



KAPENGURIA MUNICIPALITY

SOLID WASTE MANAGEMENT POLICY

@2024

Vision

To be a model municipality in service delivery in Kenya

Mission

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

Core values

Integrity

Excellence

Accountability

Equity

Professionalism

Innovativeness



FOREWORD

Accumulated waste deposits are an indication of societal lifestyles, waste Management practices and production technology. Some societies at the peak of their development have stagnated due to inadequate management of their waste leading to proliferation of disease; environmental degradation and ultimate impact on livelihoods. Improper management of waste poses a threat to Climate Change and eventually In the achievement of sustainable development. Waste being one of the contributors of greenhouse gases, affects climate change and it is for this reason that as a country, we should develop sustainable waste management policies, technologies and initiatives to cub this growing global challenge. Through our commitment to sustainable development, West Pokot County Government aims to balance the broader economic and social challenges of development and environmental protection. For this reason, the county government subscribe to the vision of a prosperous and equitable society living in harmony with our natural resources.

This is also reinforced in the constitution under the fundamental right to a clean and health environment. Sound environmental management entails use of waste reduction technologies, policies in production, sustainable product design, resource efficiency and waste prevention, re- using products where possible; recovering value from products. Although, elimination of waste entirely may not be feasible, systematic application of modern waste management systems should be explored and implemented. The challenge of waste management affects every person and institution in society. The measures set out in this strategy cannot be undertaken without a collective approach to waste challenges, and the involvement of a broad range of stakeholders in their implementation.

HON. ESTHER CHELIMO

CEC - LANDS, HOUSING, PHYSICAL PLANNING AND URBAN DEVELOPMENT

Solid Waste Management Policy — Kapenguria Municipality





Solid waste management remains one of the major challenges facing Kapenguria municipality. The impact of the indiscriminate solid waste disposal continues to adversely affect service delivery and it's against this background that Kapenguria municipal board has developed a solid waste Management Policy which will also incorporate the emerging issues in the management of solid waste.

The purpose of this policy is to provide a framework to address solid waste problem in the municipality and aims at achieving zero waste generation. It will also ensure that the Municipality, in collaboration with other stakeholders, is able to sustain the provision of adequate quality services in solid waste management and establish appropriate response to solid waste management challenges.

This policy is also an affirmation of the Board's commitment to intensify its campaign against improper disposal of solid waste onto the environment and ensure a harmonized society in the Municipality. The ultimate goal of this policy is to guarantee the residents of Kapenguria municipality a clean, health and safety environment as enshrined in the constitution.

I wish to thank Municipality manager and her team and representatives for various departments in the County for their efforts and commitment in the development of this policy. I also wish to thank all stakeholders who participated in one way or another in making the policy.

MR. YATOR KIPTUM
CHAIRMAN KAPENGURIA
MUNICIPALITY BOARD

A handwritten signature in blue ink, appearing to read 'Yator Kiptum', followed by a date stamp '5/3/2024' in a light blue box.

Solid Waste Management Policy — Kapenguria Municipality



All residence residing in Kapenguria municipality and its environment are entitled to a clean and healthy environment. The Environment Management and Co-ordination Act 1999 is guided with among others the following principles of public participation in the development of policies, plans and processes for the management of the environment. In line with the principle of inter -generational and intra-generational equity, the polluter-pays principle and the precautionary principle. Solid Waste Management is one of the biggest challenges to the Kapenguria municipal board in its endeavor to provide a clean and healthy environment to the residents of Kapenguria municipality

It is with this spirit that the municipal board strived to develop this policy which will assist the public and institutions involved to be a 7R oriented society, by Reducing; Rethinking; Refusing; Recycling; Reusing; Repairing and Refilling their waste.

All the efforts were driven towards compliance with the Environmental Management and Coordination Act of 1999 and Environmental Management and Coordination ,Waste Management Regulations of 2006 in order to ensure a clean and healthy environment for all, keeping in line with the Article 42, of the Constitution of Kenya 2010.

Finally, I wish to extend my deepest gratitude to all those who participated in coming up with this policy. My gratitude also goes to my colleagues who gave critical comments towards finalization of this policy. My call is for all of us to cooperate in delivering quality and efficient service to the Municipality citizens through this policy.

MR.DONATO LONGAL
MUNICIPAL MANAGER

KAPENGURIA MUNICIPALITY

Solid Waste Management Policy —Kapenguria Municipality



ABBREVIATIONS

CBOs: Community Based Organizations

CSOs: Civil Society Organizations

ISWM: Integrated Solid Waste Management

KMB : Kapenguria municipal board

KIE: Kenya industrial estates

NEMA: National Environment Management Authority

NGOs: Non-Governmental Organization

PCs : Private Companies PS: Private Sector

PPP : Public Private Partnership

SMEs: Small Scale Enterprises SWM : Solid waste Managment

KMC :Kapenguria Municipal Committee

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CHAPTER ONE

1.0 Introduction:

Solid waste management remains one of the development challenges globally, nationally and at the county and municipality level. Solid waste is inevitable due to ordinary 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 the municipality. The policy shall guide the Municipality solid waste management actors by providing effective, efficient and sustainable services while utilizing solid waste as an economic resource.

1.1 Policy development process.

This policy was developed through a consultative process. The key policy actors in solid waste management in the municipality were engaged during the preparation process. Specifically, national, county and municipality departments involved in solid waste management, including National Environment Management Authority (NEMA), County departments in charge of public health, and the Environment department from the county were consulted. In addition, NGOs and private actors in solid waste management such as, waste sorters and recyclers participated in the process. The municipality has a diverse background comprising of urban and rural set-ups as well as rich ethnic, racial, and cultural diversity with the Pokot being the dominant community.

1.2 Kapenguria municipal board (CMB).

Kapenguria municipal board is established pursuant to Article 184 of the Constitution of Kenya and the Urban Areas and Cities Act CAP 275 of the Laws of Kenya. The Board was inaugurated on 16 March 2023 following the approval of the Municipal Charter by the County Assembly of West Pokot.

The Board has seven members headed by the Chairman and the Municipal Manager who is the secretary and head of the municipality. The charter spells out the mandate of the Board and key among them being Solid Waste Management (SWM).

Mandate.

The Mandate of Kapenguria municipal board is drawn from the Urban Areas and Cities Act, CAP 275 of the Laws of Kenya and the Kapenguria Municipal Charter. Which include:

1. overseeing the affairs of the Municipality
2. developing and adopting policies, plans, strategies and programs, and setting targets for delivery of services
3. Formulating and implementing integrated development plan for the Municipality by controlling land use, land subdivision, land development and zoning by public and private sectors for any purpose, including industry, commerce, markets, shopping and other employment centers, residential areas, recreational areas, parks, entertainment, passenger transport, agriculture, and freight and transit stations within the framework of the spatial and master plans for the Municipality as may be delegated by the County government
4. Promoting and undertaking infrastructural development and services within the Municipality as may be delegated by the County Government
5. Developing and managing schemes, including site development in collaboration with the relevant National and County agencies
6. Maintaining a comprehensive database and information system of the administration and providing public access there to upon payment of a nominal fee to be determined by the Board
7. Administration and regulating of internal affairs and
8. Implementation of applicable National and County legislation

1.3 GEOGRAPHIC LOCATION

Kapenguria municipality is Located in West Pokot County and comprises three administrative wards, Mnagei, Kapenguria and siyoi and eight locations which include kishaunet, kapkoris, Kapenguria, kaisakat, talau, kaibos, keringet and mnagei Locations and 24 sub locations with its headquarters in Kapenguria town. The Municipality lies at the Latitude $1^{\circ} 13' 48''$ North and Longitude of $35^{\circ} 7' 12''$.

