid waste management shall ensure adoption of appropriate measures and processes for waste segregation at the point of generation

g) Disposal of waste in open grounds or in non-designated collection points by a waste generator shall be prohibited

2.6.3 Solid waste collection

Waste collection is the collection of waste from the point of generation or production (residential, industrial, commercial or institutional) to the point of treatment, recovery or disposal. Waste collection methods are determined by the location of waste generation {i.e. Public places, residential, commercial, industrial or commercial). Uncollected waste leads to public and environmental health hazards such as diseases and health conditions, public nuisance and blockage of drainage system, seepage of waste into water and soil among others.

The waste collection process is required to be efficient and carried out through appropriate means. Waste collection services in the municipality especially for urban areas are provided by the private sector. However, waste collection services for public areas are carried out through municipal services provided by the county government. Solid waste in the municipality is characterized with disposal of waste in open areas before collection (open dumping} and inefficient and inadequate waste collection services in both public and private places. Some localities in urban areas where there lacks organized waste collection services, experience environmental and health challenges associated with open disposal of waste. Other challenges include inadequate waste collection points and containers or bins as appropriate and low funding of waste collection services.

Policy measures

In order to address challenges associated with waste collection, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall in collaboration with other relevant public and private actors establish an efficient, responsive and coordinated countywide solid waste collection services system which shall among ethers include stakeholder consultation, mobilization and participation, compliance with public and environment health standards and collection of solid waste from public and private places and maintenance of clean public streets and places

b) The department responsible for solid waste management shall in consultation with National Environment Management Authority and other relevant stakeholders designate, gazette and develop waste collection points in each ward according to the solid waste management spatial map

c) The department responsible for solid waste management shall in consultation with respective local residents representing residential ,commercial, institutional and industrial areas place or install

appropriate waste collection containers, receptacles and bins in strategic public places for purpose or collection of solid waste

d) All institutions such as schools or health facilities shall place or install appropriate waste collection containers, receptacles and bins in strategic places within the facilities for purpose of collection of solid waste which shall conform to the prescribed standards

e) Solid waste collection services provided by public or private actors shall comply with the prescribed standards and operating procedures

f)Solid waste collection services from households, commercial, institutional or industrial premises shall be carried out by private sector service providers in accordance with prescribed standards and guidelines

g) The department responsible for solid waste management shall establish a system for collecting solid waste in informal settlements, which do not have access to private sector provision of waste collection services

h) A solid waste generator shall deposit any waste generated to the appropriate waste collection point located within the geographical locality of the waste generator and in the appropriate waste segregation or separation collection receptacles

i) There shall be established a system of registration of solid waste collectors including waste pickers for the purposes of coordinating solid waste collection, facilitating stakeholder capacity development and ensuring compliance with prescribed guidelines and standards

j)The department responsible for solid waste management shall in consultation and collaboration with National Environment Management Authority and other relevant stakeholder designate, gazette and develop waste transfer stations according to the solid waste management spatial map and prescribed standards. The department may establish or facilitate establishment of specialized transfer stations for specific types of solid waste

k) The department responsible for solid waste management shall promote and facilitate establishment of intermediary community based waste sorting centres which shall be integrated with the county solid waste management system.

l) The department responsible for solid waste management shall in collaboration with, the department responsible for public health maintain waste collection points in conformity with prescribed public and environment health standards

m) The department responsible for solid waste management shall in collaboration with the department(s) responsible for women, youth, persons with disabilities or other vulnerable groups and municipality treasury develop initiatives for the groups to participate in co-management of waste collection points and waste collection services for purposes of promoting economic empowerment of the groups.

