



COUNTY GOVERNMENT OF NYERI



MUNICIPALITY OF NYERI SOLID WASTE MANAGEMENT PLAN



February 2026

COUNTY GOVERNMENT OF NYERI
MUNICIPAL MANAGER
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EXECUTIVE SUMMARY

Nyeri Municipality, located in Nyeri within Nyeri County, is a key administrative and commercial centre experiencing steady population growth, urban expansion, and increasing economic activities. These dynamics have led to rising volumes and changing composition of solid waste, placing pressure on the existing waste management system.

This Solid Waste Management Plan provides a structured and phased framework to guide the Municipality toward a sustainable waste management system, clarifying institutional roles and responsibilities among the various stakeholders, so as to ensure coordinated planning, regulation, implementation, and service delivery across the waste management value chain. The Plan supports public health, environmental protection, and sustainable urban development, while aligning with national and county policies, legal frameworks, and development programmes including the Sustainable Waste Management Act of 2022, Nyeri County Solid Waste Management Act of 2021, and other regulations enforced by the National Environment Management Authority (NEMA), while supporting the objectives of the Kenya Urban Support Programme (KUSP2).

An assessment of the current system shows that waste is generated from various sources including residential, commercial, institutional, market, and light industrial sources, with organic waste forming the largest fraction. Existing collection and disposal arrangements face challenges including limited coverage, inadequate segregation at source, insufficient infrastructure and equipment, environmental risks at disposal sites, and weak coordination among stakeholders, necessitating comprehensive system improvements.

The overarching goal of the Plan is to develop and implement sustainable and inclusive solid waste management practices that meet the Municipality's needs while complying with environmental standards and national legislation, and this has been set across short term, medium term and long-term goals.

Guided by the waste management hierarchy, the Plan prioritizes waste minimization, segregation, recycling, recovery, treatment, and safe disposal of residual waste. Key interventions include shifting to and optimizing door-to-door collection, establishing material recovery and composting facilities, strengthening transportation systems, promoting public-private partnerships, and upgrading disposal facilities to meet environmental standards. Community engagement is positioned as a central pillar of successful implementation, with emphasis on public education, behavior change, stakeholder participation, social inclusion and gender integration to ensure equitable access to services.

The Plan outlines a financial framework to ensure sustainability through diversified revenue sources, including county budget allocations, user fees, private sector investments, and development partner support. Cost recovery mechanisms will be strengthened to improve operational efficiency and long-term viability. Financial projections have been prepared to guide phased investments in infrastructure, equipment, and human resources over short-, medium-, and long-term horizons.

This plan also provides for the establishment of a Monitoring and Evaluation framework with measurable key performance indicators, regular reporting, feedback mechanisms, and periodic reviews that allow the Municipality to track performance, ensure regulatory compliance, enable adaptive management and continuous improvement. A phased implementation framework, supported by clear institutional responsibilities, timelines, and measurable indicators with defined baselines and targets, will guide execution.

Overall, this Plan provides Nyeri Municipality with a comprehensive and realistic roadmap for transforming its waste management system, through improved governance, strengthened partnerships, infrastructure investment, active community participation, and financial sustainability measures. With its implementation, the Municipality will move toward a cleaner, healthier, and environmentally resilient urban environment while promoting economic opportunities in the waste management value chain.



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CHAPTER ONE

1. INTRODUCTION

Solid waste management remains one of the major development challenges globally, nationally and at the County level. In the year 2010, the new constitution rationalized the portfolio responsibilities and functions of all the county government ministries which included “refusal removal, refuse dumps and solid waste disposal” as outlined in the fourth schedule. Following the elevation of Nyeri Town to Municipality status under the Urban Areas and Cities Act, No. 13 of 2011 (as amended in 2019), the responsibility for solid waste management in Municipality of Nyeri was delegated to the Municipality of Nyeri of Nyeri.

