

EMBU COUNTY GOVERNMENT



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MINISTRY OF LAND, PHYSICAL PLANNING, URBAN DEVELOPMENT, HOUSING, WATER & IRRIGATION,
ENVIRONMENT, & NATURAL RESOURCES

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The National KUSP Coordinator
P.O Box 34477-00100
Nairobi

RE: FOWARDING OF APA-3 SELF ASSESSMENT DOCUMENTS

Reference is made to your letter ref: **MHIHUD/HUD/UD/5/14/1/VI/(75)** dated **20th April 2021** on the 3rd Annual Self Performance Assessment. I therefore hereby forward the Solid Waste Policy.

Yours faithfully


Jayne N. Mugambi
CECM-Urban Development





EMBU COUNTY GOVERNMENT

MUNICIPALITY OF EMBU

Embu Municipality Waste Management Policy

June 2019

VISION

To be the leading Municipality in integrated waste management system.

MISSION

To promote a healthy, safe, secure and sustainable environment for all through incorporation of modern technology on waste management.

CORE VALUES

- Accountability
- Transparency
- Professionalism
- Integrity
- Public Participation
- Teamwork
- Innovation and Creativity

FOREWORD

Waste management remains one of the major challenges facing Embu Municipality. The impact of the indiscriminate waste disposal continues to adversely affect service delivery and it's against this background that Embu Municipal Board has developed a waste Management Policy which will also incorporate the emerging issues in the management of waste.

The purpose of this policy is to provide a framework to address waste management problem in the municipality and aims at achieving a sustainable clean environment. It will also ensure that the Municipality, in collaboration with other stakeholders, is able to sustain the provision of adequate and quality services.

The policy will assist the Municipality in the provision of quality services in waste management as one of the core functions especially in guiding the Board in implementing waste management programs to facilitate effective and appropriate response to waste management challenges. This policy is also an affirmation of the Board's commitment to intensify its campaign against improper disposal of waste into the environment and ensure a harmonized society in the Municipality. The ultimate goal of this policy is to guarantee the residents of Embu municipality a clean, healthy and safe environment as enshrined in the constitution.

I wish to thank the representatives from 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 the other in making this policy.

Mr. Kenneth Mwige

3.2 CHAIRMAN

EMBU MUNICIPAL BOARD

PREFACE

Waste Management is one of the biggest challenges facing Embu Municipality in its endeavor to provide a clean and healthy environment to the residents. In this respect, the Board has demonstrated both concern and commitment by taking concrete steps in the management of waste in the entire Municipality.

As a sign of this commitment, the Board has prepared this policy for waste management. The policy addresses the Municipality's waste management needs and illustrates the methods by which the municipality will handle all types of wastes generated within its area of jurisdiction. The policy will focus on enhancing waste collection, disposal and reduction.

This policy builds on the previous planning efforts and describes policy measures for expanding the waste management programs in the Municipality. In this manner, the policy is intended to serve as a management instrument for the Board. The document advocates for the adoption of a waste management hierarchy.

The policy emphasizes on the need for an integrated waste management approach that meets sound economic and environmental objectives which often require different wastes generated individually to be sorted throughout the collection, processing, recovery and disposal sequence. Previous practices had all waste types mixed in the management cycle, which resulted in health and environmental hazards and hindered reuse and recycling of the waste resources.

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 services to the Municipality citizenry through this policy.

Hon . Josphat Kithumbu

3.3 CECM - URBAN DEVELOPMENT

LIST OF ACRONYMS

CBD	Central Business District
IWM	Integrated Waste Management
MDAs	Ministries, Departments and Agencies
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organization
SMEs	Small and Micro Enterprises
SWM	Waste Management

