REPUBLIC OF KENYA

COUNTY GOVERNMENT OF NYANDARUA

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SUSTAINABLE SOLID WASTE MANAGEMENT POLICY

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Abbreviations and Acronyms

CBO – Community-Based Organization

CIDP – County Integrated Development Plan

CSO- Civil Society Organization

EPR – Extended Producer Responsibility

FBO – Faith-Based Organization

GHG – Greenhouse Gas

ISWM – Integrated Solid Waste Management

MRF – Material Recovery Facility

NEMA – National Environment Management Authority

NGO – Non-Governmental Organization

OHS – Occupational Health and Safety

OSHA - Occupational Safety and Health Act

PPP – Public-Private Partnership

WSTENRCC- Water, Sanitation, Tourism, Environment, Natural Resources and Climate Change

SDGs – Sustainable Development Goals

SWM – Solid Waste Management

Preface

The Constitution of Kenya (2010) stipulates that every person has a right to clean and healthy environment. The constitution provided for the establishment of County government and devolved functions of which waste management is one of them. Counties are required to develop requisite legal and regulatory frameworks to achieve this mandate. Sustainable waste management is one way to ensure the environment is safeguarded for current and future generations.

This Department is committed to ensure that waste is managed effectively with every stakeholder actively playing their roles. Development and implementation of provisions in this policy calls for concerted effort from all stakeholders, adequate resources, seamless synergies and actions. This will reduce disease incidences; promote health and hygiene for our environment.

I appeal to all stakeholders to partner in the successful implementation of this policy.

Hon. Samuel W. Mugo

CECM- Water, Sanitation, Tourism, Environment, Natural Resources and Climate Change

Acknowledgement

The main goal of this waste management policy is to provide an enabling framework to guide sustainable waste management in the County. Unmanaged waste is often considered a menace whereas it is a resource that can be harnessed to create wealth (*Taka Taka ni Mali*), employment and reduce incidences of pollution and diseases. Once the policy is approved and implemented it will enable the county to move towards a clean, safe and green environment.

Development of this policy involved various stakeholders and especially staff from the Department of Water, Sanitation, Tourism, Environment, Natural Resources and Climate Change (WSTENRCC). The Department acknowledges the support, commitment and contributions received from various individuals, organizations who participated in the preparation and production of this county solid waste management policy document.

Appreciation goes to the CECM -(WSTENRCC), Departmental heads, staff and all who have contributed directly or indirectly to the entire process. This is a fundamental step and we will keep collaborating in the implementation and success in sustainable waste management.

MR Samuel Gitaka

Chief Officer- Water, Sanitation, Tourism, Environment, Natural Resources and Climate Change

Executive Summary

Sustainable waste management means using material resources efficiently as prioritized by the waste hierarchy, circular economy and clean production. This Nyandarua County Sustainable Waste Management Policy aims to improve how waste is handled in order to protect the environment, human health, and natural resources. The policy promotes efficient, environmentally friendly, and economically viable systems for managing waste from generation to final disposal.

Unsustainable waste management in the County poses various challenges among other environmental degradation, land, air and water pollution, diseases and poor aesthetics. Development of this policy aims at addressing the challenges by reducing the amount of waste produced, encouraging reuse and recycling, and ensuring that waste is disposed of safely. Provisions herein promotes the waste hierarchy, which prioritizes waste prevention, followed by reuse, recycling, recovery, and lastly safe disposal. This aligns with provisions in policy, legal and regulatory frameworks at the global and national levels.

Key objectives include strengthening waste collection systems, promoting segregation of waste at source, supporting recycling industries, and encouraging public participation in waste management. It also emphasizes the extended producer responsibility (EPR) approach, where manufacturers are responsible for the life-cycle of their products, including disposal.

Stakeholders in the county and beyond have a role and responsibility in sustainable waste management This policy encourages collaboration between government, private sector, communities, and individuals to achieve sustainable waste practices. It also aims to improve regulation, monitoring, and enforcement to ensure compliance with environmental standards.

Overall, the policy seeks to create a cleaner and safe environment by reducing pollution, conserve resources, and support sustainable development through responsible waste management practices.

CHAPTER ONE: INTRODUCTION

1.0 Overview

Nyandarua County has an estimated population of 638,289 people who constitute about 179,686 households. The current solid waste generated on a daily basis is estimated to be 414.9tonnes, 75% of which is safely handled at household level in the rural areas while 10% of the waste in rural areas is unattended. It is estimated that 15% of the population live in urban and peri-urban areas which generate about 65 tonnes of solid waste per day**. About 21.5%of the waste is collected leaving 78.4%uncollected**.

1.1 Categories of Waste

Composition of waste is determined by factors which include the population, level and source of income, social behaviour, climate, industrial production and the market for reusable and recyclable waste materials.

Table 1: Categories of wastes in Nyandarua County

Categories	Typical waste generators	Types of solid waste
Household or domestic	Single and multifamily dwellings etc	Food waste, paper, card boards, plastics, cans, yard wastes, textiles, leather, wood, glass and household hazardous wastes(syringes), diapers, sanitary towels, sewerage, e-waste etc.
Commercial	Stores, markets, office buildings, restaurants, shops, bars etc	Packaging and container materials, used office paper, plastics, wood shavings, food waste, hazardous waste, electronic waste etc
Industrial	Light and heavy industries	Housekeeping wastes, packaging, food wastes, demolition materials, plastics, slag, mineral tailings, electronic waste, batteries, pesticides, coolant, lubricants, e waste, radioactive waste, hazardous etc
Institutional	Police stations/posts, barracks, schools, churches,	Food waste, used paper and plastics, wood, steel, concrete wastes, e-waste etc.

	health facilities, prisons etc	
Street sweepings/ Municipal services	High density neighbourhoods	Dust/sand, leaves, paper and plastics, human and animal excreta, sludge water, electronic waste etc
Construction	New and old buildings	Wood, brick/stones, concrete, plastics, glass and metals, e waste etc.
Agricultural	Farms	Chemical containers, manure, agricultural by-products, carcasses, agricultural junks, e waste etc.
Health care facilities	Dispensary, Health centers and hospitals, private clinics and hospitals and chemists	Used needles, syringes and gloves, human tissues and body parts, e waste, radioactive waste, hazardous

1.2 Types of Waste in the County

The following are the common types of waste generated in the County:

1.2.1 Polythene and Plastics

Polythene and plastic waste is mainly generated at the household level in the County. It is notable that household waste is not adequately managed since the larger population especially in urban and peri-urban areas receive inadequate, while the rural areas receive no waste collection services. In addition, there is a persistent culture of mixing the wet waste (e.g. food waste, grey water) and dry wastes (e.g. paper, plastics and polythene) at the household level and during waste collection.

The mixing of waste at the two levels largely reduces the capacity of recycling these recyclable materials due to the sorting, cleaning and treatment process involved. It is also notable that the County lacks cleaning and treatment facilities for these plastics and polythene, which would not only reduce the percentage of plastic waste, but also create employment and act as an income earning activity.

There is therefore a need to put in place waste segregation measures at the household level and at the industrial level since the County expects different industries to be set up in future.

1.2.2 Health Care Waste or Clinical Waste

Health Care Waste (HCW) is generated in varying quantities at healthcare facilities and because of its hazardous characteristics needs to be treated prior to disposal. Systems to support the proper segregation of HCW require to always be in place within hospital wards and clinics. The wastes are disposed through incineration and some find their way to landfills.

The current legal provisions for Health Care Waste Management in Kenya as well as the current rules that are applied within the health sector bring out the linkages and synergies aimed at improving the management of HCW. The process is governed under the following legal regimes,

Health care waste should be separated into three main categories. This shall be through use of the most common practice of three bins system to accommodate waste as follows;

- Infectious and hazardous health waste.
- General waste or non-infectious waste.
- Sharp waste in puncture proof safety boxes.