All human activities generate waste which requires to be properly managed for the protection of human health and environment while enhancing aesthetics. This scenario is particularly evident in urban settlements which generate large quantities of solid waste due to high human population. The impacts of poor solid waste management within the Counties urban settlements are disastrous. As such there is need for proper and efficient waste management.

Guided by the Sustainable Waste Management Act of 2022, the Environmental Management and Coordination (Waste Management) Regulations of 2006, the Nyeri County Solid Waste Management Act of 2021, and other relevant legislative frameworks, this plan provides for the guiding framework for solid waste management within Nyeri Municipality. The plan shall guide the municipality solid waste management actors by providing effective, efficient and sustainable services while utilizing solid waste as an economic resource.

1.1 OVERVIEW OF NYERI MUNICIPLAITY

Municipality of Nyeri is an urban administrative area in central Kenya serving as the headquarters of Nyeri county. It lies in the fertile central highland between Aberdare Ranges and the slopes of Mt. Kenya at an elevation of 1750m above sea level. The town is a key hub linking major regions of the country. The Municipality covers Nyeri town and surrounding wards combining urban and peri-urban areas. According to the 2019 Kenya Population and Housing Census, the urban population of Nyeri was about 140,338 people with the projections indicating continued growth across its constituent wards reflecting urban expansion. Agriculture dominates, with key crops including coffee, tea and macadamia nuts supported by rich volcanic soils. The local economy also features trade, forestry and tourism.



1.2 PURPOSE OF THE PLAN

The plan's goal is to develop and implement sustainable waste management practices that are inclusive and meet the Municipality's needs while aligning with KUSP2 objectives, county and National policies and environmental standards.

1.3 KEY OBJECTIVES OF THE PLAN

1. Ensure timely and efficient collection, transportation, and disposal of solid waste to maintain a clean and healthy urban environment.
2. Improve public-private-people partnerships in collection, waste segregation and recycling practices/activities.
3. Promote education, public participation and awareness to foster responsible waste management practices among residents.
4. Reduce environmental impact by enhancing waste disposal sites and strengthening pollution control measures.
5. Ensure financial sustainability of the SWM system through efficient resource allocation and revenue strategies.

CHAPTER TWO

2. WASTE GENERATION AND COMPOSITION ASSESSMENT IN NYERI MUNICIPALITY.

2.1 WASTE GENERATION

Waste generation in Municipality of Nyeri is mostly from the urban areas. Nyeri Central Business District, Majengo, Kamakwa, Ngangarithi, Ruringu, Gatitu, King'ong'o, Mathari, Chaka, Kiganjo, Kirichu and major residential estates generate most of the solid waste due to high population density. Municipality of Nyeri majors in agriculture; most of the waste in rural areas is used as compost manure. The waste in urban set up is collected and mixed up at the disposal areas without sorting. However, below is a breakdown of the major categories of solid waste generators: -

1. Households
2. Retail Agri- markets
3. Hotels and restaurants
4. Wholesale and retail outlets
5. Financial and educational institutions
6. Construction sites
7. Street waste
8. Manufacturing industries

Currently, the Municipality provides waste collection services in approximately 60% of its jurisdiction. An estimated 12,197 tonnes of solid waste are currently collected annually, implying a waste generation of approximately 1,016 tonnes per month. Of the waste currently collected, 6,886 tonnes originate from the commercial sector, while 960 tonnes are generated from residential areas with both streams being predominantly organic in nature. Waste collected from industries (833 tonnes) and institutions (518 tonnes) is comparatively lower and largely inorganic.

2.2 WASTE COMPOSITION

The most common forms of solid waste generated in the municipality are the organic waste which is mainly generated at household level and agricultural produce/food markets, hotels and restaurants. These include food and kitchen waste, and paper. Inorganic waste such as e-waste, automotive waste, plastics, glass bottles, and construction waste is also produced, but in low quantities. Public and private health facilities generate medical waste, while negligible volumes of hazardous waste comprise the municipal waste – expired agrochemicals and pharmaceuticals.