TABLE OF CONTENTS

Contents

3.2	REPUBLIC OF KENYA	i
	VISION	ii
	MISSION	ii
	CORE VALUES	ii
	FOREWORD.....	3
3.3	CHAIRMAN	3
	PREFACE.....	5
3.4	BOARD MEMBER AND CECM -LAND, PHYSICAL PLANNING, URBAN DEVELOPMENT & HOUSING, WATER & IRRIGATION, ENVIRONMENT & NATURAL RESOURCES	5
3.5	EMBU MUNICIPAL BOARD	5
	LIST OF ACRONYMS	7
	TABLE OF CONTENTS	8
	INTRODUCTION	11
1.0	Background	11
1.2	Policy Development Process.....	11
1.3	Geographic Context	11
1.4	Institutional Context	12
1.4.1	Embu Municipal Board (EMB).....	12
1.4.2	Mandate of EMB	12
1.5	Policy and Legislative Context	13
1.5.1	National Legislative and Regulatory Framework for Waste Management	13
1.5.2	Existing Legislative and Regulatory Framework for Waste Management in Embu Municipality	14
2.0	SITUATIONAL ANALYSIS	17
3.6	2.1 The Waste Management Problem	17
2.2	Waste Collection & Storage, and Transportation.....	17
2.3	Waste Disposal Methods	18
2.4	Waste Recovery initiatives	18
2.5	Institutional Capacity for Waste Management in Embu Municipality.....	18
2.6	Financial Aspects	18
2.7	Public Participation	19
3.0	THE POLICY INSTRUMENT	20
3.1	Policy Statement	20
3.2	Guiding Principles.....	20

3.3	Policy Objective	22
3.4	The Integrated Waste Management Strategy (IWM)	22
4.0	POLICY INTERVENTIONS	23
4.1	The Waste Management Challenges	23
4.2	Goal for Waste Management	23
4.3	POLICY OBJECTIVES	24
	Tactics	25
3.5	Tactics	26
	Tactics	27
	Tactics	28
3.6	Tactics	29
5.0	WASTE MANAGEMENT PLAN.....	30
ANNEX 1 - WASTE MANAGEMENT POLICY- IMPLEMENTATION		
MATRIX/WORKPLAN.		
		33
3.7	Establish and maintain a data base on WM in the municipality	35
3.8	Promote research and technological advancement on waste management.....	35
3.9	ANNEX II: WASTE COLLECTION AND DISPOSAL PROGRAMME	37

INTRODUCTION

3.4 1.0 Background

Solid waste management remains one of the critical development challenges globally, nationally and at the county 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, accumulation of solid waste has environmental, health, social and economic implications in the long term. 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 waste management in Embu Municipality. The policy shall guide the waste management actors providing effective, efficient and sustainable services while utilizing waste as an economic resource.

3.5 1.2 Policy Development Process

This policy was developed through a consultative process. The key policy actors in solid waste management in the county were engaged during the preparation process. Specifically, national and county department departments and agencies involved in waste management were consulted. In addition, private actors in solid waste management such as solid waste collectors and transporters, resident associations, waste sorters and recyclers participated in the process.

3.6 1.3 Geographic Context

Embu Municipality is located approximately 130 kilometres northeast of Nairobi towards Mount Kenya on the West side of the County. It is 120km from Meru and 25km from Siakago town. It is served by two major roads: the B6 Nairobi-Embu-Meru road, and the B7 Embu-Siakago-Garissa road. Located on the south eastern a slope of Mount Kenya, Embu municipality has an elevation of 1,350 metres (4,429ft) located [0°32'S, and 37°37'E](#).

The 2009 Census reported Embu urban centre had a core-urban population of 35,736 people; a peri-urban population of 24,937 people; and a total population as 60,673 people. The economy of the town is similar to that of other urban areas in central Kenya, with the agricultural economy of the hinterland strongly linked to the town's

economy. Other sectors include commerce, financial services, and the informal economy. The presence of several institutions of higher learning has led to a significant boost of the town's real estate market, with an increased demand for housing and office space.

3.7 1.4 Institutional Context

1.4.1 Embu Municipal Board (EMB)

Embu 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 in June 2019 following the approval of the Municipal Charter by the County Assembly of Embu. The Board has eight members headed by the Chairman and the Municipal Manager who is the secretary and head of the Executive. The Charter spells out the mandate of the Board and key among them being Waste Management (SWM).

1.4.2 Mandate of EMB

The Mandate of Embu Municipal Board is drawn from the Urban Areas and Cities Act CAP 275 of the Laws of Kenya and the Embu Municipal Charter.