The County Government shall encourage and ensure appropriate handling, treatment, and disposal of waste by type and this will help to reduce costs and protect public health. The use of colour codes for waste containers will be encouraged by using the colour codes for HCW as:

- Red bins for highly infectious waste
- Yellow for infectious; and
- Black for non -infectious.

1.2.3 Hazardous Waste or Toxic Waste

Hazardous waste means waste listed in the Fourth Schedule or waste exhibiting any characteristic specified in the Fifth Schedule of the Environmental Management and Co-ordination (Waste Management) Regulations, 2024. It may include asbestos, certain batteries, chemical containers, fluorescent lamps and other wastes that are toxic, corrosive, flammable, reactive or otherwise hazardous. The County shall promote identification, segregation, safe storage, packaging, labelling, collection, transport, treatment and disposal of hazardous waste by appropriately licensed persons and facilities, in accordance with applicable law. Public awareness and compliance monitoring shall be strengthened to prevent exposure, illegal dumping and pollution.

Where suitable facilities are not available within Nyandarua County, the County Government shall pursue lawful inter-county and inter-governmental arrangements for transfer and treatment of hazardous waste at appropriately licensed facilities. Such arrangements shall comply with applicable licensing, transport, tracking and documentation requirements.

1.2.4 Radioactive Wastes

Radioactive waste is waste containing radioactive substances, including materials contaminated through use or exposure and radioactive sources that are no longer required. Ionising radiation from radionuclides can harm human health and the environment, and different radionuclides remain hazardous for different periods. Radioactive waste is subject to specialized controls and shall not be mixed with municipal solid waste or handled through ordinary waste collection systems.

The management of radioactive waste shall comply with the Nuclear Regulatory Act, 2019, and other applicable national laws and regulatory requirements. Only authorized persons and facilities shall handle, transport, store, treat or dispose of radioactive waste, under the direction or oversight of the competent national regulator.

Radioactive waste shall be isolated, secured, tracked and transferred only to authorized facilities in accordance with the applicable regulatory requirements. The County Government shall promptly refer any suspected radioactive material to the competent national regulator and shall not attempt to collect or dispose of it through routine municipal waste services.

1.2.5 E-Waste

Electronic waste (e-waste) means discarded electrical and electronic equipment, including components and sub-assemblies, intended for reuse, resale, refurbishment, dismantling, recycling or disposal. Its management covers the full chain from generation and take-back through source segregation, collection, secure storage, transport, testing for reuse, dismantling, treatment, recovery of materials and environmentally sound final disposal of residues. E-waste may contain hazardous substances and shall be handled by authorized or appropriately licensed operators in accordance with applicable law and extended producer responsibility requirements.

E-waste peculiarities single it out as a waste stream requiring urgent action owing to the fact that:

1. It is currently the fastest growing waste stream globally and thus the need for action;

2. It is highly hazardous as it contains lead, mercury, arsenic, cadmium, selenium, hexavalent chromium and brominated flame retardants beyond threshold quantities making e-waste a hazardous waste stream;

3. Improper disposal of electronic waste may cause serious health and pollution problems;

4. Developing countries and countries in transition remain, despite having preventive legislation in place, a dumping ground for e-waste from developed countries and so the need for measures to curb this in the county; and

5. Its appropriate management can bring environmental as well as economic benefits as it has an important recycling potential and can be used as a resource.

In cognizance of the above, Nyandarua County has a total commitment to the environment and sustainability in the workplace with regards to the disposal of unwanted and/or obsolete equipment. The County should seek to achieve optimal environmentally responsible disposal of various waste streams in line with provisions in legal frameworks.

1.3 Color Coding in Sustainable Waste Management

Waste in the County is often collected as mixed waste, increasing collection and disposal costs and reducing opportunities for recovery. Regulation 7 of the Environmental Management and Co-ordination (Waste Management) Regulations, 2024 requires waste generators to separate hazardous waste from non-hazardous waste and to segregate non-hazardous waste into organic and non-organic fractions. The segregated waste must be placed in clearly labelled, colour-coded receptacles, bins, containers or bags in accordance with the Second Schedule: green for organic waste, black for general waste and blue for recyclable waste. Hazardous waste must be kept separate and managed in accordance with the applicable hazardous-waste requirements; the Second Schedule does not assign it a separate colour in the national colour code. Waste service providers are required to collect, handle and transport segregated waste appropriately.

Table 2: National Waste Colour Code and Segregation Guidance (Second Schedule, Environmental Management and Co-ordination (Waste Management) Regulations, 2024)

Waste stream	National colour code	Segregation and handling guidance
Organic waste	Green	Place separately in a clearly labelled green bin, container or bag. Keep free of non-organic and hazardous waste. Where suitable arrangements exist, send for composting or other appropriate organic-waste recovery.
General waste	Black	Place separately in a clearly labelled black bin, container or bag. This stream is for non-recyclable, non-organic waste that is not hazardous. Do not mix hazardous waste or recyclable materials with this stream.
Recyclable waste	Blue	Place separately in a clearly labelled blue bin, container or bag. Keep materials suitable for recycling as clean and dry as practicable, and transfer them to an appropriate material recovery facility, buy-back centre or authorized recycler.

Source; National Environment Management Authority, 2024

1.4 SWOT analysis

The current solid waste management mechanisms have strengths and opportunities which should be harnessed to increase efficiency, effectiveness and sustainability. Appropriate measures should be taken to overcome weaknesses and mitigate against threats in the solid waste management system.

Table 3: SWOT analysis

Strengths	Weaknesses
• The Department has taken over the waste management function from health since October 2025. • Solid waste management coordination mechanism has been established at the county and sub-county levels. • Five disposal sites are available in four sub-counties (Kinangop 2, Kipipiri 1, Ndaragwa 1 and Ol'kalou 1)	• Indiscriminate dumping • Heaps of uncollected solid waste. • Inadequate refuse collection vehicles • Inadequate budgetary allocation • Illegal dumping on road reserves • Lack of necessities on the designated dump sites e.g. fencing • Inadequate SWM storage facilities. • Inadequate human resource in solid waste

• Two functional refuse vehicles and one skip loader. • Basic assorted solid waste management tools have been procured • A few burning chambers and refuse pits have been established • Solid waste holding grounds are available in some urban centres • Waste collection schedules for refuse vehicles are in place • Waste receptacles have been provided in some premises • Availability of Officers-Environmental officers and solid waste management staff • 3 municipalities in place with 20 staff each, with 2 skip loaders and a truck • Political good will	management • Competition for inadequate resources • Some urban areas have no provision for service lanes for transportation and collection of waste
Opportunities • Community awareness and involvement in clean ups/action days. • Inter-departmental collaboration • Waste recovery for salvage value • Provision of equipment and infrastructures within disposal sites • Fill in the critical staff gap work force • Stakeholders involvement • Change in technology in solid waste management • Engagement of Public Private Partnership	**Threats** • Inadequate funding • Political interference • Poor road infrastructure • Ignorance of waste generators on segregation, handling and disposal • Inadequate knowledge and implementation of provisions in SWM Act 2022

1.5 Stakeholders in sustainable waste management

Success in development and implementation of this framework requires consultation and engagement of various stakeholders in the County. Stakeholders have resources, skills, experiences which are key in sustainable waste management. Table 4 shows the summary of the key stakeholders, their roles and responsibilities in achieving SWM.