1.4 PHYSIOGRAPHIC AND NATURAL CONDITION

The Municipality is characterized by a variety of topographic features. Kapenguria municipality is 2300 meters above sea level. A portion of one of the gazetted forest, Kamatira, is within the Municipality. Though there are small rivers within Municipality which supply Water to the residents kotoruk river is the major source of water in Kapenguria Town.

1.5 RAINFALL

Kapenguria municipality has a bimodal type of rainfall. The long rains fall between the months of April and August while the short rains fall between October and December. The municipality receives a rainfall of **1600 mm per year**. The average annual temperature of the Municipality is 150 degree Celsius The high-altitude areas with moderate temperatures experience high rainfall and low Avapro-transpiration hence suitable for crop production. Kapenguria municipality has 1 ward, 6 locations and 16 sub locations. The table below presents the existing administrative units in terms of Locations and Sub locations.

Table 1. ADMINISTRATIVE STRUCTURE

SN O.	LOCATION	SUB-LOCATION
01	KISHAUNET	Kishaunet
		Lityei
		Sukut
02	KAPKORIS	Chemwochoi
		Tilak
		Kaprum
03	KAPENGURIA	Chewoyet Mwotot
		Kamatira
04	KAISAKAT	Siyoi
		Paraywa
		Kapchila
05	TALAU	Chepkoti Kapsurum
		Talau
		Kipkorinya
06	KAIBOS	Kaibos
		Kapkatet
		Lokomoi Cheptuya Morotome
07	KERINGET	
08	MNAGEI	Tartar Keringet Psigirio

1.6. Population size

Population of the municipality according to the 2019 Kenya National Population and Housing Census is 183,294 persons with 88,898 (48.5%) males and 94,397 (51.5 %) females.

CHAPTER TWO

2.0. STATUS OF WASTE IN KAPENGURIA MUNICIPALITY

West Pokot County and Kapenguria municipality has a growing human population and an increase in urbanization. Kapenguria being the most urban centers have attracted a large population of informal settlement dwellers and the middle class. This has consequently led to increased waste generation and complexity of the waste streams.

Despite the existence of National laws and policies guiding waste management, weak implementation and poor practices have led to the municipality being overwhelmed by its own waste, consequently affecting public health and the environment.

Solid waste management remains a major challenge to the municipality. The most common form of solid waste generated in the municipality is the organic waste which is estimated to be of larger percentage of all waste generated. Organic waste is mainly generated at household level and agricultural produce/food markets and hotels. The municipality generates approximately 12 tons of solid waste. Inorganic waste such as e-waste, plastics/ glass bottles, 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 biodegradable waste such as agricultural or human food waste is reused as food for farm animals. Non-biodegradable waste such as containers are reused for other household uses such as storage. Market centers in the municipality generate most of the municipal waste in substantial quantities due to high population density.

Most of the solid waste generated in Kapenguria town is disposed of Kapenguria dumpsite. Most solid waste is disposed of in the same form as it was generated without being recycled or reused or recovered or segregated. Open disposal of solid waste has continuously posed a negative environmental health impact through leachate and direct flow into water sources. In addition, the disposal methods in the Municipality have been a contributor to public nuisance. There is limited investment in solid waste recycling and recovery systems in the Municipality.

Collection and transportation of solid waste is done by County government.

The county government has put in place waste collection receptacles in strategic places in Kapenguria town. This however is below the desired optimal level. The county government has made budgetary allocation for solid waste collection, but the allocation has been below desired financial investment for solid waste management system.

2.1. Waste streams in Kapenguria municipality

2.1.1 Domestic waste

Domestic waste is also referred to as garbage, refuse or trash and forms high percentage of the waste generated within Kapenguria municipality. It consists mainly of biodegradable waste which is food and kitchen waste, human waste, latrine and toilet effluents, green wastepaper and non- biodegradable such as plastics, glass bottles, cans, metals and wrapping materials. There is no proper way of managing this waste in the municipality. Plastics and Scrap metals are recovered by Informal Waste groups. High Percentage end up in disposal Site and others are illegally dumped.

2.1.2 Waste Tyers

Waste Tyers which forms low percentage of the total waste is an emerging waste stream that has reached their end of life due to wear or damage and cannot be recycled or reused. There are no established formal systems for collection and recycling of tyres with the exception of retreading. As such the bulk of the tyers are informally collected and often illegally burnt in the open to recover steel for recycling. This emits harmful gasses causing air pollution and soil contamination arising from the residues.

2.1.3 Construction and demolition waste

This waste forms low percentage of the total waste produced and it is generated as a result of new construction works, remodeling or demolition. Construction waste comprises debris, steel, timber, iron sheets, tiles and ceramics among others. Although construction and demolition waste are not classified as hazardous, it is a mixed waste source that requires separation into component parts for the purposes of recycling. These wastes currently end up in the disposal sites or are used for backfilling in our road networks within the municipality and also in County. Sometimes this waste ends up in Disposal site. There need for proper requirements to be put in place for those to operate on disposal sites. Transportation Vehicles to be Licensed by Nema.

2.1.4 Biomedical Waste

Biomedical waste also referred to as medical waste forms low percentage of total waste produced and it refers to waste generated in health facilities, research institutions or during immunization of human beings and animals. It's classified into, infectious waste, sharps, pharmaceutical wastes, chemical waste and pathological waste. Biomedical wastes pose risks to human health due to its pathogenic characteristics and hence require prior treatment before disposal.

Currently, segregation is fully embraced in most dispensaries based on the guidelines issued by the Ministry of Health.

Currently, segregation is not fully embraced in most clinics based on the guidelines issued by the Ministry of Health. Although the biomedical waste is expected to be disposed through incineration, some find its way to the Kapenguria municipal dumpsites and others find their way to Kapenguria Townships due to illegal dumping, while some is handled through rudimentary facilities such as kilns. Kapenguria hospital have embraced proper biomedical waste management, the major challenge remains the small clinics and dispensaries which practice illegal disposal of these wastes. There is need for awareness on biomedical waste management within the municipality for safety in the Municipality.

2.1.5 E-waste:

E-waste is an emerging waste stream arising from Electrical and Electronic Equipment's (EEEs) becoming obsolete at the end of life. Municipality has experienced a rapid increase of e-waste due to adoption of ICT across all sectors and an influx of low quality EEEs. E-waste comprises heavy metal components and materials used in the manufacture of electronic goods. Some of these include mercury, brominated flame retardants and cadmium which are considered hazardous if not well-handled during dismantling or recycling can become harmful to human health and the environment.