The Mandate includes:

- ❖ Overseeing the affairs of the Municipality
- ❖ Developing and adopting policies, plans, strategies and programmes, and setting targets for delivery of services
- ❖ Formulating and implementing integrated development plan for the Municipality by controlling land use, land sub-division, land development and zoning by public and private sectors for any purpose, including industry, commerce, markets, shopping and other employment centres, 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
- ❖ Promoting and undertaking infrastructural development and services within the Municipality as may be delegated by the County Government
- ❖ Developing and managing schemes, including site development in

- collaboration with the relevant National and County agencies
- ❖ Maintaining a comprehensive database and information system of the administration and providing public access thereto upon payment of a nominal fee to be determined by the Board
- ❖ Administration and regulating of internal affairs and
- ❖ Implementation of applicable National and County legislation

3.8 1.5 Policy and Legislative Context

1.5.1 National Legislative and Regulatory Framework for Waste Management

The Constitution of Kenya (CoK) Article 42 states that every Kenyan citizen has a right to a clean and healthy environment that includes the right to have the environment sustainably protected through legislations and other measures. It also devolved waste management to the 47 county governments. This is implemented through various policy and regulatory frameworks as follows:

Environmental Management and Coordination Act (EMCA) and the EMCA Waste Management regulations (2006) provide a general framework for waste management in Kenya and provide a guide for licensing, transportation and disposal of waste. The generator of waste, transporter, recyclers and institutions that own disposal facilities have obligations to ensure the activities do not deprive citizens the above constitutional right.

The Waste Management Regulations- 2006 provide a framework for managing the environment including waste management and classifies waste as hazardous and non-hazardous waste, with a focus on transportation, disposal licensing and burying of waste. National Environment Policy 2013 acknowledges that unsustainable consumption and production patterns leads to excessive waste generation and calls for development of integrated national waste management strategy, promotion of economic incentives to manage waste and promotion of clean production, waste recovery, recycling and reuse.

The Occupational Safety and Health Act, 2007 Part IX Chemical Safety, Section 83 Subsection IV states that at every workplace where chemicals or other toxic substances are manipulated, the employer shall develop a suitable system for the safe collection, recycling and disposal of chemical wastes, obsolete chemicals and empty

containers of chemicals to avoid the risks to safety, health of employees and to the environment.

The National Environmental Management Authority (NEMA) Waste Management Strategy (2015) aims to create a 7R oriented society in Reducing, Rethinking, Refusing, Recycling, Reusing, Repairing and Refilling. Focus areas being waste collection, transportation, and disposal and licensing. The order prescribed by strategy of the 7R is not in any environmental waste management priority. The strategy also focuses attention on the 5 urban centers proposed by Vision 2030.

Gazette Notice number 2017 totally banned the manufacture, sale, export and importation of plastic carrier bags in Kenya. The ban of the polythene carrier bags effected in August 2017 had a great impact towards reducing waste generation in Kenya. Waste reduction is considered a key factor for the reduction of green gas house emissions.

National Appropriate Mitigation Action (NEMA 2016) proposal for a Circular Economy Waste Management Approach for Urban Areas in Kenya was developed by the Ministry of Environment and Natural Resources in 2016. The NEMA concept include waste sorting, creation of recycling points, recycling of 600 tons of waste per day and composting facilities for organic waste treatment.

The National Climate Change Action Plan 2018–2022 proposes to reduce GHG's emissions through adoption of circular approaches to waste management and engineered landfills.

Additional instruments include Kenya vision 2030, Draft chemical regulations, 2019, Pest Control Products Act, Cap 346 Asbestos guidelines, Air quality regulations 2014 and E-waste guidelines (2014).

1.5.2 Existing Legislative and Regulatory Framework for Waste Management in Embu Municipality

Embu Municipality has been operating on the conservancy policy which lay emphasis on collection and disposal of refuse as outlined in local government act CAP 265(repealed). The County Governments Act, 2012 section 104 (2) provides for county planning to include environmental planning.

Other sectorial statutes which provide for SWM are the Public Health Act CAP 242 and Environmental Management and Coordination Act (EMCA) 2015, which allocates considerable property rights as far as various aspects of environmental management are concerned.