Table 4: Stakeholders in sustainable waste management

NO.	STAKEHOLDER	ROLES AND RESPONSIBILITIES
1.	Public/ Community/ Local Leaders	• Generate, store, collect, transport and dispose waste appropriately. • Provide SWM receptacles. • Participate in SWM activities and campaigns. • Adhering to solid waste policies, requirements & legislations. • Over sighting the SWM activities.
2	Directorate of Environment-Nyandarua county	• Overall mandate to manage SW in the county. • Development of SWM legislative framework • Development of strategies & programs for SWM. • To plan, budget and implement all SWM activities. • Initiate and enforce relevant SWM legislations. • Undertake/initiate research on SWM. • Recruitment, deployment and Capacity building of human resource. • Provide necessary tools & equipment. • Identify land for SWM e.g. disposal grounds, Transfer stations, landfill etc. • Enhance intra and Interdepartmental/sectoral collaboration • Monitoring & evaluation. • Design SWM structures.
3	Nyandarua County Government Executive Committee	• Mobilize resources for SWM. • Co-ordinating and enhancing linkage between relevant departments. • Coordination and cooperation with the national government. • Allocate resources for SWM
4	The County Assembly	• Legislate on SWM. • Provide oversight roles. • Enhance creation of community awareness.
5	Municipalities	• To appropriately manage solid wastes within their jurisdiction.
6	State department of Public Health	• Develop national SWM Policy. • Recommend appropriate technologies • Undertake/initiate research on SWM. • Recommend SWM standards. • Capacity building county government health department personnel on SWM. • Linking County Governments with other

		international stakeholders e.g. WHO. • Monitoring & evaluation
7	PBOs/CBOs/CSOs	• Assist in raising community awareness. • Capacity building in solid wastes related skills/technologies • Mobilize SWM resources. • Monitoring & evaluation. • Liaise with other SWM stakeholders
8	National Environmental Management Authority (NEMA)	• Guide in development of SWM standards. • Create Community awareness. • License relevant SWM facilities and equipment. • Enforce the Environmental Management Act (EMCA), 1999.
9	Department of Land, housing & physical planning of Nyandarua county Government	• Provide technical assistance on: • Rural & Urban planning • Survey of land & registration.
10	Department of Water, Sanitation, Tourism, Environment, Natural Resources and Climate Change of Nyandarua County Government	• Manage liquid wastes & sewerage. • Provide technical assistance on water & water issues. • Implementation of Sustainable Waste Management Act No. 31 of 2022 • Coordination and oversight by County Environment Committee
11	County Attorney office	• Provide solid wastes legal related services.
12	Judiciary	• Determine solid wastes' related cases. • Interpret and enforce SWM legislations. • Enforcement of legislations related to solid wastes. • Protection of citizens' rights on matters related to solid wastes.
13.	Department of Roads, Public works and transport of Nyandarua County Government	• Draw architectural designs, quantify, and supervise SWM related public works. • Design, maintain and improve road networks connecting SWM infrastructure.
14.	Department of Education, youth, Children affairs, culture & social services of county government	• Implement the Kenya national school health policy. • Ensure all schools have adequate solid wastes' management mechanisms.
15.	Department of Agriculture, Livestock and Fisheries	• Provide appropriate advice on management & resource potential of agricultural and household solid wastes.

16.	Department of Trade, Industrialization, Co-operatiive Development.	• Initiate appropriate solid wastes' management technologies. • Establish waste recycling facilities in markets • Assist groups' formation and registration of self-help groups dealing with SWM
17.	Ministry of interior & co-ordination	• Enhance community mobilization, security, and maintain law & order.
18	Business community	• Appropriate management of solid wastes at all levels. • Provide standard wastes receptacles as per the policy guidelines. • Remit the required county government revenues. • Assist in raising community awareness. • Participate actively in SWM activities. • Adhering to SWM rules and regulations.
19	Private sector	• Invest in affordable, accessible, efficient, effective, available & appropriate solid wastes technologies. • Provide consultancy services. • Participate in creating awareness to their product consumers, community/ public. • Adhere to rules and regulations as per SWM policy
20.	Health institutions	• Ensure health care wastes are segregated, stored, transported and disposed as per the policy guidelines.

CHAPTER TWO: GOALS, OBJECTIVES AND GUIDING PRINCIPLES

2.1 Goal of the Policy

To provide an enabling environment for sustainable and integrated solid waste management, minimize waste generation, protect the environment and public health, and promote job creation and wealth generation within the county's waste management sector.

2.2 Main Objectives of the Policy

The main objectives of this Policy are to:

(i) Establish and operationalize the County's legal, institutional and coordination framework for sustainable solid waste management, with clearly defined roles, enforcement procedures and annual reporting mechanisms, within the first two years of implementation.

(ii) Protect the environment and public health by progressively expanding waste segregation, reliable collection, safe transportation, resource recovery and environmentally compliant disposal services, supported by annual performance monitoring and public reporting.

2.3 Specific Objectives of the Policy

The specific objectives of this Policy are to:

(i) Promote the waste hierarchy and circular economy within five years of adoption by prioritizing waste prevention, reduction, reuse, recycling, composting and resource recovery over final disposal.

(ii) Establish and strengthen waste segregation and collection systems in all urban centres within five years of adoption, while progressively extending services to underserved rural settlements and monitoring annual progress through recorded data on service coverage, collection and recovery.

(iii) Establish and maintain functional partnerships with relevant national government agencies, municipalities, private operators, producer responsibility organizations, community groups and development partners within three years of adoption, as demonstrated through formal agreements and joint activities.

(iv) Develop and implement transparent mechanisms to attract private-sector investment in waste prevention, collection, material recovery, recycling, composting and treatment within five years of adoption, while ensuring effective public oversight and compliance with environmental standards.

(v) Implement an annual countywide public awareness and participation programme on waste prevention, segregation, safe handling, reuse, recycling and proper disposal, with documented outreach activities and participation results.

(vi) Promote inclusive participation in solid waste management by involving formal and informal waste-sector workers, women, youth, persons with disabilities and other affected groups in

consultations, capacity-building initiatives and relevant livelihood opportunities throughout policy implementation.

2.4 Guiding principles

(i) Sustainable development: integrates environment, social and economic, needs not only for current but also future generation.

(ii) Right to a clean and healthy environment: Article 42 of the Constitution indicates that every person in Kenya has a right to a clean and healthy environment and a duty to safeguard and protect the environment.

(iii) Devolution and Cooperative governance: is critical in the effective working relations within and between the national government departments and agencies with county government.

(iv) Partnership: promoting and building functional partnerships and synergies among various stakeholders

(v) Equity and social inclusion: various groups within and between generations contribute and are affected in different ways in the waste management. This policy provides to engagement and inclusion and target interventions in SWM taking into consideration these disparities

(vi) Integrity and transparency promote open engagement and informed engagement with all stakeholders by providing information and minimizing corruption and achieve optimal results

(vii) Precautionary Principle: applies where some cause and effect relationship are not fully established scientifically when an activity or product raises threats of harm to human health or the environment.

(viii) Polluter pays principle: this principle requires the producer of waste of polluter to bear the cost and take responsibility for their action. Effective implementation of this principle acts as a deterrent and promotes change of attitude of polluters.

(ix) Zero Waste principle: targets the ultimate achievement of zero waste often linked with the 7 Rs-Rethink, Refuse, Reduce, Reuse, Repair Recycle and Recover (7Rs) to minimize waste and promote resource efficiency through waste segregation at the source designing and managing products and processes that reduce waste volume and pollution from waste.

(x) Extended producer responsibility: the principle that producers should be given significant responsibility – financial and/or physical – for the treatment or disposal of the waste from the products they create. Beyond easing government budgets for waste

management, such responsibility in principle incentivizes companies to prevent wastes at the source, promoting more environmentally friendly product design and supporting the achievement of public recycling and materials management goals.