The waste characteristic is estimated to be as enumerated on the table below:

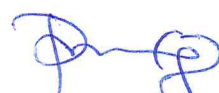


Table 1: Solid waste characterization for Nyeri Municipality

Type of waste	Percentage
Food and green waste	51%
Plastics	11%
Paper and paper products	9%
Glass	5%
Metals	2%
Inerts such as sand, rubble, dirt etc.	4%
E-waste	2%
Others	16%

2.3 WASTE GENERATION TREND

Solid waste generation in Nyeri Municipality is projected to increase steadily over the 2025–2030 planning period, primarily driven by population growth and gradual urban expansion. Population projections contained in the County Integrated Development Plan (CIDP 2023–2027) prepared by the County Government of Nyeri, and demographic data from the Kenya National Bureau of Statistics, indicate that the county is experiencing a moderate annual population growth rate of approximately 1.7–1.8 percent. This rate, which is lower than the national average, provides a realistic basis for municipal waste forecasting.

Using a base year (2025) population estimate of approximately 85,000 residents for Nyeri Municipality and an average per capita waste generation rate of 0.65 kilograms per person per day (consistent with secondary urban centres in Kenya), total annual solid waste generation is estimated at approximately 20,166 tonnes in 2025. Population projections applying an average annual growth rate of 1.8 percent indicate that the municipal population could reach approximately 92,900 residents by 2030. At a constant per capita waste generation rate, this would translate to an estimated annual waste generation of approximately 22,037 tonnes by 2030.

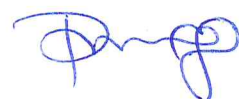
Overall, this represents an approximate 9 percent increase in total waste generation over the five-year planning horizon. The projection is based on total waste generated rather than quantities collected, thereby providing a more accurate foundation for infrastructure sizing, operational planning, and financial forecasting.

While the projected growth rate is moderate, additional upward pressure on waste volumes may arise from ongoing economic activities in agriculture, trade, and service sectors within the municipality. Changes in consumption patterns and gradual increases in per capita waste generation could further elevate waste quantities beyond baseline projections. Consequently, the municipality should adopt scalable and flexible waste management systems capable of accommodating both projected demographic growth and potential increases in waste intensity.

The projected increase underscores the need for strengthened waste collection systems, expanded material recovery and recycling initiatives, improved disposal infrastructure, and sustainable

financing mechanisms to ensure effective and environmentally sound solid waste management over the medium term.

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CHAPTER THREE

3. EXISTING SOLID WASTE MANAGEMENT SYSTEM.

3.1 WASTE COLLECTION SYSTEM

Collection and transportation of solid waste generated at household, commercial, and institution level is mainly undertaken by the Municipality of Nyeri, with some residential estates being served by private waste collectors. Health waste is handled separately with major processing being done through microwave and incineration.

Since 2019, the Municipality of Nyeri has been implementing daily kerbside waste collection system within the Central Business District. The same has been affected in estates surrounding Nyeri town, with a weekly defined collection schedule in place. In addition, skip bins have been evenly distributed throughout the municipality to enhance waste collection efficiency. In rural areas as well as select estates, there are waste collection receptacles/retention chambers positioned at strategic points to support communal collection.