NEMA has also enacted waste management regulations of 2006 which provide and elaborate guidelines for handling of SWM in general. In addition, the County Government of Embu has enacted Embu County Environment Management and Protection Act, 2015, (ECEMPA, 2015) and Embu County Water Act 2015, which seeks to promote a clean, safe and healthy environment and water at the local level. ECEMPA, 2015 addresses issues pertinent to clean and healthy environment, waste management, air pollution, public nuisances, outdoor advertising and noise pollution.

3.9 1.6 Conceptual Framework

Waste emanates as a result of human activities. The term “waste” in common terms implies something that has no value and that should be discarded. Management of waste is a public issue that has health, environment, economic and social effects at household, local, national and international 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.

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.

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 from public spaces such as streets, markets, slaughter houses, public toilets, bus stops, parks and gardens.

The modern 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 2 complementary analytical frameworks on ISWM. The analytical frameworks are the “two-triangles” ISWM analytical framework advanced by UN-Habitat and the Waste Management Hierarchy advanced by UNEP.

2.0 SITUATIONAL ANALYSIS

3.102.1 The Waste Management Problem

Waste management remains one of the major environmental challenges facing most urban centers in Kenya today and Embu Municipality is no exception. Lack of proper management has had major implications to the health, Environment, Economy and the Society at large. Lack of good waste management affects negatively the environmental quality indicators such as aesthetics, ecology and human health. Reducing these negative impacts requires best practices in the way waste is generated, stored, transported and disposed.

Bad practices with negative impacts to air, water and soil quality need to be stopped. When materials are burnt, pollutants are released to the air, water soil and life support systems. These negative impacts need to be minimized by introducing best technologies and environmental practices.

According to the World Bank Report for African countries, the annual growth rate of waste generation is 2.09 %. Currently, the municipality is estimated to produce 1530 tons of waste every month with much of this waste coming from the fresh produce markets and residential houses.

The Waste Management (WM) in the Municipality involve three stages namely; collection and storage, transportation and disposal.

2.2 Waste Collection & Storage, and Transportation

In terms of frequency, collection and transportation services are provided daily within the Central Business Districts of Embu town and at least twice a week on the neighboring areas within the Municipality. Garbage collection services are currently provided by the Municipality in partnership with the County Department of Public Health. The street cleaning services which accounts for much of the municipal wastes is also provided within the Embu CBD, and Market within the Municipality.

Waste in the town is largely collected by the County Government while private operators dominate collection in residential areas.

3.112.3 Waste Disposal Methods

Waste disposal is a major environmental challenge in Embu Municipality. The common methods practiced include open dumping, open burning, use of skips, dust bins and informal waste picking. Of these methods, open dumping is the main mode of disposal. Disposal site is located at Kagunga, ten (10 kilometers from Embu town. The current site is adequate but requires environmental interventions to buffer it from creating negative impacts to the immediate neighbourhood.

2.4 Waste Recovery initiatives

The Municipality's waste is generally organic with substantial quantities of valuable components which account for a smaller percentage of waste generated. Some of the valuable categories of waste that can be reused and recycled include paper, cellulose material, plastics, rubber 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 a few waste recycling initiatives in the municipality and they mainly engage in utilization of biodegradable waste from the markets for the preparation of compost manure.

3.122.5 Institutional Capacity for Waste Management in Embu Municipality.

The Public Health unit which currently handles waste management matters in the Municipality does not have the requisite personnel for effective Waste Management (WM) operations. Inadequacy in personnel, equipment and inappropriate dumpsites are key challenges in managing the waste.

2.6 Financial Aspects

As explained above, waste management consists of collection, transportation and disposal. The WM service charges vary depending on the type of businesses. This is a combined fee that caters for the cost of collection, transportation and disposal. A rate is charged through the business permits. However, experience has shown willingness of the people to pay for garbage collection services is very low.

2.7 Public Participation

Community participation in WM 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 without due regard for the health and environmental implications.

3.0 THE POLICY INSTRUMENT

3.133 .1 Policy Statement

Embu Municipal Board recognizes waste should be well managed to ensure a clean, safe and healthy environment for improved quality of life, promotion of ecological integrity and encouragement of economic vitality in a sustainable manner.

3.14 Guiding Principles

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

(i) **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.