(xi) Proximity principle: waste should, where technically, environmentally and economically practicable and legally permitted, be managed as close as reasonably possible to where it is generated. The County shall prioritize treatment and recovery within the sub-county of generation where suitable facilities and capacity exist. Waste requiring specialized facilities, or where local management would not be safe or feasible, may be transferred to an authorized facility through lawful arrangements and appropriate tracking.

CHAPTER THREE: LEGAL AND REGULATORY FRAMEWORKS FOR SUSTAINABLE WASTE MANAGEMENT

Legal and regulatory frameworks for Solid Waste Management in Kenya integrate provisions in international, national, and county-level policy and legislation. This chapter outlines the key policies and legal framework influencing SWM in the Kenya's.

3.1 National Frameworks

3.1.1 The Constitution of Kenya (2010)

The Constitution of Kenya, 2010 guarantees the right to a clean and healthy environment under Article 42, and the right to sanitation under the right to health under Article 43. Article 69 imposes a duty on both the State and citizens to safeguard the environment. Crucially, the Fourth Schedule designates refuse removal, refuse dumps**,** and solid waste disposal as exclusive functions of county governments,

3.1.2 Environmental Management and Coordination Act (EMCA, 1999,)

The Act aims to create a structured, environmentally sound system for waste management that minimizes health risks, reduces environmental pollution, and promotes sustainability in Kenya. Under the Act, counties must regulate SWM through licensing, environmentally sound practices**,** and penalties for violations.

Key EMCA 1999 provisions on solid waste management include:

a) Adoption of an integrated approach promoting waste reduction, reuse, recycling, and safe disposal.

b) Licensing and regulation of waste handlers, transporters, treatment, and disposal facilities by NEMA.

c) Prohibition of illegal dumping, with emphasis on designated sites and sanitary landfills.

d) Promotion of public participation and awareness in waste management.

e) Application of the polluter-pays principle, making waste generators responsible for costs and impacts.

Enforcement measures including fines and penalties for non-compliance

3.1.3 Sustainable Waste Management Act, 2022 (No. 31)

The Act represents a landmark reform in Kenya's waste governance framework. It establishes the National Waste Management Council which provides policy direction and coordination and the National Sustainable Waste Management Authority which serves as the implementing and enforcement agency. The Act anchors modern principles of segregation at source, extended

producer responsibility (EPR), circular economy, zero-waste, public participation, and incentives for recycling and recovery.

For devolved governments, the Act places clear obligations on counties and Municipality, including:

a) Enacting local waste management legislation and by-laws within one year.

b) Developing infrastructure for material recovery, recycling, and sanitary landfills.

c) Promoting segregation at source, managing waste within county boundaries (unless otherwise agreed), and submitting regular reports to the national Authority.

3.1.4. Waste Management Regulations (Legal Notice No. 178 of 2024)

These Regulations, issued under the EMCA1999, strengthen Kenya's legal framework on solid waste. They provide detailed standards on waste storage, segregation at source, collection, transportation, treatment, and final disposal, and classify waste streams including biomedical, industrial, hazardous, and radioactive waste. These regulations place binding obligations on counties and Municipality to ensure waste is managed in an environmentally sound and health-conscious manner, with clear penalties for non-compliance.

The Regulations were enacted under the Sustainable Waste Management Act, 2022 (No. 31) to operationalize the principle that producers are accountable for the full lifecycle of their products and packaging. The Regulations establish clear obligations for producers, importers, and brand owners to ensure environmentally sound management of waste arising from their products.

Key provisions include:

a) EPR Schemes: Producers must establish or join collective EPR schemes registered with the National Sustainable Waste Management Authority, covering collection, segregation, transport, recycling, and safe disposal.

b) Take-Back Mechanisms: Producers are obligated to put in place take-back and buy-back systems for products such as plastics, electronics (e-waste), tires, and batteries.

c) Circular Economy Measures: The Regulations promote product redesign, eco-labelling, use of recyclable materials, and investment in recycling infrastructure to reduce waste at source.

d) Reporting and Compliance: Producers must submit periodic reports on quantities placed in the market, recovery rates, and waste management measures, with non-compliance attracting penalties.

d) Support to Counties and Municipality: EPR schemes are required to collaborate with counties and Municipality by financing waste collection, recycling, and awareness campaigns, ensuring that the cost burden of waste management does not fall solely on local governments

3.1.5 Legal Notice No. 137 of 2013

This was issued by the Transition Authority and gave legal effect to devolution of functions under the fourth schedule of the GoK by breaking down SWM functions into actionable tasks, such as waste collection, transport, treatment, and disposal. It thus laid a firm constitutional and operational foundation for local-level SWM governance.

3.1.6 Urban Areas and Cities **Act**, Cap 275

This Act provides for the classification, governance and management of urban areas and cities; for the criteria of establishing urban areas, also provides for the
principle of governance and participation of residents and for connected purposes 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

3.1.7 Public Finance Management Act, Cap 412

The Act provides for financial planning and management at the national and county levels including linkage of development planning, budgeting and public expenditure.

Key provisions for Counties and Municipality include:

a) Empowers counties to allocate resources devolved functions as required in the Constitution.

b) All revenues, including waste management fees and charges, must be paid into the County Revenue Fund and appropriated through the County Assembly.

c) Operationalizes the principles of fiscal responsibility and transparency, requiring that counties demonstrate efficient use of public resources in service delivery.

d) Provides for the Counties diversify financing mechanisms, including user charges, conditional grants, and partnerships with the private sector and development partners, to ensure sustainability of waste management systems.

3.1.8 Occupation Safety and Health Act, Cap 514

The Act provides for safety, health and welfare of workers and persons lawfully present at workplaces. It obligates workplaces that manipulate chemicals or toxic substances, such as the solid waste management unit, to develop a suitable system for the safe collection, recycling and disposal of chemical wastes, obsolete chemicals and empty containers of chemicals. This ensures that the employer avoid risks to safety, health of employees and the environment.

3.1.9 Public Health Act (Cap. 242)

The Act gives local authorities the mandate to enforce sanitation and hygiene standards. This ensures that waste facilities, collections, and dumpsites do not pose health risks, especially during outbreaks.

3.1.10 Physical and Land Use Planning Act (2019)

The Act requires Counties to prepare local physical and land use development plans consistent with broader county and national spatial strategies. The Act provides for zoning areas such as for waste infrastructure, protective buffer zones, and ensure compliance with development control standards. The County government has developed specific plans to domesticate provisions in the national frameworks.

3.1.11. The County Government Act 2012

The Act decentralizes waste management, giving counties the mandate to manage waste within their boundaries. Counties are responsible for the collection, transportation, treatment, and disposal of waste, and must develop supporting policies, plans, and infrastructure.

The Act places obligations and mandates on Counties to:

a) Integrate solid waste management into urban planning and development strategies, including zoning for landfills, recycling centers, and disposal sites.

b) Conduct public participation in planning and implementation to ensure accountability and responsiveness to community needs.

c) Adopt sustainable waste management practices such as recycling, waste reduction, and proper disposal, in line with EMCA 1999 to protect ecosystems and public health.

d) Engage in public-private partnerships (PPPs) and to outsource services such as waste collection and recycling, to improve efficiency.

e) Levy fees and charges for waste management services, with revenues ring-fenced to maintain and expand SWM systems.

3.1.12 Vision 2030

Vision 2030 highlights SWM as essential in urban infrastructure investments supporting sustainable urban growth. It recognizes the need for efficient and sustainable waste management systems to be established as the country develops into a newly industrialized state by 2030. It aligns solid waste management with the broader agenda of industrialization, infrastructure development, and environmental sustainability. Municipal solid waste management is an essential aspect of achieving the country's goals of sustainable urban development, environmental conservation, and improved public health. As Kenya experiences rapid urbanization, effective waste management is seen as a critical factor in transforming urban areas into clean, healthy, and liveable environments.