Batteries can either be alkaline (dry cells) or acid based which support domestic and industrial applications. The acid based (rechargeable and silver oxide) batteries contain heavy metals such as mercury and cadmium which are classified as hazardous substances. This hazardous material if not properly handled and disposed presents a risk to human health and the environment.

Currently, there are no recycling or disposal facilities for alkaline, rechargeable and silver oxide batteries. As such the batteries are disposed in the open dumpsites alongside domestic waste. Proper measures have to be put in place for E-waste management.

2.1.6 Pesticides waste

Pesticides are chemicals used to control pests. Pesticide waste consists of expired and contaminated pesticides as well as the used containers. Due to their toxicity, potential to pollute and threat to human health, pesticide wastes are extremely hazardous and must be transported, treated and disposed of accordingly. These pesticides can contain persistent organic pollutants (POPs), which can accumulate in the food chain if not well managed. Larger

scale generators of pesticides waste incinerate or export the waste to developed countries for treatment or disposal. However small-scale generators dispose pesticides wastes in their farms and such things as containers end in dumpsite. Measures have to be put in place for management of this waste.

2.1.7 Used Oil and Sludge:

Used Oil and Sludge arises from the use of petroleum products. This contains potentially hazardous compounds such as poly-aromatic hydrocarbons that have carcinogenic and mutagenic properties.

Used oil and sludge have a slow rate of decomposition and hence any spillage can accumulate in the environment causing soil and water pollution. There is a need for management of this waste in the municipality.

2.1.8 Sewage Sludge:

Sewage sludge is a sediment material that accumulates over time in the sewage treatment plants and ponds. The widespread disposal of industrial effluent via sewage treatment works results in contamination of sewage sludge with hazardous chemicals, thereby posing particular challenges for its disposal. Sewage sludge that is contaminated by heavy metals from industrial effluent can severely contaminated agricultural land to which it is applied. However, a high proportion of the contaminated sewage sludge continues to be disposed of in dumpsites. In this regard there is a need to pre-treat contaminated sewage sludge before disposal.

Uncontaminated sewage sludge has a variety of commercial uses and can be recycled.

2.1.9 Industrial Waste

Industrial waste is the waste produced by industrial activity which includes any material that is rendered useless during a manufacturing process. Industries produce both hazardous and nonhazardous waste. These wastes include chemical solvents, paints, sandpaper, paper products, industrial by products, metals, municipal solid waste and radio-active waste.

at the moment we have no industrial waste generated but measures are put in place to take care of the imminent opening of industries. Therefore, proper measures have to be put in place for management of this waste.

2.1.10 Asbestos waste-

This waste are found in Kapenguria referral hospoital ,used as roofing materials.

The municipality shall put in place measures to manage this kind of waste as per Cap 346 the Asbestos handling and disposal guideline

2.2 Current waste Management practices in Kapenguria municipality

2.2.1 Waste Segregation

Most of the waste is generated at household, marketplaces and institutions. Currently within the municipality there is no segregation of waste at all. Recovery of recyclable items like plastics, papers, glass and metals is done by increasing number of informal groups.

There is need for private service providers and an MRF to aid in Separation of Reusable and Recyclable items.

2.2.2 Waste Storage and Collection.

Collection of waste is done by Municipal Cleaners daily in Makutano town ,Bendera and Kapenguria offices. Waste is stored in individuals collecting bins at household level and business premises which they Manually transport to County collecting receptacles for storage before transportation. Other market Centers in the municipality waste is collected and disposed in designated points. Others practice illegal burning of wastes Due to Increase in population in the municipality. There is need for Zonation of market centers such as Karas,kishaunet,kirenget,siyoi,lounon,safari hotel,karasTukummo, Kamaua, Chepkobegh,Chesra,Lounon and other

upcoming centers and towns in the municipality to become waste collection points.

2.2.3 Waste transportation.

Waste transportation is largely rudimentary using open modified tractor and only within Mkutano townships, these poor transportation modes have led to littering, making waste an eye-sore particularly plastics in the environment. Disposal of waste in the Municipality remains a major challenge because the Municipality are currently using Kapenguria disposal site. The Municipality hoping to relocate the disposal because it doesn't meet the disposal standards.

Waste in Kapenguria municipality is largely collected by the County Government vehicles. There are no Private Service Providers to offer the services in the Municipality. Transportation is done twice or thrice per week to Kapenguria Disposal site.

2.2.4 Solid Waste Disposal Methods.

Waste disposal is a major environmental challenge in Kapenguria municipality. The common methods practiced include open dumping, open burning, incineration of medical waste, informal waste picking. Of these methods, open dumping is the main mode of disposal in Kapenguria municipality. The municipality disposes waste to Kapenguria dumpsite. The open disposal site has been in use since 1980's and has reached its optimum capacity. The facility poses health and environmental threat to neighboring land uses especially the County Referral Hospital which is situated adjacent to it. Attempts by Kapenguria municipality to find the disposal site has not been successful. The landowners are not willing to provide land for setting up the site due to the fear associated with the disposal site menace. Municipality is hoping to get a site between 1-2 years. They should follow all the Procedures for disposal site establishments and maintenance.



current state of the dumpsite

2.2.5 Waste Recovery initiatives.

The Municipality's waste is generally organic with substantial quantities of valuable components which account for lowest percentage of waste generated. Some of the valuable's category can be reused and recycled such as Paper, Cellulose material, plastic, rubbles and aggregate material such as glasses and metals. Informal waste recycling initiatives are carried out by waste pickers especially at the dumpsite and residential areas. There are

no formal wastes recycling initiatives in the municipality. This policy shall aid in implementation of waste recovery materials.

2.2.6 Institutional Capacity for Solid Waste Management in Kapenguria municipality.

Kapenguria municipal board which currently handles solid waste management matters in the Municipality shall ensure there is enough requisite personnel for effective SWM operations. The unit has a workforce of casual staff who are mostly not skilled to ensure effective delivery of quality service and one Contracted Sharing officer. There is need for more Personnel due to increasing population for effective service Delivery and training of the unskilled personnel.

2.2.7 Financial Aspects.

As explained above, solid waste management consists of collection, transportation and disposal. Currently municipality does not charge any fee on waste collection, transportation and disposal. However, going forward municipality will consider charging a fee that will vary depending on the type of businesses, size of rental houses, factories. This fee will cater for the cost of collection, transportation and disposal. Consideration will also be made to ensure that fee is charged to every landlord/business premise generating waste. The cost will be subjected to Public Participation. Institutions will also pay for services of Transportation to bear for individual responsibility to manage waste.

2.2.8 Public Participation.

Community Participation in SWM is very low and this is shown by limited awareness and knowledge on the importance of a clean and healthy environment. As such, there is poor handling of waste at the household level including lack of segregation, reuse, reduce and recycling. In addition, negative attitude towards waste management and failure to take individual responsibility has contributed to poor practices such as littering, illegal dumping and open burning. These malpractices are common at the household level where residents indiscriminately dispose garbage haphazardly without due regard for the health and environmental implications.