(ii) **Right to sustainable development:** The right to development will be respected taking into account economic, social and environmental needs. Embu Municipality seeks to achieve people-centered development that builds human capabilities, improves people's wellbeing and enhances quality of life.

(iii) **Principle of Environmental Protection:** In undertaking waste management, all entities and individuals should provide high level of human, health and environmental protection.

(iv) **Principle of Proximity:** To minimize environmental impact and transport costs, waste should be processed, treated and disposed as close as possible to the location of its generation.

(v) **Precautionary Principle:** Preventive action should be taken and environmental damage should be rectified at source as a priority.

(vi) **Polluter pays principle:** Those who produce pollutants or waste should bear the costs of managing it to prevent damage to human health or the environment.

(vii) **Zero Waste principle:** The 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.

(viii) **Extended producer responsibility:** The producers should be given significant responsibility financially and/or physical for the treatment or disposal of the waste from the products they create. Waste management responsibility is given as an incentive to companies to prevent wastes at the source, promote more environmentally friendly product design and support the achievement of public recycling and materials management goals.

(ix) **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 the used products and the packaging to be processed, for which they need to be labelled in a manner that is established by law and another regulation.

(x) **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.

(xi) **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.

(xii) **Equity and social inclusion:** Ensuring a fair and equitable allocation of effort and cost, as well as ploughing back of benefit's in the context of the need to address disproportionate vulnerabilities, responsibilities, capabilities,

disparities, and inter- and intra-generational equity. The communities that benefit from sustainable waste management shall be actively involved in planning and decision-making.

3.15 Policy Objective

To maintain a comprehensive, integrated waste management system that addresses collection and storage, transportation, and disposal. The approach will address the Waste hierarchy elements of source reduction, reuse, recycling, resource recovery, incineration, and landfilling, in proportions appropriate for the municipality's needs.

3.16 The Integrated Waste Management Strategy (IWM)

Waste management issues run across various aspects of our daily life from households to communities, cities, regions and country level. Each level is comprised of stakeholders that play a pivotal role to waste management system wherein activities of each directly affect the effectiveness of the system. Recent years have shown the increase of community-oriented approach towards waste minimization in many cities all over world. Partnerships among stakeholders have been built, bridging linkages between the formal and informal players in waste system in both public and private sectors.

Financing is one of the major constraints of many County Government agencies in Kenya to address waste problems. Multi-stakeholder partnership is potentially one of the most viable solutions as it brings and taps in potential financial resources. The increase in participation of external agencies such as international and local organizations as well as private entities in waste management (WM) has also contributed substantially to the inadequacies and limited administrative and technical capacities of county governments.

The increase in community-based approach in waste management is an encouraging feature in many cities in the world. However, many of these initiatives have placed bigger emphasis on waste disposal and recycling. Relatively little has been done to tackle urban organic wastes that generally represent over 50 percent of the total waste generation. Addressing this aspect would amount to achieving benefits for stakeholders like County Governments as it induces savings on operational cost of waste transport and reduce the impact on

disposal sites. Furthermore, it reduces waste collection and management costs and opens income opportunities for communities and households.

4.0 POLICY INTERVENTIONS

3.174.1 The Waste Management Challenges

The overall aim of the Waste Management policy for the Embu Municipality is to enhance waste management for provision of a clean and healthy environment to the residents of Embu Municipality. As highlighted above the main waste management problems facing Embu Municipality include;

- ❖ Inefficient and ineffective waste collection and storage, transportation and disposal system
- ❖ Uncoordinated informal waste minimization activities
- ❖ Inadequate systems for handling hazardous waste
- ❖ Inadequate capacity in WM
- ❖ Inadequate financing mechanism for WM
- ❖ Low coverage of waste collection services
- ❖ Indiscriminate waste disposal
- ❖ Inadequate treatment facilities
- ❖ Inadequate stakeholder involvement in WM
- ❖ Irregular collection
- ❖ Inappropriate siting of disposal site

3.184.2 Goal for Waste Management

Reduction and elimination of adverse impacts of waste materials on human health and environment to support economic development and superior quality of life.

In order to achieve this goal, the following strategic objectives are proposed to improve waste management in the entire Embu municipality;

- i) To provide efficient and economical refuse collection recycling and disposal services.