3.1.13 National Waste Management Strategy (2015)

The Strategy provides Kenya's roadmap for transitioning to sustainable and resource-efficient waste systems. It set an ambitious target of achieving 80% waste recovery by 2030, primarily through segregation at source, recycling, composting, and energy recovery, thereby reducing reliance on landfills. The Strategy emphasizes Integrated Solid Waste Management (ISWM), which combines waste minimization, resource recovery, safe disposal, and stakeholder participation.

For counties and Municipality, the Strategy provides both direction and benchmarks, requiring them to develop localized waste management plans, strengthen public-private partnerships, and adopt circular economy practices that align with the national recovery target.

These National policies and legislation are binding on County governments and Municipality with regard to sustainable, climate-sensitive, and inclusive waste management systems.

Policy Statement

The County Will:

1. Operationalize the constitutional right to a clean and healthy environment by implementing its devolved mandate over refuse removal, dumps, and solid waste disposal in compliance with the Constitution of Kenya (2010) and Legal Notice No. 137 of 2013.

2. Align its waste management practices with national legislation and shall enforce national environmental and public health standards within its jurisdiction.

Integrate national policy directions into its local systems to promote sustainable consumption, resource recovery, and climate-smart waste management

3.1.14 National Environment Policy, 2013

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

3.1.15 Kenya Environment, Sanitation and Hygiene Policy 2016-2030.

This policy provides a national framework for achieving universal access to adequate sanitation and a clean, healthy environment. It emphasizes expanded access to rural and urban sanitation, elimination of public health nuisances, and private sector participation in service delivery. It further promotes strong governance, sustainable financing, enabling laws and regulations, research and innovation, and effective monitoring and evaluation systems.

For counties and Municipality, the Policy requires integration of sanitation and hygiene into local development plans, investment in waste and sanitation infrastructure, and collaboration with communities and private actors to ensure public health protection and environmental sustainability.

3.1.16 National Climate Change Action Plan (NCCAP) 2023–2027

It is Kenya's first climate change action plan developed to implement the National Climate Change Response Strategy (NCCRS). The action plan encourages proper management of solid waste which contribute to improved ground water quality, local air quality and safety as well as hygienic conditions. It is also aimed at reducing emissions through mitigation and adaptation strategies.

3.2. County Frameworks

At the devolved level, Nyandarua County and the Municipality operate under the national framework but must adopt county-specific policies and systems:

3.2.1 The Nyandarua County Integrated Development Plan 2023-2027

The CIDP is the counties statutory planning document. The five-year document informs Annual Development Plans and the annual budgets. Solid waste management in a key sub program in the CIDP and the county commits to implementing projects that involve sorting waste at the source,

improving collection systems, and using environmentally sustainable methods to manage increasing waste levels.

3.2.2 Nyandarua County Public Participation and Civic Education Act No 4

The Act was developed in line with Article 10 of the Constitution and Section 91 of the County Governments Act which recognize public participation as a mandatory element in planning and implementation of SWM. The Municipality will be required to integrate this principle by engaging residents, business owners, CBOs, waste workers and other relevant stakeholders in decision-making processes**.**

3.2.3 Municipal Documents

There are three municipalities in the County namely Ol'Kalou, Engineer and Mairo-Inya. The municipalities are semi-autonomous with SSWM as one of the transferred function. Each municipality has legal frameworks that provides for SWM, SWM plans, Integrated Development Plans and.

3.2.4 Nyandarua County Climate Action Plan 2023 -2027

The Nyandarua County Climate Change Action Plan is a five-year plan that will guide Nyandarua in climate change mitigation and adaptation. The plan recommends promotion of innovative interventions for SWM to divert waste from disposal sites, recycling and promotion of circular economy.

CHAPTER FOUR: THEMATIC AREAS AND POLICY INTERVENTIONS

Thematic areas presented in this chapter seeks to domesticate provisions in the national legal frameworks in this county policy. The two levels of governance consult, collaborate and complement each other. The main focus is on the waste hierarchy and circular economy model for managing waste in Kenya as well the enabling framework to support its implementation and realisation of a zero-waste economy.

4.1 Adoption of Waste Hierarchy

The Waste management hierarchy provides an order of environmental priority actions for proper waste management. It stipulates an integrated approach to waste management by establishing an order for reduction and management of waste. Sustainable and environmentally sound waste management is based on waste management hierarchy that prioritizes waste prevention and reduction, re-use, recycling and composting, waste treatment and disposal to a regulated landfill with energy recovery.

Policy Statements

The County will:

1. Align county waste management laws and strategies to the waste management hierarchy.
2. Domesticate the National Solid Waste Management Strategy
3. Set aside sufficient land for waste management activities, and generate jobs and livelihoods from solid waste collection, recycling, and waste management activities according to the waste hierarchy.
4. Establish and improve waste management infrastructure to promote source segregation, collection, reuse, set up materials recovery facilities and controlled disposal in engineered landfills.

4.2 Waste Prevention and Reduction

Waste prevention are measures adopted to create less waste by reducing waste at source of origin and minimising waste ending up to the landfill much as possible through integrating waste reduction in production processes, use of eco-friendly inputs and packaging, better design of to enhance durability, reusability and recyclability and use of , enhance segregation at source, reduction of superfluous packaging, efficient resource use adoption of green procurement and extension of product lifecycle.

The following policy measures are proposed for county government in order to reduce generation of waste:

The County will:

1. Create a County regulatory environment that promotes a functional market for waste and recycled materials without compromising quality standards, public health and environment.

2. Initiate a market and mechanism within the county procurement system to prioritise recycled materials and materials recovery sector.

3. Develop county regulations to require institutions to ensure that their waste is recycled through a licensed service provider

4. Promote the circular economy by encouraging reuse, repair, recycling and remanufacturing of materials, and by supporting enterprises that turn waste into products.

5. Strengthen implementation of Extended Producer Responsibility (EPR), in accordance with applicable national law, by supporting producers, importers and producer-responsibility organizations to establish or participate in take-back and collection systems and to ensure appropriate transport, recovery, treatment and disposal of post-consumer waste.

6. The County shall collaborate with the relevant national authorities and shall not impose obligations beyond its legal mandate.

4.3 Composting

Nyandarua is an agricultural county related waste contributes to the waste volumes. Agricultural waste consists of biodegradable waste organic like kitchen waste, unsold produce, fresh and rotten vegetable waste, expired grain produces and farm level agricultural waste which is biodegradable under controlled aerobic conditions. Unmanaged bio waste produces green gas emissions and leachate which ends up polluting soils and waste sources. Livestock farming is also another source of waste in the county. Once segregated at source, composting is an effective method for recycling organic waste. Embracing use of compost from organic (agriculture and food based) and livestock waste.

The County will:

1. Promote innovations that use of agricultural waste in biogas production

2. Identify, prioritise, establish potential sites for setting up composting plants and composting sites especially in markets.

3. Engage the private sector participation in composting ventures.

4. Promote the use of biodegradable polytubes (seedling tubes) in tree nurseries and horticulture in place of non-biodegradable polythene.

5. Introduce measures for the collection, reuse, recycling and safe disposal of agricultural plastics like, plastic sheets and twines used in greenhouses.

4.4 Waste treatment before disposal

Waste treatment refers to physical, mechanical, biological, thermal processing of waste with by removal of toxic elements which if emitted would have severe environmental impacts before disposal. The following policy measures shall apply to waste treatment.