Kapenguria municipality need more awareness on Solid Waste handling, collection, transportation, recovery and transportation for Proper management of Waste.

2.3 Challenges in Waste Management

1 . Lack of awareness and knowledge

There is limited awareness and knowledge on the importance of a clean and healthy environment. This has led to poor practices by the Public towards waste management which has led to environmental pollution. As such there is poor handling of waste at the household level including lack of segregation, reuse, reduce and recycling. In addition, negative attitude towards waste management and failure to take individual responsibility has contributed to poor practices such as littering, illegal dumping and open burning.

2 . Poor management of the disposal site

The municipality dumpsite don't meet the standards for dumpsite. There is need for fencing, putting a security person among other requirements.

3. Low Funding

Lack of prioritization for waste management in the Municipality has led to inadequate budgetary allocation. As a result, management of the entire waste management cycle (collection, transportation and disposal) is hampered. Low funding has also affected investment in waste management facilities and equipment. There is need for small waste collections bins in the municipality.

4. Inadequate segregations

There is lack of waste segregation at source leading to mixed wastes which are collectively disposed of in the dumpsites. Where sorting is done, the problem is compounded by the lack of compartmentalized vehicles for transportation of the sorted waste leading to the remixing. This hampers material recovery, reuse, and recycling. The sorting has largely been relegated to the lowly in society such as the waste pickers and street urchins.

5. limited technical competencies

As a Municipality, we are faced by limited technical competencies in waste management. This has led to poor management of our waste management facilities and equipment and their failure to attain optimal operating capacities.

6. Lack of integration of modern technologies in waste management

Although there are many waste management technologies in the country, there has been low adoption of the same by the relevant practitioners. This as a result of diverse factors including inadequate financial resources to purchase the equipments, lack of incentives including tax waivers, resistance to change, lack of awareness, unavailability of land and weak enforcement.

7. Equipments- lack of funds to buy big equipments for waste transportation

8. Tracking system- adoption of using GPS in waste receptacles and waste transporting vehicle

9. Inappropriate waste transport vehicles

there is limited number of receptacles for segregation to remixing of

10. Untimely and irregular waste collections

there is untimely collection of waste in the municipality due to lack of enough fuel.

11. No waste management Infrastructure-material recovery facility- currently the municipality has no Material Recovery Facility but there is a plan to set up the facility in the municipality.

12. Low upcycling of waste materials (creativity)- there is low upcycling of the waste materials and hence there is room for the research and involvement of learning institutional facility to do more creativity and research on waste management

13. Inadequate data for solid waste management in municipality-

there is no or limited data for waste management in the municipality and hence the municipality will conduct more research and collect more data.

14. waste management plan(zonation)-

waste management plan is key and currently there is poor zonation in the municipality. and therefore, there is room for the improvement and better zoning to ensure effective waste management.

15. illegal disposal of waste

there is illegal disposal of waste in the municipality, and this is mainly because of limited knowledge and awareness and thus give room for public information and awareness on waste disposal for proper waste management.

16. Open burning of waste

there is open burning of waste in the Municipality and thus there is better room for other methods to ensure that waste is better managed by building incineration and material recovery facility (MRF)

CHAPTER THREE

2.0 POLICY STATEMENT

Kapenguria municipal board recognizes solid waste as a resource that should be managed so as to ensure a clean, safe and healthy environment for improved quality of life, promote ecological economy and promote economy vitality in a way that facilitate sustainability(as envisaged in the constitution of Kenya 2020)

POLICY OBJECTIVE

This policy sets out the aim of the Kapenguria municipal board (CMB) to gain control over the waste generated.The policy will lend special emphasis on waste generators responsibility, private sector initiatives, and Solid Waste hierarchy

GOAL

Kapenguria municipal board recognizes solid waste as a resource that should be managed so as to ensure a clean, safe and healthy environment for improved quality of life, promote ecological Integrity and encourage economic stability that facilitates sustainability (as Envisaged in the constitution of Kenya 2010.)

2.1. Guiding Principles

The implementation of this Policy will be guided by the following principles:

Right to a clean and healthy environment:

Under the Constitution, 2010 every person in Kenya has a right to a clean and healthy environment and a duty to safeguard and enhance the environment.

Right to sustainable development:

The right to development will be respected taking into account economic, social and environmental needs. Kenya seeks to achieve people- centered development that builds human capabilities, improves people's well being and enhances quality of life.

Principle of Environmental Protection:

There is need to balance socio economic development and environmental protection. In undertaking waste management, all entities and individual should provide high level of human, health and environmental protection

Principle of Proximity:

To minimize environmental impact and transport costs. In accordance with the principle of proximity, waste should be processed, treated and disposed of as much as possible to the location of its generation.

Precautionary Principle:

The principle states that measures should be taken even if some causes and effects are not fully established scientifically when an activity or product raises threat or harm to human health or the environment.

Polluter pays principle:

The principle states that those who produce pollutants or waste should bear the costs of managing it to prevent damage to human health or the environment.

Zero Waste principle:

The principle states that society should aim for zero waste, designing and managing products and processes that reduce and eventually eliminate the volume and toxicity of waste, to conserve and recover waste resources rather than to burn or bury them. The Waste hierarchy establishes preferred program priorities based on zero waste principle and sustainability. The standard outline of the hierarchy ranks 6 approaches to waste management. In order (most preferable to least preferable) these are: prevention, minimization, reuse, recycle (including composting), energy recovery and disposal.

Extended producer responsibility:

The principle states that producers should be given significant responsibility financially and/or physically for the treatment or disposal of the waste from the products they create. Beyond easing government budgets for waste management, such responsibility in incentives companies to prevent wastes at the source, promoting more environmentally friendly product design and supporting the achievement of public recycling and materials management goals

System of deposit;

When buying certain products, the buyer shall pay a certain added value to the price of the product, which shall be returned to him/her upon restitution of the used products and the packaging to the seller, provided that there is a possibility for using the product.

Partnership:

Building partnerships, collaboration and synergies among various stakeholders from the public, government, non-governmental organizations, civil society and private sector, as well as vulnerable communities and populations including women and youth, will be prioritized to achieve effective implementation of this Policy. The private sector will be encouraged to develop capacities for investment, construction and service delivery in recycling and waste management.

Devolution and Cooperative government:

embracing a system of consultation, negotiation and consensus building in implementation of sustainable waste management between and within the National and County governments.

Equity and social inclusion:

ensuring a fair and equitable allocation of effort and cost as well as ploughing back benefits in the context of the need to address disproportionate vulnerabilities, responsibilities, capabilities, disparities and inter/ intra generational equity. The communities that benefit from sustainable waste management will be actively involved in planning and decision making.