11) kajiado municipality shall initiate and develop public private partnership proqrammes for sustainable solid waste collection services

o) In accordance with Access to Government Procurement Opportunities Policy, Kajiado municipality shall provide preferential treatment to youth, women and persons with disabilities in accessing thirty percent of Kajiado municipality contracts for solid waste collection services

p) In procuring services for provision of solid waste collection services, Kajiado municipality shall consider a supplier's integration of service delivery with youth, women and persons with disabilities empowerment

2.6.4 Solid Waste Transfer and Transportation

Context

Waste transfer and transportation is directly related to waste collection. Waste is generally collected for the purposes of transfer or transportation to the next point of waste management system. Solid waste in Kajiado municipality is normally transported from collection points directly to the final disposal sites or landfills. This has meant that there has been limited intermediate waste processing such as recovery, recycling and composting. The Common mode of waste transportation is through trucks or hard carts for transfer of waste from households or premises to waste collection points. Most of the trucks are open which leads to waste dropping off during transportation.

Policy measures

In order to address challenges associated with solid waste transfer, the following policy measures shall be adopted-

a) Save for biomedical and hazardous waste, all solid waste shall be transferred or transported to solid waste transfer stations or to a materials processing facility for sorting and separation or processing after which waste shall be transported to the appropriate landfill for final disposal as appropriate. However, Construction and demolition waste may be transported to specific areas approved by the county department responsible for solid waste management in accordance with the standards

b) All solid waste transporters shall registered and licensed by Kajiado county government as prescribed

c) Solid waste transportation services including plant and equipment shall conform to the prescribed standards

d) The department responsible for solid waste management shall in collaboration with other public and private stakeholders establish market linkages between waste transporters and women, youth, persons with disabilities or other vulnerable groups involved in co-management of waste collection and for purposes of economic empowerment of the groups and effective service delivery

e) In accordance with access to Government Procurement Policy, Kajiado municipality shall provide preferential treatment to youth, women and persons with disabilities in accessing thirty percent of county government contracts for transfer and transportation of solid waste

f) In granting contracts for provision of solid waste transfer and transportation services, Kajiado municipality shall consider a supplier's integration of service deliver with youth, women and persons with disabilities empowerment

g) Solid waste transfer and transportation services from households, commercial, institutional or industrial premises shall be carried out by private sector service providers in accordance with prescribed standards and guidelines

h) The department responsible for solid waste management shall establish a system for transfer and transportation solid waste in informal settlements, which do not have access to private sector provision of waste collection services

i) The department responsible for solid waste in collaboration with the departments responsible for physical planning, transport and National Environment management Authority and in consultation with solid waste transportation service providers, designate specific routes and time schedule to be followed in transfer and transportation of solid waste

2.6.5 Solid waste separation, processing and transformation

Context

Sustainable management of solid waste leads to processing and transformation of waste into economic value. As a result, minimal waste is actually disposed in the final landfill. Waste separation entails separating waste according to potential use such as recycling or recovery, Waste is separated into for example organics and recyclables (which are further separated into for example e-waste, plastics,

metals, papers and junks such as wood among others). Waste processing and transformation entails material recovery processes seen as composting, combustion and recycling of materials to make useful products.

Kajiado municipality lacks a structured system of separation, processing and transformation of solid waste into useful materials that may be utilized for other purposes. Most of the waste generated, which comes from urban areas, is disposed through open dumping in dumpsites. The municipality lacks a coordinated system for separation of waste and recycling. However, there are few initiatives for collection of recyclable materials especially metal and plastics.

Policy measures

In order to address the problem of poor waste separation, processing and transformation, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall in collaboration with other relevant stakeholders mobilize local communities and neighborhoods to promote and facilitate collection and separation of recyclable solid waste

b) The department responsible for solid waste management shall in collaboration with national government and other relevant stakeholders establish a system for facilitating and promoting solid waste separation, processing and transformation (material recovery and recycling which shall among others include facilitation of enterprises involved in waste processing and transformation to access solid waste placed in transfer statins technology acquisition, technical assistance and capacity development.