Policy Statements

The County will:

1. Domesticate waste treatment before disposal in County legislation.
2. Establish incinerator(s) that meets WHO standard to address agrochemical packages and medical wastes.

Waste management facilities

1. The recyclers, bio-waste processors and material recovery facilities will obtain environmental compliance licences from NEMA.

4.5. Transiting from Dumpsites to Landfills

Waste disposal is the final solution of discarding waste that cannot be used or reprocessed at the least harm to human life, health or environment. Common disposal methods consist of landfilling and incineration. The County does not have a landfill but few open disposal sites which need to be phased out.

The County will:

1. Implement the ban of dumpsites imposed by the national government

2. Develop a 3-year plan from the date of policy adoption to transit from the current dumpsites and adopt landfilling for residual waste.
3. Develop regulations and levying structure to promote the closure of open dumpsites.
4. Establish engineered landfills for disposal of non-recoverable fractions of wastes.
5. Ensure the landfills are manned, weighbridge for incoming waste, recording and perimeter fencing to control unauthorised access.
6. Prohibit and enforce open burning of waste in the county.

4.6 Landfills

A landfill is a controlled and regulated disposal site for unrecyclable waste with basic operations and site management that has a controlled access, recording facilities for incoming waste control and prevents the release of pollutants to soil, water and air. Landfills are used for wastes that have no residual value

National frameworks recommend that landfills should only be used for residual waste (waste with no commercial value left out after segregation process in a Materials Recovery Facility (MRF). The aim of this policy is to ensure that only those materials that cannot be recycled are landfilled and shall apply the following measures

The County will:

1. Ensure that landfills are only used for residual waste that has no commercial value left out after segregation process at an MRF.
2. Establish an engineered landfill in its county boundaries where possible a county economic bloc agreement is in place for common disposal of waste in a jointly managed engineered landfill.
3. Develop a public private partnership and concession framework for establishment and operation of landfills by private operators.
4. Impose landfill fee to deter waste from landfills.
5. Domesticate national guidelines and regulations on landfilling.

4.7 Incineration (Waste to Energy)

This is the thermal treatment of waste to convert it to energy, heat ash, and flue gas and will be the last preferred option as per the waste hierarchy for waste management in Kenya.

The County will

1. Collaborate with the national government in requisite waste to energy projects
2. Implement provisions in incineration guidelines and regulations.
3. Ensure all incinerators to comply with statutory requirements and licencein from NEMA

4.7.1 Enhance Mapping, Planning, Segregation, Collection, Transportation and Service Provision

The county is facing challenges relating to collecting, segregation, treatment and auditing of the ever-increasing quantities of solid waste. There is need to organize waste collection, segregation and transportation services so as to regularly gather and organize already existing data while generating additional knowledge and information to inform planning and decision-making for integrated waste management going forward.

4.7.2 Waste Mapping

Accurate information and data on waste generation, current waste disposal practices, waste minimization, reuse and recycling opportunities are critical for planning and implementing interventions. It also assists in addressing the impacts of poor state of waste management on public health, environment and natural resources.

The County will: -

1. Set up data collection system of the county waste streams, volumes generated and how they are handled,

2. Registered service providers to ensure that all policy and regulatory decisions at the county level are informed by and based on credible data.

3. Incorporate waste management indicators into the County Integrated Monitoring and Evaluation System.

4. Put in place measures to harness the waste value chain to generate jobs and income for diverse stakeholders.

5. Undertake zonation of the county, mapping waste hotspots, Material Recovery Facility and landfills, waste transportation routes to guide planning, collection and enforcement.

4.7.3 Waste Segregation

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 from waste. The following policy measures shall apply to waste segregation:

The County will: -

1. Enforce waste fractions segregation at source based on the national gazetted minimum waste fractions for all waste generators including household level.

2. Ensure waste service providers provide separate 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.

3. Carry out county public awareness on waste colour codes and importance of proper sorting in all waste collection and the transfer of recyclable materials and waste from point of generation.

4. Undertake continuous community sensitization on household-level waste segregation.

5. Ensure at least two waste receptacles at households(plots) level.

4.7.4 Waste Collection

Waste collection should be managed in line with the waste hierarchy supportive of extraction of maximum value principle of waste segregation and resource efficiency. System of deposit return of products or containers allows for special upfront surcharge or deposit by manufactures which is then refunded to the consumer when he or she returns the containers or products for recycling or proper disposal. Historically, deposit systems are used for glass, aluminium, plastic, drinking bottles and cans. Deposit-return systems enhance collection of materials and packages and reduces contamination by incentivising the consumer as well as enhancing recirculation back to the economy loop. The following policy measures will apply to waste collection: public labelled bins for easier sorting

The County will: -

1. Establish “public collection centres “guided by the principle of proximity, where the public can discard a variety of recyclable household waste such as paper, cardboard, glass, plastic, & metal including electronic products and hazardous waste.

2. Develop regulations and guidelines for county cleaning, collection and transportation schedules in respect to waste fractions segregated at source.

3. Ensure all citizens have access to waste collection services and receptacles

4. Adopt nationally prescribed design, size, construction and maintenance of public waste receptacles.

5. Authorise placing of waste receptacles on county public places.

6. Enforce requirement that property owners, landlords and caretakers be held responsible for waste dumped in front and around their facilities.

7. Ensure all public places within their jurisdiction are clean.

8. Ensure that all public event organisers submit waste management plan of the waste generated or engage a licensed waste provider to manage waste generated during the event.

9. Foster cooperation with Resident Associations to eliminate waste dumping within their jurisdiction.

10. Increase the number of skip bins and place them strategically in urban centres, markets and other public places.

11. Push for the establishment of segregated bins in residential buildings and in all public spaces, including hospitals, schools, stadiums and bus parks.

12. Establish a subcounty waste management committee to oversee the sustainable management of solid waste.

4.7.5 Waste Transportation

Waste should be transported in an environmentally sound manner without causing pollution or bad odour or further littering. A waste manifest system enables tracking of transportation of waste both hazardous and non-hazardous till it reaches its disposal destination

The Ccounty will:

1. Develop guidelines for waste transportation in Counties that is aligned to national regulations
2. Apply the Proximity Principle, whereby waste is disposed of within the sub-county where it is generated.

4.7.6 Waste Service Providers

Waste Service Providers include legal entities or registered individuals and community groups licensed to collect, transport waste, run and operate materials recovery facilities, Recycle, treat and dispose waste to engineered landfills. The harmonisation of their services is very crucial to ensure achievement of waste hierarchy goals and targets

The County will: -

1. Ensure that Waste collectors and transporters take their collected waste to materials recovery facilities and not directly to landfills.

2. Publish annually a list of licensed waste operators.

3. Supervise and manage waste management service providers operating in their jurisdiction to ensure they deliver effective waste management services to the materials recovery facilities in accordance to the waste hierarchy priority. The following policy measures shall apply to waste collectors and transporters:

4.7.7 Waste Service Providers

Licensed waste management service providers shall be responsible for collection and transportation of waste from locations specified in their contracts and transport them to materials recovery facilities or licensed recycling facilities only.

2. Waste collectors and transporters shall adhere to determined collection and transportation schedules of sorted materials and waste streams.

3. Waste collectors and transporters shall submit a one-year waste management plan aligned to the waste hierarchy priorities for the area of coverage as part of the licensing requirements with a direct linkage to Materials Recovery facilities for further sorting and processing of waste collected.

4. Waste Service collectors shall put in place customer charters setting out charging fees, collection schedules, and collection of extra waste or removal of bulky waste as well as provide protective equipment and proper identification of their employees/waste handlers.

5. Waste service collectors and transporters shall provide health safety information to all staff and visitors regarding waste handling and ensure their staff poses the requisite technical and knowledge on waste management.