- ii) To promote waste management through the adoption of waste management hierarchy.
- iii) To promote proper waste disposal and treatment.
- iv) To reduce waste and maximize reuse and recycling.
- v) To educate and sensitize the public on SWM.
- vi) To strengthen institutional and organizational capacity in waste management
- vii) To promote sustainable collection and disposal of hazardous waste
- viii) To formulate policies, legislations and economic instruments on SWM
- ix) To inculcate responsible public behavior on waste management
- x) To promote waste segregation at the source
- xi) To establish environmentally sound infrastructure and systems for waste management

These issues will be addressed in the following section, with the identification of each problem, specific objectives and key actions.

4.3 POLICY OBJECTIVES

4.3.1 General Objective

To maintain a comprehensive, integrated waste management system that addresses collection and storage, transportation, and disposal. The approach will address the Waste hierarchy elements of source reduction, reuse, recycling, resource recovery, incineration, and landfilling, in proportions appropriate for the municipality's needs.

4.3.2 Specific objectives

Objective1: To provide efficient and economical waste collection and storage.

In Embu Municipality waste is collected at household, business, institutions, industries and market centres. The waste should be segregate at the source based on guidelines provided by the Board. Waste should be collected in an environmentally sound manner without causing pollution, bad odour or further littering.

The segregated waste should be stored in a manner that is not detrimental to the environment. A Waste management zoning plan provides that the framework for the town's spatial coverage of waste management is needed. This arrangement aims to provide an

enabling environment for the realization of public-private-partnerships through;

- ❖ The issuance of service contracts by the Board whenever required.
- ❖ Elimination of the problem of coordination, duplication of efforts and resources.
- ❖ Curb unhealthy competition by waste management stakeholders.
- ❖ Reduce long travel routes in search of customers and thus increase level of service provision through benchmarking;
- ❖ Act as basis for waste commercialization i.e. franchise depending on the capacity and level of technology required.

The policy will also seek to embrace the involvement of community groups and private sector in waste collection.

3.19 Tactics

- ❖ Develop a zoning plan to ensure effectiveness and efficiency in the Operational areas.
- ❖ Develop guidelines requiring all legal entities or individuals collecting waste within the municipality provide tracking documents of source and destination.

Key actions

- a) Mapping and zoning of waste operational areas, and routes
- b) Waste disposal Tracking
- c) Adoption and enforcement of NEMA air quality regulations
- d) Enforcing guidelines on garbage tracking

Objective 2: To promote safe, efficient and economical transport system

Waste collected and stored at collection centres will be transported to a landfill or a recycling plant through safe, efficient and economical way in accordance with the guidelines provided by the Board.

The policy will also seek to embrace the involvement of community groups and private sector in transportation.

Tactics

- ❖ Ensure that waste service providers transport their waste to materials recovery facility and to a landfill.
- ❖ Ensure waste transportation trucks adhere to air quality regulations.
- ❖ Develop guidelines requiring all legal entities or individuals transporting waste within the municipality provide tracking documents of source and destination.

Key actions

- a) Licensing service providers
- b) Legislating required regulations
- c) Acquiring the recommended waste trucks

Objective 3. Promote waste segregation at source

Waste segregation includes all measures to ensure quality of materials extracted from waste and reprocessed is maintained for the realization of maximum value of resources and environmental protection.

The following policy measures shall apply to waste segregation.

3.20 Tactics

- ❖ To ensure waste segregation is done at the source
- ❖ To ensure separate waste segregation containers are provided to enable sorting at source of organic waste, recyclable and non-recyclables and educate the waste generators on the prescribed sorting categories and methods.
- ❖ To ensure public awareness on waste colour codes and importance of proper sorting

Key actions

- ❖ Enforcement of waste segregation regulations at source based on the national gazetted minimum waste fractions for all waste generators including household level.

- ❖ Provision of waste segregation containers to enable sorting at source of organic waste, recyclable and non-recyclables and educate the waste generators on the prescribed sorting categories and methods.
- ❖ To carry out public awareness on waste colour codes and importance of proper sorting in all public labelled bins for easier sorting.

Objective 4: To promote proper waste disposal and treatment.

This policy sets priority order for managing waste as a resource that should be harnessed in the municipality according to the waste management hierarchy by adopting the following specific objectives.