c) Final waste separation shall be undertaken at the transfer stations. Other waste processing and transformation processes may take place at a transfer station

d) Kajiado municipality shall adopt appropriate economic incentives to promote private sector participation in solid waste separation, processing and transformation such as reduced fees, charges and levies for enterprises involved in waste processing and transformation

e) Kajiado municipality shall in collaboration and coordination with the county government, national government and relevant stakeholders promote investment in solid waste processing and transformation and establishment of wholesale and retail outlets for sale of recycled products or recovered materials

f) Kajiado municipality shall in accordance with the Public Procurement and disposal Act undertake purchase of appropriate products produced from processed and transformed solid waste in order to promote market development in solid waste management

g) The department responsible for solid waste management shall in collaboration with national government entities and relevant stakeholders develop and adopt guidelines, standards and operating procedures for separation, processing and transformation applicable to each solid waste stream in accordance with the established standards and best practices. All waste generators shall comply with the established guidelines

h) Where there is no capacity to recycle any waste stream or type of waste, Kajiado municipality shall promote and facilitate market linkages between local and external investors for purposes of supply drain management

i) The department responsible for solid waste management shall, in collaboration with relevant stakeholders establish technology and innovation hubs for development of solid waste management technology

2.6.6. Solid waste disposal

Context

Solid waste disposal is the final stage in the process of discarding solid waste. Any material that cannot be recycled or recovered is disposed mainly in the landfills or through incineration especially for biomedical waste. A sustainable solid waste management system, is where few materials of solid waste are finally disposed.

However, most of the solid waste generated in the municipal is disposed through dumping in the landfills which or open grounds in public places. This, as noted earlier poses a threat to public and environmental health. The landfills in the county are poorly sited especially in relation to residential areas and do not meet the appropriate standards. The municipal has no sanitary landfill hence the waste disposed in the open grounds has direct negative Impact on the environment and water resources. The ultimate goal is to have zero waste to landfills.

Policy measures

In order to address challenges associated with waste disposal, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall in collaboration with the department responsible for physical planning, National Environment Management Authority, residents in the potential areas for siting landfills and other relevant stakeholders designate, gazette and develop controlled sanitary landfills in accordance with the solid waste spatial plan and the county spatial plan

b) All the open public places where solid waste is dumped shall be cleared and placed under the respective intended public use

c) The department responsible for solid waste management shall ensure and facilitate solid waste treatment before final disposal

d) The department responsible for solid waste management shall develop a system and standard operating procedures for management of sanitary landfills

e) For purposes of disposing biomedical waste, the department responsible for health in collaboration with the department responsible for solid waste management and relevant agencies shall install appropriate incinerators in health facilities

f) The county government shall implement and where applicable, enforce national law and policy that prohibits disposal of solid waste into rivers and water resources

g) Where the national government has established a landfill, Ngong municipality shall utilize the landfill for purposes of disposing the solid waste designated for disposal in the landfill.

2.6.7 Solid waste management financing

Provision of sustainable solid waste management services requires substantial funding. It requires coordinated financial investment from public, private and voluntary sectors. Some of the solid waste management processes such as processing, transformation, treatment and disposal are capital intensive. Consequently, for Kajiado municipality to achieve intended objectives of solid waste management, there is need for adoption of diverse funding models and instruments. In addition, cost sharing through user fees and charges are effective mechanisms for sustainable solid waste management. Currently, there is low funding for solid waste management in the municipality. There is low private sector investment in solid waste management. In addition, public funding in the sector is below the levels required for financing the municipal solid waste management services.

Policy measures

In order to address the policy challenges in financing solid waste management, the following policy measures shall be adopted-

a) There shall be levied appropriate user fees and charges for solid waste management. The fees and charges shall be levied in accordance with the tariff policy stipulated under the County Governments Act.

b) Kajiado municipality shall provide incentives for promoting solid waste recycling and waste material recovery which may include reduced fees, levies and charges for enterprises engaged in the two processes

c) The Kajiado municipality shall in consultation with the county government and the National government adopt public-private partnership model of financing various processes in solid waste management. Such partnership shall be based on efficiency, cost effectiveness and sustainability of the model in provision of solid waste management services

d) Kajiado municipality shall facilitate its officers to acquire technical skills and develop competencies for public private partnerships management especially in initiation, development, negotiation, award and management of public private partnerships in solid waste management.