6. Ensure that all waste handlers use appropriate Personal Protective Equipment (PPEs) at all times.

4.7.8 Material Recovery Facilities

A materials recovery facility (MRF) is a specialized plant that receives, separates and prepares recyclable materials for marketing and subsequent use in terms recycling of the dry materials and composting of the organic materials and processing of secondary raw materials. MRFs form an integral part of a circular economy value chain as waste materials need to be sorted first before they can be recycled. To promote circular economy and locking valuable resources in the economy, the policy aims that all waste collected by waste collectors should first go to MRFs and only the sorted residual materials should then go to a waste-to- energy or landfill facility

The County will: -

1. Establish Material Recovery Facility in every subcounty.

2. Domesticate and enforce national regulations and guidelines on MRFs.

3. Consolidate an annual environmental audit report of the MRFS and submit to the National Environment Management Authority.

4. Collect and transport residual waste from MRF to the landfills.

5. Ensure MRFs be the only facilities allowed to take waste to engineered landfills.

6. Provide enabling environment for private sector to establish MRFs

7. Enforce ban on sorted and unsorted waste dumping

8. Establish additional MRFs and support environmental start-ups in technology and solid waste management through incentives.

Materials Recovery Facility Operators will: -

1. Ensure all material recovery facilities submit a 1-year waste management plan with clear linkages to waste collectors, recycler and landfills for the area of coverage as part of the licensing requirements.

2. Ensure all materials recovery facilities automate their operations and record trucks that enter facility (plate number, amount of waste in tonnes) technical and organizational capacities.

3. Provide data quarterly to county governments of materials received, quantities sorted and dispatched or disposed to a landfill.

The County will: -

1. Assign communal waste collection centres and transfer stations to formalised and organised groups to manage the services
2. Mobilise communities especially in the informal settlements and support formation of community-based waste management groups or organisations.
3. Support waste management initiatives of the formalized groups through County Waste Funds.

4.8 Strengthen National and County Legal and Institutional Frameworks

Waste management is a devolved function however the complexity of handling the function implies the national government complement counties to be efficient and enhanced performance. The two levels of government undertake requisite interventions.

4.8.1 Strengthening the Institutional Framework

To ensure that the waste management enforcement and inspection regime is robust and well resourced. Each stakeholder is required to actively contribute towards achieving Sustainable Waste Management.

The County will: -

1. Domesticate the national waste management plan.
2. Mainstream county waste management oversight in the county environment committee and subcounty waste management committee.
3. Employ additional officers for solid waste management.
4. Establish a sub-county waste management committee in each sub-county.

Individuals and households shall contribute to the costs of providing the services used for segregation, collection, transportation, treatment and disposal of the wastes they generate

4.9 Transparent mechanisms for waste management infrastructure.

Adequate and predictable financial resources are a crucial component for achieving sustainable waste management objectives. Given the extent of the waste management challenge, it is important to ensure that internal and external sources of finances mobilized.

4.9.1 Setting up financial mechanisms

Economic incentives are useful tools to encourage good solid waste management practices and incentivize investment in waste management. In addition the polluter pays principle ensures that waste management at County level is financially viable.

The County will:

1. Allocate resources for sustainable waste management actions in county budgetary processes.
2. Build capacity to mobilise and enhance absorption of resources for sustainable waste management interventions.

3. Promote the creation of green jobs by establishing an enabling policy framework for investment, and creating business friendly regulatory environments in recycling, green economy, and sustainable waste management.
4. Support waste management enterprises at county level, including those run by vulnerable and marginalized Groups.
5. Provide incentives to support environmental start-ups, technology and innovation in solid waste management.

Citizens and Individuals

(i) Waste generators including individuals and households shall contribute to the cost of waste management services

4.9.2. Waste Reporting and Audit

The purpose of waste audit is to monitor waste management activities and compliance with waste management procedures and regulations. It is fundamental in accounting for waste and data generation for planning and informing decision making.

The County will: -

(i) Provide semi-annual reports to the national waste management council showing how and when materials were collected within their jurisdiction, volume of materials recycled and measures undertaken to implement the waste hierarchy in the county.

5.0 Strengthen partnerships and increase public awareness

The government is required to promote and develop functional partnership for effective SWM. Stakeholders from formal and informal sectors require to be well informed, access requisite information to ensure informed decision making and active participation. The role of role county is to provide an enabling environment and coordinate stakeholder initiatives.

Concurrent

The National and County Government will

1. Incorporate sustainable waste management knowledge into government public awareness initiatives and advertising
2. Collaborate with, and support, media, private sector and civil society in incorporating sustainable waste management into their advocacy and public

awareness raising programmes

3. Encourage smart purchasing such as buying right amount of goods like food so that none goes to waste.

4. Provide timely information on waste management using diverse platforms including institutional websites.

5.1 Education and public awareness

Raising and maintaining awareness on integrated waste management is crucial to enhance the participation and increase the responsibility of the public as a positive agent of change. Inclusion of sustainable waste management knowledge into the education curriculum at all levels should be prioritized

Concurrent

The National and County Government will

1.Incorporate sustainable waste management knowledge into government public awareness initiatives and advertising

2. Collaborate with, and support, media, private sector and civil society in incorporating sustainable waste management into their advocacy and public awareness raising programmes

3. Encourage smart purchasing such as buying right amount of goods like food so that none goes to waste.

4. Provide timely information on waste management using diverse platforms including institutional websites.

5. Incorporate waste management in the school curriculum at all levels.

6. Undertake continuous community sensitization on household-level waste segregation.

5.2 Formalization of the informal sector

The informal sector plays a vital role in the waste management system, especially in the collection and recycling of waste. Recognizing their role and including them in the formal economy are necessary steps to enhance an integrated waste management system and contribute to a circular economy.

The County will: -

1 Assign communal waste collection centres and transfer stations to formalised, individual and organised groups to manage the services

2 Mobilise communities especially in the informal settlements and support formation of community-based waste management groups or organisations.

3 Support waste management initiatives of the formalized groups through County Waste Funds, donors and partners.

5.3 Capacity Development

Capacity-development on sustainable waste management is critical for multiple sectors of the economy, the public, national and county governments. Its focus will include the training of government and county institutions to effectively implement policy frameworks, laws and regulations. It will also include the private sector through capacity building and knowledge transfer on the circular economy and move beyond business as usual model.

The County will: -

1. Prioritize proximity in capacity building and waste management interventions.

2. Domesticate the national sustainable waste management capacity development strategy.

5.4 Mainstreaming Cross Cutting Issues

Cross cutting issues relating to gender, youth and special groups require to be integral in the SWM cycle.

Special ground such as persons with disabilities are affected by the poor management of waste and they have meagre job opportunities. The youth constitute the majority group in the County and have the potential to take an active role in SWM. Youth are also involved in the informal sector especially in the transport sector and in the Material Recovery Facility. Engaging these groups will open employment opportunities and potential positive influence on their peers.

Policy Statements

(i) The County government will put in place mechanisms to ensure and enhance the participation of the youth and vulnerable groups in sustainable waste management decision-making and implementation

(ii A

(iii) National and County governments will undertake a systemic analysis of the various special needs. Based on the analysis, job opportunities and incentives for people with such needs should be included in the waste management system.

5.5 Collaboration and Stakeholders Participation

Participatory and partnerships with various stakeholders like the County governments, private sector, formalised informal sector, civil society organisations, international agencies and media are key in Sustainable Solid Waste Management.