3.21 Tactics

- ❖ Prioritize waste control and minimization in conformance to the waste hierarchy
- ❖ Set aside sufficient land for waste management activities, and generate jobs and livelihoods from waste management activities
- ❖ Establish and improve waste management infrastructure to promote source segregation, collection, reuse, set up materials recovery facilities and controlled disposal in engineered landfills.
- ❖ Identify and prioritize potential and financial requirements for setting up composting plants and technology in the municipality.

Key actions

- ❖ Sensitize the public on the 4Rs (Reduce, Re-use, Recycle, Recover)
- ❖ Liaise with the County Government of Embu to acquire and/or 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.
- ❖ Design, construct and equip a recycling material recovery plant and waste transfer stations
- ❖ Provide incentives to promote reduction in waste production and recycling of the

produced waste.

- ❖ Develop a 3-year plan to transit from the current open dumpsites and adopt land filling for residual waste.
- ❖ Ensure the recyclers, bio-waste processors and material recovery facilities obtain environmental compliance licenses from the statutory authorities.

Objective 5: To capacity build the Community on waste management.

Negative attitudes and lack of cooperation from the community on WM and environmental cleanliness is a major constraint towards achieving sustainable WM in Embu Municipality. Consequently, a lot of illegal dumpsites and indiscriminate disposal of wastes along the streets, alleys, river banks, open spaces and undeveloped land is a norm rather than the exception.

Tactics

- ❖ Sensitize the community, leaders and staff on sustainable SWM service provision.

Key actions

- ❖ Undertaking community awareness and sensitization programmes for sustainable WM service provision.
- ❖ Training and sensitization of leaders and staff on WM.
- ❖ Institute clean up days.

Objective 6: establish and maintain a data base on WM in the municipality

The Municipality's ability to respond effectively to the waste challenge requires enhanced data collection on waste generation, current waste disposal practices, waste minimization, reuse and recycling opportunities, as well as the impacts of the current poor state of waste management on public health and the environment.

3.22 Tactics

- ❖ Set up a data management system of the Municipality waste streams, volumes generated and how they are handled.

Key Actions

- ❖ Register service providers to ensure that all policy and regulatory decisions at the Municipality level are informed and are based on credible data.
- ❖ Incorporate waste management indicators into the Municipality's Integrated Monitoring and Evaluation System

Objective 7: Promote research and technological advancement on waste management

Waste management is a dynamic paradigm and requires consistent research and innovation as new waste streams are released regularly.

3.23 Tactics

- ❖ Establish and promote linkages between the Municipality and research institutions.

Key Action

- ❖ Establish linkages with the county government, academia, private sector, civil society and global sustainable waste management innovation institutions.
- ❖ Establish a research fund.

5.0 WASTE MANAGEMENT PLAN

Embu municipality has experienced strong population growth for the past four decades, and recently also moderately strong economic growth, and this has translated to a fast increase in waste quantities, which have doubled every 10 years. There have been some investments into infrastructure, operational systems and human resources to manage this waste by the Embu County Government, which has not kept pace with this increase, and the municipality and its residents now face the consequences of improper waste management.

The municipality management shall develop an integrated waste management plan that lays out the framework for a coordinated and well-planned response to this waste management crisis. The plan shall embrace the integrated approach to waste with a strong emphasis on county government actions in activities such as source reduction, re-use, resource recovery and recycling.

Very importantly, the implementation of this plan will be accompanied by significant inclusion of three important constituencies:

- i) The Departments of Environment, Public Health and Water of Embu County.
- ii) The National Government Environmental Agencies.
- iii) Stakeholders in the county's waste management systems.

As the municipality moves forward with the development, adoption and implementation of the WM plan, care shall be taken to nurture and further strengthen the human capacity base that will prove to be essential to achieve the vision of a healthy, safe, secure and sustainable waste management system that entails primary and secondary collection, transfer, transportation, pre-treatment, recovery and disposal.

6: MONITORING AND EVALUATION

6.0 Monitoring and Evaluation of Waste Management Programmes

Monitoring and Evaluation shall be an integral part of all activities undertaken by the Board pertaining to Waste Management. As such, Waste Management Programmes shall be monitored and evaluated to ascertain the extent to which the objectives have been met, and for purposes of instituting remedial measures.