e) Subject to Public Finance Management Act, at least fifty percent of the user fees and charges collected from solid waste management services shall be utilized for defraying operational costs associated with provision of solid waste management services

f) Kajiado municipality shall subsidize solid waste management services to low income areas and informal settlements in accordance with the County Governments Act

g) Kajiado municipality shall progressively increase budgetary allocations for implementation of this policy and laws related to solid waste management

h) Kajiado municipality shall mobilize resources in the form of grants and donations from development partners for financing solid waste management processes

2.6.8 Solid Waste Management and Informal Sector

Context

Informal sector is a key player in solid waste management. Most informal actors in solid waste management include waste pickers, community based organizations, self-help groups, small and

micro enterprises and individual actors such as waste pickers and sorters among others. They play a significant role in the whole solid waste management value chain. However, their work exposes them to numerous health conditions and diseases especially respiratory ones. In addition, whereas they generate some income from their activities, the incomes are very low. Due to limited access to capital, most of their work is undertaken manually. Kajiado municipality recognizes the valuable role the informal sector plays in solid waste management and the strategic need to facilitate their role to promote employment creation.

Policy measures

In order to promote participation of informal sector in solid waste management, the following policy measures shall be adopted in addition to measures described above -

a) Kajiado municipality shall facilitate the informal groups or individuals involved in solid waste management value chain to access affordable capital for solid waste management enterprise development

b) The department responsible for solid waste management shall initiate capacity development programs for informal sector engaged in solid waste management as well as facilitate and support the sector to adopt health requirements

c) The department responsible for solid waste management shall in collaboration with other relevant stakeholders facilitate and promote market linkage between the informal sector and investors in solid waste management

d} Ngong municipality shall where appropriate develop service agency agreements with the informal sector in the provision of solid waste management services

2.6.9. Solid waste management and land use planning

Context

The quantities of several waste streams generated depends on the population density of waste generators in a given locality. Different zones produce different types of waste and in various quantities. The location of waste collection points, application of waste collection, transfer and transportation services are based on spatial planning in a given locality, Further, the siting of waste disposal areas is based on physical characteristics of the locality such as soil structure, terrain, population density and impact of the locality Lu other physical resources such as water resources. Consequently, land use planning has a significant role to play in ensuring sustainable solid waste management. Kajiado municipality has no solid

waste management spatial plan to, which guides various interventions in solid waste management services.

Policy measures

In order to ensure that there is sustainable solid waste management, it will be essential to have appropriate and effective zoning for solid waste management. In this regard-

1} The department responsible for spatial planning in collaboration with the department responsible for solid waste management and other relevant stakeholders, shall-

a) Carry out solid waste management survey using Geographical Information System (GJS), which shall consider -

{i) Land use: topography, drainage and soil

(iij) Infrastructure (transport, communications, health, education, water and energy)

(iii} Economic base of the area (urban informal economic base)

(iv) Human settlements (density and land use)

{v) Institutions such as schools and other government Institutions, industries and Commercial enterprises and non -state organizations

b) Develop the municipality solid waste management spatial plan, which shall include details for each ward as the core decentralized spatial units

c} Designate the location of the collection points transfer stations, composting sites, waste recovery facility and landfills in accordance with the solid waste management spatial plan

d) Regulate solid waste management in accordance with the solid waste management spatial plan

2) The department responsible for solid waste management shall in collaboration with departments responsible for spatial planning and municipality administration map the municipality into solid waste management zones for purposes of ensuring efficiency in service delivery and coordination of stakeholder participation in solid waste management

3) Kajiado municipality shall ensure that the municipality spatial plan designates zoning and setting up of industries that are integrated in terms of use of waste generated in some industries which is utilized as raw materials in other industries

2.6.10 Planning, partnerships, participation and Inter-governmental relations.

Context

Solid waste management is complex due to multiplicity of social, economic and environmental determinant factors and stakeholders. There is no single policy measure or stakeholder that can manage solid waste effectively. There is need for inclusivity of diverse stakeholders in solid waste management processes. Users and providers of solid waste management services must partner and collaborate in order to deal with all aspects of solid waste management. All the stakeholders should be involved in identifying policy options and implementing programmes related to solid waste management. Kajiado municipality has a weak stakeholder management process concerning solid waste management. Users and non-state providers of solid waste management services are usually excluded from active participation in the management process.