The County will: -

1. Ensure industries align their waste management approaches and priorities to this policy.

2. Develop and implement a partnership strategy targeting diverse stakeholders

3. Enhance coordination of partnerships engagements.

4. Promote and facilitate regional waste management approaches for certain types of wastes where economic viability is a challenge

5. Encourage the use of Public-Private Partnerships (PPPs) in waste management.

5.6 Research and knowledge management

Research data handling requires enhanced coordination to enhance its availability to all players. Currently, research data is scattered in diverse libraries and portals and there is inadequate coordination. In this regard, knowledge management will be strengthened to play a critical role in guiding waste planning and interventions.

County will: -

1. Identify research and technology needs and promote strategic and systematic waste management-related research, impact and vulnerability assessments, and technology development and diffusion.

2. Enhance linkages between government, academia, private sector, civil society and global sustainable waste management innovation institutions.

3. Enhance continuous capacity building to officers on Sustainable Solid Waste Management.

Annex 1: Sustainable Solid Waste Management Implementation Framework

OBJECTIVE: To guide sustainable solid waste management in Nyandarua to ensure a healthy, safe and secure environment for all. This will be a deliberate, continuous and visionary County commitment

OBJECTIVE	ACTIVITY	KEY PERFORMANCE TARGETS	KEY PERFORMANCE INDICATORS	TIME FRAME					OUT COMES	ACTORS	BUDGET
				Year(s)							
				1	2	3	4	5			
Formulation of solid waste management policy	Develop and harmonize policies	Harmonized policies	policies						Effective and efficient solid waste management	County government, Department of health NEMA, Legal department	1.5 M
	Implement policy	Implement the policy	Policy implemented								
Compliance and enforcement of waste management legislation	Compliance and enforcement of waste management standards and legislations	Compliance and enforcement to set standards	Level of compliance and enforcement						Effective and efficient solid waste management		0.5M

Uptake of efficient technologies	Undertake benchmarking on best practices of appropriate technologies	Best practices of appropriate technologies bench marked	Appropriate technologies adopted								703,000
Capacity building in waste management	Sensitize the public on responsible waste management	A sensitized public on responsible management	Number of people sensitized						Public behaviour change on waste management	County government, Department of health NEMA	1 M
Engage the public on solid waste management	Create awareness on suitable waste management options	Awareness created on suitable management options	Number of campaigns. Number of forums.						Public behaviour change on waste management	County government Department of health, NGOs, NEMA, CSOs, media	1.0M
	Undertake monthly clean-	Monthly clean-ups undertaken	Number of clean-ups								

	ups										
	Develop sensitization materials	Sensitization materials developed	Number of sensitization materials developed								
Segregated waste services	Provision of equipment for waste segregation	Equipment for waste segregation provided The vehicles for waste transport should be ideal to meet the principles of Sustainable Solid Waste Management	Number of equipment provided						Segregated waste	County government, WSTE NRCC, Department of health, Department of Trade, Department of Urban and Housing Development, Ol Kalou, Engineer and Mairo Inya Municipalities	30M

Improvement of existing solid waste management facilities	Upgrade existing solid waste management facilities	Upgraded solid waste management facilities	Number of upgraded solid waste management facilities						Functional environmentally compliant solid waste management collection ,transportation transfer station, treatment and disposal facilities	County government, department of health and with support of various funding bodies	22M
Solid Waste collection and transportation system	Provision of adequate and appropriate collection facilities and services	Adequate and appropriate collection facilities provided	Number of appropriate facilities provided								6.4M
	Provision of adequate and appropriate transport systems for segregated waste	Appropriate transport systems provided	Number of appropriate transport systems provided								
Solid waste transfer	Establish and operate	Transfer stations built and	Number of transfer stations							County government,	30.0M

station	transfer stations	operational	and operational							Directorate of Environment., Investors.	
Solid waste treatment facilities	Establish recycling facilities	Recycling facilities established	Number of recycling facilities established								50.0M
	Establish compositing facilities	compositing facilities established	Number of compositing facilities established								50.0M
Solid waste disposal facilities	Develop sanitary landfills	sanitary landfills developed	Number of sanitary landfills developed								22.0M
	Develop standard incinerators	standard incinerators developed	Number standard incinerator with energy recovery facilities developed								
Recycling facilities	Enhance recycling of solid waste	Enhance recycling of solid waste	% of waste recycled						Materials recovered recycled and energy generated		25.0M
Energy generatio	Enhance waste to	Energy generated	% of energy								25.0M

n plants	energy resources	from wastes	generated								
Recovered Materials	Recovery of materials	Recovered Materials	Amount of materials recovered								
Collaboration on recycling and energy recovery	Enhance collaboration	Mechanisms of collaboration	Number of collaborations								

Annex 2: Definition of Terms

Biodegradable Waste: Organic waste that can decompose naturally, typically through microbial processes, into non-toxic substances. Examples include food waste, yard trimmings, farm produce and certain paper products.

National Color-Coding System: A system of bins, bags and other receptacles designated by color to indicate different types of waste. Common colors include green for wet waste (organic), blue for dry waste (recyclables), and red for hazardous waste.

Composting: The biological process by which organic waste (such as food scraps, yard waste, and biodegradable materials) is decomposed into nutrient-rich soil through controlled aerobic decomposition.

Dry Waste: Waste materials that are non-biodegradable and do not decompose quickly, including items like plastics, metals, glass, paper, and textiles.

General Waste: Non-hazardous, non-recyclable, and non-compostable waste that cannot be easily categorized into other types. This includes contaminated or soiled paper, certain food packaging, plastics that cannot be recycled, and other mixed waste items typically sent to landfills or waste-to-energy facilities.

Guidelines: Instructions or principles set by authorities, such as the National Environment Management Authority (NEMA), to regulate and standardize waste management practices.

Hazardous Waste: Waste that poses potential risks to public health or the environment due to its toxic, flammable, corrosive, or reactive properties. Examples include batteries, medical waste, pesticides, and certain electronic items.

Incineration: The process of controlled burning of waste materials at high temperatures to reduce volume and, in some cases, to generate energy.

Landfill: A designated site for the disposal of waste materials. Landfills are engineered to contain waste and prevent leachate from contaminating the surrounding environment.

Material Recovery Facility (MRF): A specialized facility that receives, separates and prepares recyclable material for marketing to end users.

Municipal Solid Waste (MSW): Waste produced by households, businesses, and institutions, typically including materials like food scraps, packaging, plastics, paper, and e-waste. MSW excludes hazardous and industrial waste and is usually managed by municipalities.

Recyclable Waste: Materials that can be collected, processed, and re-manufactured into new products. They include paper, cardboard, plastics, glass, and metals.

Source Segregation: The practice of sorting waste at the point of origin, such as in homes, workplaces, or public spaces, into appropriate categories before it enters the waste management system.

SustainableWaste Management: means using material resources efficiently as prioritized by the waste hierarchy, circular economy and clean production.

E-Waste: waste resulting from electrical and electronic equipment including components and sub-assemblies thereof such as old computers, mobile phones, TVs, and batteries.

Waste Characterization: The process of classifying waste materials into categories based on their composition, origin, and potential impact on health and the environment.

Waste Disposal: It is the final stage in waste management where waste is permanently discarded after all possible recycling, reuse, and treatment options have been exhausted. Waste disposal methods include landfilling, incineration, and waste-to-energy facilities.

Waste Generator: Any person, household, organization, or entity that produces waste.

Waste Segregation: The process of separating waste into distinct categories (e.g., organic, recyclable, hazardous) at the source of generation.

Waste Treatment: Processes used to alter the physical, chemical, or biological characteristics of waste to make it safer for disposal, reduce its volume, or prepare it for recycling.

Wet Waste: Primarily organic waste that includes food remains, plant matter, and other compostable materials. Wet waste is suitable for composting but should be kept separate from dry and hazardous waste to prevent contamination.

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