Integrated Solid Waste Management

Hierarchy Integrated solid use of various approaches of sustainable waste management. It establishes the preferred of solid waste management alternatives as follows: waste reduction, reuse, recycling, resource recovery, incineration, and landfilling

CHAPTER FOUR POLICY INTERVENTIONS AND MEASURES

4.0 INTRODUCTION

The municipality shall adopt an integrated approach to solid waste management as well as the principles of solid waste management that form the foundation of this policy.

The policy measures shall be informed of policy statements which prescribe appropriate policy instrument in solid waste manage. In addition, the policy measures are based on constitutional functional assignment of county governments as well as constitutional provisions

4.1 POLICY INTERVENTIONS

The overall aim for solid waste management is protection of human health and the environment in a manner that is affordable, environmentally friendly and socially acceptable. To achieve this there is a need for the Municipality to adopt the following interventions measures:

4.1.1 Integrated Solid Waste Management Hierarchy

Integrated solid use of various approaches of sustainable waste management. It establishes the preferred of solid waste management alternatives as follows: waste reduction, reuse, recycling, resource recovery, incineration, and landfilling

Waste avoidance and reduction

Waste avoidance and reduction is the foundation of the waste hierarchy and is the preferred choice for waste management measures. The aim of waste avoidance and reduction is to achieve waste minimization and therefore reduce the amount of waste entering the waste stream.

Recovery, re-use and recycling

Recovery, re-use and recycling comprise the second step in the waste hierarchy. Recovery, reuse and recycling are very different physical processes, but have the same way of reclaiming material from the waste stream and reducing the volume of waste generated that moves down the waste hierarchy.

Disposal

Disposal is any operation that involves the dumping and incineration of waste without energy recovery. Before final disposal, a considerable amount of pretreatment may be necessary to change the characteristics of the waste in order to reduce the quantity or harmfulness of the waste. Landfills are the most common form of waste disposal but the least preferred option in the waste hierarchy.

Waste Treatment

The following waste treatment technologies are highly recommended to enable Kapenguria municipality to achieve reduction of waste directed to landfills and other disposal facilities.

Material recovery technologies

These include:-

Recycling

Recycling is the processing of waste material into a new product of similar chemical composition. Recycling prevents wastage of potentially useful materials, reduces the consumption of fresh raw materials and energy usage in addition to reducing pollution.

Municipality should embrace full recycling of all recyclable materials to reduce the amount of waste being disposed of at the landfill.

Composting

Composting is the biological decomposition of biodegradable solid waste under controlled aerobic conditions to produce Compost is used as an organic fertilizer in agricultural production. Residents in the municipality should be encouraged and taught to strive to compost all their organic wastes to reduce on organic waste ending at the landfill.

Thermal treatment of waste

Thermal treatment is the combustion of waste at specific temperatures with or with no air supply as part of the process and includes waste incineration, gasification and pyrolysis. The un reusable and non recyclable wastes can be subjected to thermal treatment which is an environmentally sound technology that reduces the volume of waste and inert any hazardous components. At the same time energy can be recovered as an end product

Waste Incineration

Incineration is controlled burning of solids, liquids and gaseous waste. The technology is applicable in the management of hazardous waste streams. Incineration should be undertaken in facilities that meet the requirements in the Third schedule of the Environmental Management and Coordination (Waste Management) Regulations of 2006.

Gasification

Gasification is a process of reacting waste at high temperatures greater than (700 °C), without combustion, with a controlled amount of oxygen and/or steam to generate useful products such as electricity, chemicals, fertilizers and natural gas. This could be an important option in landfills.

Pyrolysis

Pyrolysis is a form of treatment that chemically decomposes organic materials by heat in the absence of oxygen. Pyrolysis typically occurs under pressure and at operating temperatures above 400-500 degrees Celsius.

Biological treatment of waste

This is a natural process that occurs where plant and animal materials (biomass) are broken down in the presence of microorganisms. Biological treatment of waste can either be anaerobic or aerobic. In anaerobic treatment, waste is broken down in the presence of micro- organisms and in the absence of air while in the aerobic treatment, biological degradation of organic waste takes place in the presence of oxygen. Useful products are derived from these two processes mainly biogas which produces electricity and organic fertilizer

In order to promote waste management through Adoption of Integrated Solid Waste Management Hierarchy. The Kapenguria municipal board shall:-

- a) Liaise with the County Government to align County waste management laws and strategies to the waste management hierarchy.
- b) Prioritize waste prevention and minimization in conformance to the waste hierarchy when developing waste management plans and legislation.
- c) Liaise with the County Government to set aside sufficient land for waste management activities, and generate jobs and livelihoods from waste collection, recycling, and waste management activities according to the waste hierarchy
- d) Establish and improve waste management infrastructure to promote source segregation, collection, reuse, set up materials recovery facilities and controlled disposal in sanitary landfill.
- e) In consultation with the County Government, identify and prioritize potential and financial requirements of setting up composting plants and technology in the Municipality.
- f) Establish clear procedures for providing incentives to encourage private sector participation in composting ventures
- g) Ensure the recyclers, bio-waste processors and material recovery facilities shall obtain environmental compliance licenses from NEMA. Promote the establishment of incineration(waste-to-energy programs)

4.1.2 Solid waste generation

In order to promote and facilitate prevention of solid waste generation through sustainable waste generation processes, Kapenguria municipal board 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 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 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 collaboration with national government and relevant stakeholders in the adoption of modern technology in product manufacture so as 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) Establish an inventory for all the waste streams, update any data which shall be disaggregated according to the respective sources and characteristics

4.1.3. Solid waste handling, separation, storage

In order to ensure effective and appropriate solid waste handling, storage and separation, Kapenguria municipal board shall–

- a) Collaborate with relevant stakeholders to carry out awareness creation and capacity development to waste generators on handling, storage and processing of solid waste at source
- b) Ensure that solid waste is segregated or separated at source or point of generation into dry (recyclables) and wet waste (food waste and organic matter) which shall be further segregated and stored under each of the two categories into different forms of waste in accordance with the standards and stored in appropriate receptacles in accordance with the prescribed guidelines and standards
- c) In accordance with the building code and development control laws and policies, owners or occupiers of 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
- d) Ensure solid waste generated from any premises or source is separated and stored within the premises before being collected and transported for recovery and final disposal.
- e) Ensure waste is disposed only in designated points

4.1.4 Solid waste collection

In order to address challenges associated with waste collection, Kapenguria municipal board shall:

Collaborate with other relevant public and private actors to establish an efficient, responsive and coordinated municipality solid waste collection services system which shall among others 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.

- a) In consultation with the National Environment Management Authority and other relevant stakeholders designate, gazette and develop waste collection points in each location according to the solid waste management spatial map.