Policy measures

In order to ensure inclusion and participation of users and providers of solid waste management services, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall in collaboration with relevant stakeholders prepare a municipality waste management plan, which shall provide a framework for implementing this policy, national policy and any law enacted for purposes of implementing this policy.

b) The department responsible for solid waste management shall in collaboration with relevant stakeholders -

(i) Initiate programmes for mobilizing and creating awareness among residents, local communities and neighborhoods to participate in sustainable solid waste management.

(ii} Establish mechanisms to receive and handle complaints related to solid waste management service delivery from the respective localities

(iii) Facilitate community or area-based forums for users and providers of solid waste management services to deliberate on emerging issues in solid waste management to as to enhance efficiency in service delivery

(iv) Promote and facilitate stakeholder-led initiatives on solid waste management

c) The department responsible for solid waste management shall consult, inform and coordinate with relevant stakeholders on any matters related to service delivery on solid waste management

d) Kajiado municipality shall liaise, consult, collaborate and coordinate with the county government, National government and neighboring counties on matters related to solid waste management information, education and communication

2.6.11 Information, Education and communication

Context

Solid waste management depends on a combination of regulatory, service delivery and information-based tools. Whereas regulatory tools are instrumental command and control instruments in behavior in matters such as generation, handling and disposal of solid waste, they cannot be fully effective unless they are complemented by behavior change by users and providers of solid waste management services. Sustainable solid waste management depends on value-based approach by individuals and entities. Strategic communication and messaging on solid waste management is instrumental in shaping public opinion and support. Kajiado municipality lacks effective information, education and communication system and processes. There- is low awareness on sustainable solid waste management in the county.

Policy measures

In order to increase awareness and change behavior on solid waste management, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall in collaboration with relevant stakeholders develop and implement information, education and communication system and strategies targeting diverse users and providers of solid waste management services and shall ensure that such information is available to all stakeholders and county residents

b) The department responsible for education and department responsible for solid waste management shall in collaboration with national government ministry responsible for education and relevant stakeholders develop information, education and communication materials and initiate

dissemination, education and awareness creation programmes targeting children and youth on solid waste management

c) The department responsible for solid waste management shall in collaboration with the department responsible for information technology develop technology-based communication strategies on solid waste management

d) The department responsible for solid waste management shall in collaboration with the department responsible for information technology and relevant stakeholders establish a solid waste information management system

2.6.12 Research and development

Context

Solid waste generation is dynamic and changes as society develops. The form of waste streams changes as production processes change and new products and packaging emerge. Consequently, there is need for continuous innovation in intervention measures and strategies in solid waste management. In addition, there is need for evidence-based decision making on solid waste management. There are minimal research efforts undertaken by Kajiado municipality in regard to solid waste management.

Policy measures

In order to address the policy gaps in research and development, the following policy measures shall be adopted-

a) The department responsible for solid waste management shall facilitate a capacity development programme for personnel in research and development

b) The department responsible for solid waste management shall establish a research unit to coordinate, promote and undertake research and development related to environment management and governance

c) The department for solid waste management shall undertake and collaborate with relevant research institutions and institute of higher learning in carrying out research and development in solid waste management

c) The department responsible for solid waste management shall in collaboration with relevant stakeholders disseminate research findings

e) The department responsible for solid waste management shall establish a research data management system

f) The county executive committee shall ensure that evidence generated through research informs decisions related to solid management

CHAPTER 3

POLICY IMPLEMENTATION, MONITORING AND EVALUATION.