Monitoring and evaluation will ensure control and provide information needed for improvement and sustainability of the programmes. Evaluation will further establish the extent to which the Board has achieved its mandate.

The Waste Management Programmes by the Board, therefore, will be carefully managed and coordinated for sustainability, consensus and shared ownership by all stakeholders in order to realize the Waste Management goals and targets.

6.1 Framework for Monitoring and Evaluation of the Waste Management Programme

M&E framework will be designed to ensure adoption of a participatory approach in the implementation of the Waste Management programmes in the Municipality. Focus shall be on the following:

- (i) Definition of the main objectives and targets;

- (ii) Selection of indicators to measure the efficiency and effectiveness of the Waste Management activities;

(iii) Identification of lessons learnt and the reapplication of best practices; and

(iv) Involvement of Ministries, Departments and Agencies (MDAs) and stakeholders in the monitoring and evaluation of the Waste Management programme.

The municipality management shall endeavor to conduct M& E at input, activities, outcome/output levels and impact of the programme.

6.2 Review of the Policy

The policy will be reviewed every five years or as need arises in order to address emerging issues.

**ANNEX 1 - WASTE MANAGEMENT POLICY- IMPLEMENTATION
MATRIX/WORKPLAN.**

S/No	Objective	Key Actions	Responsible Agency	Time Frame
1.	To provide efficient and economical waste collection and storage	<ul style="list-style-type: none"> a) Mapping and zoning of waste operational areas, and routes b) Waste disposal Tracking c) Adoption and enforcement of NEMA air quality regulations d) Enforcing guidelines on garbage tracking at the household level. 	Municipality Management	2 years
2.	To promote safe, efficient and economical transport system	<ul style="list-style-type: none"> a) Licensing service providers b) Legislating required regulations c) Acquiring the recommended waste trucks 	Municipality Management	Continuous
3.	Promote waste segregation at source	<ul style="list-style-type: none"> a) Enforcement of waste segregation regulations at source based on the national gazetted minimum waste fractions for all waste generators including household level. b) Provision of waste segregation containers to enable sorting at source of organic waste, recyclable and non-recyclables and educate the waste generators on the prescribed sorting categories and methods. c) To carry out public awareness on waste colour codes and importance of proper sorting in 	Municipality Management	Continuous

		all public labelled bins for easier sorting.		
4.	To promote proper waste disposal and treatment.	<p>a) Sensitize the public on the 4Rs (Reduce, Re-use, Recycle, Recover)</p> <p>b) Liaise with the County Government of Embu to acquire and/or 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.</p> <p>c) Design, construct and equip a recycling material recovery plant and waste transfer stations</p> <p>d) Provide incentives to promote reduction in waste production and recycling of the produced waste.</p> <p>e) Develop a 3-year plan to transit from the current open dumpsites and adopt land filling for residual waste.</p> <p>f) Ensure the recyclers, bio-waste processors and material recovery facilities obtain environmental compliance licenses from the statutory authorities.</p>	Municipality Management	Continuous
5.	To capacity	a) Undertaking community	Municipality	Continuous

	build the Community on waste management.	<p>awareness and sensitization programmes for sustainable WM service provision.</p> <p>b) Training and sensitization of leaders and staff on WM.</p> <p>c) Institute clean up days.</p>	Management	
6.	3.24 Establish and maintain a data base on WM in the municipal ity	<p>a) Register service providers to ensure that all policy and regulatory decisions at the Municipality level are informed and are based on credible data.</p> <p>b) Incorporate waste management indicators into the Municipality's Integrated Monitoring and Evaluation System</p>	Municipality Management	Continuous
7.	3.25 Promote research and technological advancement on waste management	<p>a) Establish linkages with the county government, academia, private sector, civil society and global sustainable waste management innovation institutions.</p> <p>b) Establish a research fund.</p>	Municipality Management	Continuous

3.26 ANNEX II: WASTE COLLECTION AND DISPOSAL PROGRAMME

TOWN	COLLECTION FREQUENCY	MODE OF DISPOSAL	DISPOSAL SITE
Embu town and its environs	Daily	Waste skips and trucks	Kagunga