- b) In consultation with relevant stakeholders, install appropriate waste receptacles in strategic public places for the purpose of collection of solid waste.
- c) Ensure solid waste collection services provided by public or private actors comply with the prescribed standards and operating procedures.
- d) Ensure solid waste collection services from households, commercial, institutional or factory premises shall be carried out by private sector service providers in accordance with prescribed standards and guidelines unless in areas where there are no established private sector service providers for solid waste collection.
- e) Establish a system for collecting solid waste in informal settlements which do not have access to private sector provision of waste collection services.
- f) Establish 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.
- g) 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 Board may establish or facilitate establishment of specialized transfer stations for specific types of solid waste.
- h) In collaboration with the department responsible for public health, maintain waste collection points in conformity with prescribed public and environment health standards.
- i) In collaboration with the department (s) responsible for women, youth, persons with disabilities or other vulnerable groups and County 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.
- j) Initiate and develop public private partnership programmes(PPP)
- k) Ensure that the green procurement principle is adhered to for sustainability
- l) In accordance with Access to Government Procurement Opportunities Policy, provide preferential treatment to youth, women and persons with disabilities in accessing thirty percent of municipal contracts for solid waste collection services

4.1.5 Solid waste transfer and transportation

In order to address challenges associated with solid waste transfer, Kapenguria municipal board shall:

- a) Ensure all solid waste transporters are registered and issued with a permit by the municipality as may be prescribed.
- b) Ensure solid waste transportation services including plant and equipment conform to the prescribed standard
- c) 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
- d) Ensure solid waste transfer and transportation services from households, commercial, institutional or industrial premises shall be carried out by private sector service providers or community-based organization accordance with prescribed standards and guidelines
- e) 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
- f) In collaboration with the departments responsible for physical planning and 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

- g) Ensure the transfer and transportation solid waste done during off peak hours

4.1.6 Solid waste processing and transformation

In order to address the challenges associated with waste processing and transformation, Kapenguria municipal board shall:

- a) In collaboration with other relevant stakeholders mobilize local communities and neighborhoods to promote and facilitate waste processing and transformation technologies
- b) In collaboration with other relevant stakeholders mobilize individuals, local communities, industries and neighborhoods to promote and facilitate donation or sale of used products that may be reused by other users.
- c) Promote private sector participation in solid waste processing and transformation through fiscal incentives, disincentives or fees to induce or promote enterprises involved in waste processing and transformation
- d) Promote green procurement while purchasing goods and services for the municipality

4.1.7 Solid waste disposal

In order to address challenges associated to waste disposal, Kapenguria municipal board shall;

- a) Ensure all waste designated for disposal shall be disposed in accordance with the national policy and standards
- b) Ensure biomedical waste, hazardous and e-waste shall be disposed in accordance with the national policy and standard
- c) In collaboration with the physical planning department, National Environment Management Authority, residents in the potential areas for siting landfills and other relevant stakeholders, designate, gazette and develop sanitary landfills in accordance with the solid waste spatial plan and the county spatial plan
- d) Ensure all open public places where solid waste is dumped is decommissioned.
- e) Ensure open burning of solid waste is prohibited
- f) Ensure solid waste treatment is done before final disposal
- g) Develop a system and standard operating procedures for management of sanitary landfills
- h) Implement and where applicable, enforce national law and policy that prohibits disposal of solid waste into the environment.
- i) Collaborate with other partners in establishing sanitary landfills.

4.1.8 Solid waste management financing

In order to address the policy challenges in financing solid waste management, Kapenguria municipal board shall:

- a) Levy user fees and charges in accordance with the tariff policy stipulated under the Finance Act of the County Government for solid waste management.
- b) Ensure collection of the fees and charges shall be integrated with the county business permits and charges for utility services
- c) In consultation with the national government adopt a 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) 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) Subsidize solid waste management services to low income areas and informal settlements in accordance with the relevant law

- f) Mobilize resources in the form of grants and donations from development partners for financing solid waste management processes.

4.1.9 Solid waste management and informal sector

In order to promote participation of informal sector in solid waste management, the Kapenguria municipal board shall:

- a) Initiate capacity development programs for informal sector engaged in solid waste management ;
- b) Collaborate with relevant stakeholders to facilitate and promote market linkage between the informal sector and investors in solid waste management
- c) Where appropriate develop service agency agreements with the informal sector in the provision of solid waste management services.

4.1.10 Solid waste management and land use planning

The quantities of various 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 to other physical resources such as water resources. Consequently, land use planning has a significant role to play in ensuring sustainable solid waste management. The municipality has no solid waste management spatial plan to, which guides various interventions in solid waste management services.

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, the Kapenguria municipal board shall:

- a) In collaboration with the physical planning department, carry out solid waste management survey using Geographical Information System (GIS), which shall consider –
- b) land use: topography, drainage and soil
- c) infrastructure (transport, communications, health, education, water and energy)
- d) Economic base of the area (urban informal economic base)
- e) human settlements (density and land use)
- f) institutions such as schools and other government institutions, industries and commercial enterprises and non – state organizations
- g) Develop the municipal solid waste management spatial plan which shall include details for each location and sub location as the core decentralized spatial units.
- h) 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
- i) Regulate solid waste management in accordance with the solid waste management spatial plan
- j) In collaboration with the physical planning department designate zones for purposes of ensuring efficiency in service delivery and coordination of stakeholders responsible for spatial planning and county administration to map the Municipality.
- k) Ensure that the county spatial plan designates zoning and setting up of industries that are integrated in terms of use of waste generated.

4.1.11 Planning, Partnerships, Participation and Inter-governmental Relations

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 a 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. Users and non-state providers of solid waste management services are usually excluded from active participation in the management process.

In order to ensure inclusion and participation of users and providers of solid waste management services, Kapenguria municipal board shall:

- a) In collaboration with relevant stakeholders, prepare a municipal solid 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) In collaboration with relevant stakeholders – initiate programmes for mobilizing and creating awareness among residents, local communities and neighborhoods to participate in sustainable solid waste management.
- c) establish mechanisms to receive and handle complaints related to solid waste management service delivery from the respective localities
- d) facilitate community or area-based forums for users and providers of solid waste management services to deliberate on emerging issues in solid waste management so as to enhance efficiency in service delivery promote and facilitate stakeholder-led initiatives on solid waste management,
- e) Consult, inform and coordinate with relevant stakeholders. The municipality shall liaise, consult, collaborate and coordinate with the national government and neighboring counties on matters related to solid waste management

4.1.12 Information, Education and Communication

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 a value-based approach by individuals and entities.

Strategic communication and messaging on solid waste management is instrumental in shaping public opinion and support. The Municipality lacks effective information, education and communication systems and processes. There is low awareness on sustainable solid waste management in the municipality.

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

- a) 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) 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 programs targeting children and youth on solid waste management
- c) In collaboration with the department responsible for information technology develop technology-based communication strategies on solid waste management
- d) In collaboration with the department responsible for information technology management system (IoT) and relevant stakeholders establish a solid waste information management system

4.1.13 Research and development

Solid waste generation is dynamic and changes as society develops. The form of waste streams changes as production processes changes and new products and packaging emerges. Consequently, there is a need for continuous innovation in intervention measures and strategies in solid waste management. In addition, there is a need for evidence-based decision making on solid waste management. There are no research efforts undertaken

by the municipality in regard to solid waste management.