3.1 Introduction

This chapter outlines the mechanisms for implementing, monitoring and evaluating the policy. For intended policy outcomes to be achieved there is need for effective policy implementation, monitoring and evaluation. This will require strong institutional development, inclusion of stakeholders in governance, legal and administrative reforms and integration with the county performance management system.

3.2. Policy Implementation

3.2.1 Institutional framework

In order to ensure effective and efficient solid waste management, the following institutions shall be established-

1**) Municipal solid waste management Committee**

There shall be established Kajiado municipality Solid Waste Management Committee which shall consist of-

{a) Kajiado municipality executive committee member responsible for solid waste management who shall be the chairperson;

(b) The chief officer responsible for solid waste management who shall be the secretary:

(c) The director in charge of solid waste matters

(d) One ward administrator;

(e) The director in charge of public health matters;

(g) The director in charge of public works;

(h) One person representing the National Environment Management Authority;

i) One person representing the municipality environment committee established under the Environment Management Coordination Act;

J) One person representing community based organizations or non-governmental organizations engaged in solid waste management in the county;

(k} One person representing generators of industrial waste;

(I) One person representing entities engaged in solid waste recycling, composting or material recovery in the county;

(m) One person representing residents or neighborhood associations;

(n) One person representing private waste collectors and transporters; and

(o) One professional qualified and experienced in matters related to environment and solid waste management

The Committee may co-opt not more than three persons who are experienced in matters related to solid waste management. The persons described under (h),(i), (j} shall be appointed by the municipality executive member responsible for solid waste management from amongst persons nominated by the respective organizations

The committee shall be responsible for -

a) Coordinating public and Private sector engagement in solid waste management in the county

b) Providing platform for public-private dialogue, consultation and collaboration and participation in solid waste management in the municipality

c) Facilitating mobilization of Kajiado municipality residents on solid waste management in the municipality

d) Ensuring harmonization of public and private sector plans and programs on solid waste management in the municipality

e) Receiving and considering reports from ward committees and advising the municipal executive committee on appropriate policies, strategies and plans to be adopted in the municipality on solid waste management

f) Monitoring and evaluating the implementation of municipal solid waste management policies, strategies, plans and programs

g) Adjudicating in disputes emanating from solid waste management processes in the municipality

The Committee shall hold meetings on a quarterly basis and shall regulate its own procedure. The term of office for persons who are not public officers shall be 3 years renewable for one and final term of 3 years.

2} Ward solid waste management committee

There shall be established a Ward Solid Waste Management Committee for each ward which shall consist of-

(a} The ward administrator who shall be the chairperson:

(b) The officer in charge of environment in the ward who shall be the secretary;

(c) The Area Chief as designated by the National Government;

(d) The officer in charge of public health matters in the ward;

(e) The officer in charge of trade in the ward;

(t) The officer in charge of public works in the ward;

(g) One, person nominated and appointed to represent community based organizations or non-governmental organizations engaged in solid waste management in the ward

(h) Two persons representing resident or neighborhood associations in the ward;

(i) One person representing entities engaged in solid waste recycling, composting or material recovery;

j) One person representing waste pickers in the ward;

(k) One person representing private enterprises providing waste collection and transportation services in the ward; and

(I) One professional qualified and experienced in matters related to environment and solid waste management

The Committee may co-opt not more than three persons who are experienced in matters related to solid waste management. The persons described under paragraph (h), (i), (j) shall be appointed by the municipal executive member responsible for solid waste management from amongst persons nominated by the respective organizations. I

The committee shall be responsible for -

a) Coordinating public and private sector provision of in solid waste management services in the ward

b} Providing a platform for public-private dialogue, consultation, collaboration and participation in solid waste management in the ward

c) Facilitating mobilization of county residents on solid waste management the ward

d) Ensuring harmonization of public and private sector strategies and programs on solid waste management in the ward

e) Monitoring the implementation of this policy and other solid waste management policies, strategies, plans and programs at the ward level

f) Monitoring the quality and adequacy of provision and delivery of solid waste management services in the ward

g) Organizing and facilitating ward forums on solid waste management:

h) Advising the municipality committee on appropriate legislative and policy measures or public services to be adopted in ensuring effective implementation of this policy and any legislation developed for implementation of this policy

The Committee shall hold meetings on a quarterly basis and shall regulate its own procedure. The term of office for persons who are not public officers shall be 3 years renewable for one and final term of 3 years.