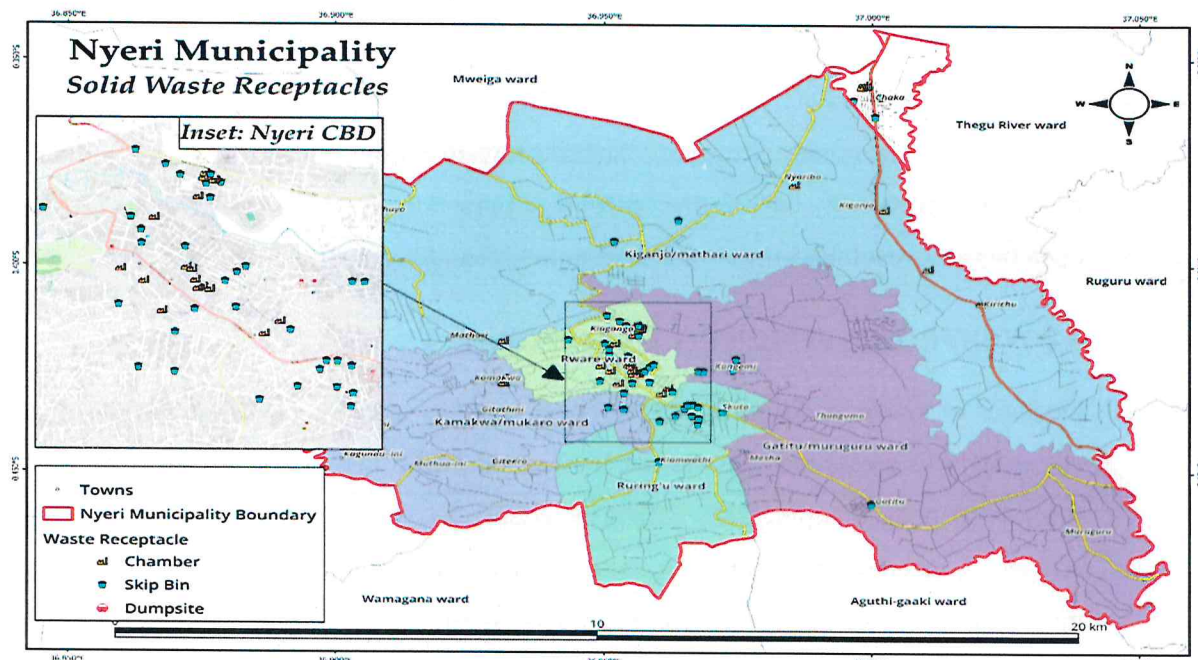
Waste transportation in the municipality is primarily basic, relying on open trucks, side loaders, and skip loaders. Currently, the Municipality operates two tippers, two side loaders, and two skip loaders to serve all areas within its coverage on a daily basis.



Fig 1: Side loader waste truck



Fig 2: Skip loader waste truck



Map: A GIS map showing the distribution and locations of refuse chambers and skip bins within the municipality

This collection system faces challenges that limit its overall effectiveness. Inconsistencies in the weekly collection schedule often arise due to system issues, such as breakdowns of assigned collection trucks, leading to open dumping and roadside littering. The number of collection trips and trucks is inadequate relative to the size of the population and the geographical coverage area, resulting in some locations being underserved or receiving only partial coverage, including areas such as Thunguma, Kandara and Ciaraini areas. Additionally, insufficient funding for waste management operations further constrains the municipality's ability to maintain equipment, expand coverage, and ensure consistent service delivery.

Poor infrastructure in informal settlements has resulted in improper waste disposal, primarily due to the absence of designated waste collection points and limited accessibility. These areas lack appropriate locations for residents to deposit waste while awaiting collection and transportation. Consequently, indiscriminate disposal has led to the blocking of drainage systems, causing water pollution, health hazards, and environmental degradation. The lack of structured road networks also makes it difficult for waste collection trucks to access these settlements, resulting in the accumulation of waste over time.

Additionally, there is limited awareness and knowledge regarding the importance of a clean and healthy environment within Nyeri Municipality, which has contributed to poor household-level waste management practices, including the lack of segregation and minimal efforts to reduce,

reuse, or recycle waste. A negative attitude toward waste management and a failure to take personal responsibility have further encouraged practices such as littering, illegal dumping, and open burning, resulting in environmental pollution and degradation.

3.2 WASTE TREATMENT AND DISPOSAL

Disposal of waste in Municipality of Nyeri remains a major challenge, as the municipality currently lacks a gazetted disposal site and has not established a dedicated waste transfer station. It relies on other dumping sites within the county for waste disposal, which has compromised efficiency, increased transportation costs, and raises environmental and public health risks. The municipality, however, has a micro-shredder at the Nyeri Referral Hospital (PGH) for the treatment and disposal of medical waste, providing a limited but important capacity for managing hazardous healthcare materials.