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

- a) Facilitate a capacity development programme for personnel in research and development
- b) Establish a research unit to coordinate, promote and undertake research and development related to environment management and governance
- c) Undertake and collaborate with other relevant research institutions and institutes of higher learning in carrying out research and development in solid waste management
- d) In collaboration with relevant stakeholders disseminate research findings
- e) Establish a research data management system
- f) Ensure that evidence generated through research informs decisions related to solid waste management.

4.2 Existing regulatory framework for solid waste management in Kapenguria municipality

The challenges facing SWM in Kapenguria municipality is mostly due to reliance on national policy and regulatory framework. The county has been operating on National guidelines on Sustainable waste management act , on Solid Waste management.

There is need for the Municipality to develop the policy in order address solid waste management matters. Currently, the municipality does not have a policy and legislation which address SWM matters.

There are no existing by -laws to provide for support on SWM. The policy should encompass all aspects of SWM right from the generation to disposal including provision for waste minimization, composting, informal sector and private sector involvement.

CHAPTER FIVE

5.0.POLICY AND LEGISLATIVE FRAMEWORK ON SOLID WASTE MANAGEMENT

The policy and legislative framework for county 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 county level.

1. **Constitution 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 the 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 county government the function of refuse removal, refuse dumps and solid waste disposal.

2. **The Environmental Management and Co-ordination Act (Cap387)**

The Environmental Management and Co-ordination Act, Cap 387 including subsidiary legislation 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–

development of county environment action plans which provide for environment management systems the standards of waste including issues such as handling, storage,transportation ,segregation and destruction of any waste

prohibition of handling dangerous waste ,classification and management of hazardous and toxic waste

3. 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.

4. National Environment Policy, 2013

The policy provides a 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 reuse

5. 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 waterfronts in Kisumu, Mombasa and Nakuru.

6. The National Solid Waste Management Strategy, 2015

7. 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 for–

definitions and classification of solid waste
the national context and status on solid waste management
the common waste management practices in Kenya
the challenges facing solid waste management in Kenya

integrated solid waste management

the waste management cycle and ideal approaches applicable to Kenya The national strategy sets the foundation for development and adoption of county solid waste management policies and strategies.

Global Policy Related to Solid Waste Management

8. **The global policy related to solid waste management is mainly contained in the United Nations conventions and policies** that provide a framework for solid waste management and which have implications on county solid waste management policies and laws. They include–
9. **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 gasses in sector such as waste management sectors
10. **The Kyoto Protocol to the United Nations Convention on Climate Change.** Article 1 (viii) provides for States’ obligation to limitation or and reduction of methane emissions through recovery and use of waste management. The Protocol obligates States to formulate and implement solid waste management programs that are intended to mitigate climate change
11. **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 national government
12. **The Rio Declaration on Environment and Development (Agenda 21-Global Program 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
13. **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 county model policy shall include –
 - Goal 3:** Ensure healthy lives and promote wellbeing for all at all ages
 - Goal 6:** Ensure availability and sustainable management of water and sanitation for all
 - Goal 9:** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12: Ensure sustainable consumption and production patterns

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

There are other national policies and laws that have implications on County Solid Waste management (or the process and institutional frameworks for county policies and laws). These include–

- 14. 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
- 15. Public Finance Management Act, Cap 412 C**, which provides for financial planning and management at the national and county levels including linkage of development planning, budgeting and public expenditure
- 16. 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
- 17. Physical Planning Act, No. 6 of 1996**, which provides for physical planning and development control in Kenya, which is mainly a county function. Integrated Solid Waste Management System requires functioning and effective spatial planning, zoning and land laws.
- 18. Legal Notice No. 137 on Transfer of Functions to County Governments, 2013**, which provides for unbundling of county functions stipulated under Part 2 of the Fourth Schedule to the Constitution.

CHAPTER SIX

6.0. Policy Implementation, Monitoring and Evaluation

6.1. Introduction

This chapter outlines the mechanisms for implementing, monitoring and evaluating the policy. For intended policy outcomes to be achieved, there is a 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.

6.2. Policy Implementation

Institutional framework

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

6.3. Kapenguria Solid Waste Management Committee

Kapenguria municipality shall establish a solid waste management Committee which shall consist of ;

- i. the Municipal manager who shall be the chairperson;
- ii. the officer in charge of environment in the municipality who shall be the secretary;
- iii. the National Government officer in charge of west Pokot Sub-county where the municipality lies;
- iv. the officer in charge of public health matters in Kapenguria Ward
- v. representative-(KNCCI)
- vi. representative for CSOs dealing with waste management
- vii. representative of waste pickers

The committee shall be responsible for –

- a. coordinating public and private sector provision of solid waste management services in the municipality
- b. providing a platform for public-private dialogue, consultation, collaboration and participation in solid waste management in the municipality
- c. facilitating of Municipal residents to manage solid waste
- d. ensuring harmonization of public and private sector strategies and programs on solid waste management in the municipality
- e. monitoring the implementation of this policy and other solid waste management policies, strategies, plans and programs at the municipality level
- f. monitoring the quality and adequacy of provision and delivery of solid waste management services in the municipality
- g. organizing and facilitating town forums on solid waste management;
- h. advising the Municipality Board on appropriate legislative and policy measures on 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, non-remunerable terms

6.4.Planning and Performance Management

Implementation of the policy shall be undertaken through development of municipal plan.In accordance with the County Governments Act, the municipal plan shall be part of the County Integrated Development Plan (CIDP 2022-2027). The county Medium Term Expenditure Framework (MTEF) and the County Fiscal Strategy Paper shall adequately cover the strategies and programmes provided under the municipal plan. The municipal plan shall be implemented annually through the annual development plan

Implementation of this policy shall be integrated with the County and Kapenguria municipality performance management system through the municipal plan. The annual performance contracting and targets for the municipality responsible for implementation of this policy shall be aligned to activities and programs in the municipal 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 municipal manager and other stakeholders.

6.5.Legal and Administrative Reforms

In addition to programmes and projects to be designed under the municipal plan, appropriate legal reforms related to solid waste management shall be undertaken. They shall be prepared for enactment or adoption laws, guidelines, standards and frameworks. Key among them shall be enactment of Kapenguria municipality Solid Waste Management Bill.

6.6.Collaboration with National Government

As stipulated under Article 6 and 189 of the Constitution, the county government through Kapenguria 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 Kapenguria municipality board shall initiate intergovernmental collaboration mechanisms with the national government ministry of environment and other agencies responsible for matters related to the solid waste management.

6.7.Staff Capacity Development

The Kapenguria municipality board shall in collaboration with the department responsible for human resource management and the County Public Service Board, source for the municipality as , highly qualified professional staff in line with respective policy measures. In addition, the municipality and human resource management department shall develop and facilitate continuous professional and capacity development for all relevant officers in various departments responsible for implementing this policy.

6.8.Policy Monitoring and Evaluation

Design of indicators

In order to ensure effective implementation of this policy, there shall be a continuous monitoring of the results of programs and activities undertaken to implement this policy. The Kapenguria municipality board shall in collaboration with national, county government and relevant stakeholders design the core outcome indicators to be adopted in measuring the results.