3.2.2 Planning and performance management

Implementation of the policy shall be undertaken through development of environment sectoral plan {or sectoral plan dealing with solid waste management). In accordance with the County Governments Act, the environment sectoral plan shall be part of the County integrated Development plan {CIDP 2018-2022). The county Medium Term Expenditure Framework (MTEF) and the County Fiscal Strategy Paper shall adequately cover the strategies and programmes provided under the environment sectoral plan. The sectoral plan shall be implemented annually through the annual development plan

Implementation of this policy shall be integrated with the county performance management system through the sectoral plan. The annual performance contracting and targets for respective departments responsible for implementation of this policy responsible for implementation of this policy shall be aligned to activities and programs in the environment sectoral plan so as to ensure complementarity and inter sectoral approach in implementing this policy. Data related to policy

implementation shall be collected on a continuous basis in order to inform decision making by the executive and other sector stakeholders.

3.2.3. Legal and administrative reforms

In addition to programmes and projects to be designed under the environment sectoral plan (or sectoral plan dealing with solid waste management), appropriate legal reforms related to solid waste management shall be undertaken. There shall be prepared for enactment or adoption laws, guidelines, standards and frameworks.

3.2.4. Collaboration with National Government

As stipulated under Article 6 and 189 of the Constitution, Ngong municipality shall institute measures to cooperate, collaborate, consult and partner with the national government in implementing this policy as well as implementing national policies, laws and standards related to solid waste management . In this regard, the department responsible for solid waste management shall initiate intergovernmental collaboration mechanisms with the national government ministry of environment and other agencies responsible for matters related to environment.

3.2.5. Staff Capacity Development

The department responsible for solid waste management shall in collaboration with the department responsible for human resource management with highly qualified professional staff in line with respective policy measures ,develop and facilitate continuous professional and capacity development for all relevant officers in various departments responsible for implementing this policy.

3.3. Policy Monitoring and Evaluation

3.3.1 Design of indicators

In order to ensure effective implementation of this policy, there shall be a continuous monitoring of the results of programmes and activities undertaken to implement this policy. The department responsible for solid waste management shall in collaboration with national and county stakeholders ,design the core outcome indicators to be adopted in measuring the results.

3.3.2 Monitoring and evaluation framework and system

This policy shall be evaluated in accordance with overall county monitoring and evaluation framework, standards and system. The following requirements shall apply in regard to policy monitoring and evaluation-

a) The department responsible for solid waste management shall designate staff to be responsible for coordinating monitoring and evaluation of implementation of this policy.

b) In each period of 3 months, the department responsible for solid waste management shall prepare a report on the progress made in implementing the policy, which shall be submitted to the municipality executive committee for consideration and decision-making.

c) There shall be annual policy review, which shall involve all solid waste management stakeholders. The review shall provide feedback on successes, progress and challenges related to policy implementation and whether policy outcome have been met in each year. The policy review report shall be submitted to county executive committee for consideration and decision-making

d) The policy shall be evaluated at the end of each period of 5 years to assess the extent to which policy outcomes have been realized including policy impact.

e) The department responsible for solid waste management shall disseminate policy evaluation reports to Kajiado municipality solid waste management stakeholders.

REFERENCES

1. Kajiado County Integrated Development Plan (2012-2022)
2. Kajiado North(2016-2025), Integrated Strategic Urban Development plan
3. Kenya Bureau of Statistics(2013), Exploring Kenya's Inequality,
4. Kajiado County (2018), Infrastructure and Environment transformation support framework
5. Kenya Alliance of Resident Associations & Kenya Association of Manufactures (2018),Model solid waste management policy