Monitoring and evaluation framework and system

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

- a. The Kapenguria municipality board shall designate staff to be responsible for coordinating monitoring and

evaluation of implementation of this policy.

- b. In each period of 3 months, the Kapenguria municipality board shall prepare a report on the progress made in implementing the policy, which shall be submitted to the county executive committee for consideration and decision-making.
- c. There shall be an 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 outcomes 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 Kapenguria municipality board shall disseminate policy evaluation reports to county and national government solid waste management stakeholders.

6.9. Role of stakeholders

Successful implementation of this strategy requires the involvement of several actors whose roles are outlined below;

1. Ministry of Environment, Water and Natural Resources

Give policy direction on solid waste management initiatives

2. NEMA:

- a. Develop and disseminate public information on the regulatory requirements for waste management in Kenya;
- b. Enhance the capacity of the county government and municipalities on zero waste management systems and approaches applicable in the county.
- c. Hold public awareness sessions (for example, school workshops, public consultation exhibitions and public events) on solid waste management initiatives;
- d. Support the dissemination of waste management research and development findings
- e. Involve mass media dissemination techniques, such as the publication of news articles and press releases, in addition to ensure coverage in both print and media outlets.
- f. Undertake enforcement activities of the laws developed on solid waste management and surveillance exercises on illegal waste related activities. Monitoring and evaluation of the strategy

3. County Government

- a. Responsible for drawing up action plans for implementation of applicable solid waste management systems;
- b. Source adequate funding for development of sustainable waste management initiatives in the entire cycle;
- c. Put in place measures for enticed Public-Private-partnerships (PHP);
- d. Benchmarking best practices of appropriate technologies;
- e. Undertake periodic clean-up activities.
- f. Provision of equipment for waste segregation and transport systems;
- g. Zone the waste operational areas;
- h. Continuous management of activities/facilities to ensure all the waste is transported to the designated waste disposal sites in a timely manner
- i. Monitoring and evaluation of the strategy.
- j. Ensure wide coverage and no littering of waste through improved collection methods and facilities.
- k. Progressively improve the designated official county disposal site towards a sanitary landfill

4.Civil Society Organizations (CSOs) and NGOs

- a. Promote and /or undertake income generating ventures in waste management initiatives;
- b. Represent the public's interest in the solid waste management agenda, nationwide and in support in identification of illegal waste related activities.
- c. . Advocate for change in the public's knowledge, attitude and practice towards sustainable waste management.
- d. Private Sector
- e. Through PPP, Involvement in the development of effective and efficient solid waste management facilities;
- f. Prioritize on corporate social responsibility (CSR) on waste management
- g. Empower communities and other stakeholders in understanding waste management related issues and in finding solutions for the same

5.The Citizens/Public

- a. Change attitude and practice to embrace the concept of a waste generator's responsibility by ensuring waste is appropriately managed at source and/or in all phases of the waste management cycle;

6.Ministry of Trade

- a) Provide opportunities to accelerate the diffusion of waste processing technology and create loops in the manufacturing process to keep resources in the production line.

7.CM Committee

- a) Participate in creating awareness on Solid Waste Management in the Municipality and Follow up on Policy Implementation

8.Public Service Board

- a) Assist in Employment of Qualified Staff in Waste Management

TABLE ON IMPLEMENTATION AND REVIEW OF THE POLICY

No	Objective	Key action	Responsibility	Time years	Budget (key actions has budget implications)
1	To enhance solid waste collection and transportation services in Kapenguria municipality	<p>Purchase a well covered and efficient garbage collection vehicle</p> <p>Outsource solid waste management in Kapenguria municipality to</p> <p>Promote enabling environment for public private partnership</p> <p>Enable informal waste recycling groups</p> <p>Provide Daily collection of market waste ,pavements cleanings and drainage systems</p>	<p>KMB</p> <p>NEMA</p> <p>Partners</p> <p>Waste pickers</p> <p>Municipal cleaners</p>	<p>2</p> <p>Immediately</p>	

2	Public awareness and education on solid waste management	<p>Create community awareness on solid waste management</p> <p>Designate clean up days</p> <p>Hold workshops and seminars on proper solid waste management</p>	<p>KMB</p> <p>NEMA</p> <p>Partners</p>	1	
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3	Promote segregation of wastes at the source	Enact municipal regulation to promote waste separation at the source Promote waste separation and sorting at household level Install litter more bins for segregation to control littering and promote waste separation at the source Enact and enforce solid waste management by-laws	KMB Department of Public Health Waste pickers Citizens	2	
4	Improve waste disposal and treatment	Identify new disposal and transform to sanitary landfill Maintain solid waste disposal sites Introduce waste treatment infrastructures Adopt land filling for residual waste	KMB Department of health West Pokot County government Partners	4	
5	To strengthen institutional capacity	Recruitment of additional staff to be trained on SWM improvement of working condition	KMB Human resource County Public service board	1	

6	Proper handling of hazardous wastes	Promote waste separation at the source Provide incineration Services	KMB PUBLIC HEALTH NEMA Citizens	2	
7	Improve street drainage market, parks and cleaning services	Provision of adequate litter bins in strategic places within municipality Provide additional labor construction of storm drain systems	KMB Public works Partners	2	
8	integrate modern technologies in waste management	Provision of modern technologies in waste management	KMB Partners	2	
9	Adoption of tracking systems in waste receptacles and vehicles	Provision of tracking systems in waste transportation vehicles and receptacles	KMB	2	
10	Promote faster collection and transportation of wastes	Enhance faster transportation of wastes	KMB	2	
11	Establish waste management	Establish MRF, Composting site	KMB Partners	2	

	infrastructure				
12	Promote upcycling of waste materials	Promote upcycling of waste products	KMB Partners	3	
13	Establish waste zonation areas Promote research development Prohibit illegal disposal and open burning of waste	Establish waste management spatial plan Establish research institutions promote proper waste disposal	KMB Partners KMB KMB	3 2	
15	Promote community based waste management initiatives	Provide training to small scale businesses on SWM	KMB	2	
16	Promote research and technical knowledge	Establish linkages with government ,academia and private sector on SWM	KMB Partners	2	

17	Maintain a database of SMW in the county	Set up data collection systems within the municipality	KMB GIS Department	3	
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18	Financial Aspects	Support municipality with adequate funds	Partners County government	1	
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19	Policy directions	Give policy directions	KMB	1	
20	Initiate intergovernmental collaborations	Enhance intergovernmental Agreements	County Government KMB	2	
21	Collect and Reuse recyclable and reusable SW Products	Enhance waste recycling	Waste pickers	1	
22	Develop and disseminate public information on regulatory requirements for SWM		NEMA	2	

23	Create awareness to commercial businesses on SWM	Enhance awareness to commercial businesses on SWM	Trade department	2	
24	Change in attitudes and practices to embrace the concept of waste generators responsibility	Enhance positive attitudes towards SWM	Citizens/public	1	
25	Continuous Monitoring And Review of the Policy	Provide continuous monitoring on SWM	KMB	3 Months and more	