This situation has led to ineffective waste service delivery, as collection trucks make fewer trips due to the extended time required to transport waste to disposal sites located outside the municipality. Consequently, a significant portion of allocated funds is spent on fuel and vehicle maintenance, reducing resources available for actual waste collection and management.

3.3 RECYCLING AND RESOURCE RECOVERY

Waste recycling within the municipality occurs minimally and informally, primarily at collection points and disposal sites, carried out by both individual and organized groups of waste pickers. The municipality lacks material recovery facilities or transfer stations, which limits structured recycling efforts. Recycling activities are conducted on a small scale, with most focus on scrap metal, plastics, glass, paper, and rubber, which are collected for sale or further processing. In addition, at the markets, some individuals collect organic waste for manure production and black soldier fly farming.

3.4 INSTITUTIONAL FRAMEWORK

The current institutional framework for solid waste management in Municipality of Nyeri is anchored within existing national and county governance structures and involves multiple public and non-state institutions. These arrangements shape how solid waste management functions are planned, coordinated, regulated, and implemented across the municipality.

Municipality of Nyeri is responsible for solid waste service delivery within its jurisdiction. The municipality undertakes organized weekly waste collection within the Central Business District (CBD) and surrounding estates and disposes of collected waste at a county-designated disposal site. These services are currently delivered by a workforce of 72 staff, comprising 69 support staff

(drivers and waste collectors) and 3 Public Health Officers, who are responsible for planning, supervision, and reporting to the Municipal Manager. The municipality also develops and disseminates waste collection schedules to the public, maintains waste collection vehicles, and enforces compliance with waste management regulations within its coverage area.

In addition to routine waste collection services, the Municipality periodically supports and coordinates clean-up activities organized primarily by community groups, institutions, and other partners. These initiatives focus mainly on street and estate litter management, drainage unblocking, and improvement of general environmental cleanliness within the town and residential areas. While these activities contribute to improved waste management outcomes, they are largely ad hoc and dependent on community and institutional participation.

The County Government of Nyeri delivers waste management services in areas outside the municipality and is responsible for the management of all county disposal sites, including those used for municipal waste disposal. The County has developed and enacted the Nyeri County Solid Waste Management Act, 2021, and is responsible for its implementation across the county.

Private waste service providers also operate within Nyeri Municipality, offering waste collection and transportation services in selected estates and institutions that are either not covered or are partially served through the municipal kerbside collection system. In addition, informal waste actors play a role in waste recovery at points of collection, focusing mainly on recyclable materials such as metals, glass, paper, and rubber, which are sold directly or transported to recycling facilities.

The National Environment Management Authority (NEMA) provides regulatory oversight for solid waste management within the county. Its role includes the licensing of waste transporters and facilities, enforcement of environmental regulations, and provision of technical and advisory support on solid waste management matters.

3.5 FINANCIAL MANAGEMENT

The Municipality of Nyeri has solid waste management financed primarily through budgetary allocations from the County Treasury. These allocations are derived from the National exchequer as well as county-generated revenues, including solid waste management user fees collected from businesses, markets, institutions, and private waste operators through the business permitting system. Households within the Municipality that are served by NYEWASCO contribute to waste management financing through user fees charged alongside water bills. All revenues collected are consolidated into the County budget and, upon approval, are released through the County

Exchequer and disbursed to County departments and units, including the Municipality, in accordance with approved budgetary allocations.

Additional financial and in-kind support is mobilized through development partners implementing environmental and waste management programmes within the Municipality. Such support has included project-based interventions such as the provision and installation of waste receptacles and other supporting infrastructure. Further, the private sector and organized community groups complement municipal efforts by undertaking solid waste management initiatives that enhance service delivery, including the provision of litter bins, sponsorship of clean-up activities, and community-led environmental actions.

CHAPTER FOUR

4. WASTE MANAGEMENT GOALS

The Municipality of Nyeri Solid Waste Management plan has been formulated with an aim of leading the municipality towards achieving sustainable solid waste management to a state of Zero Waste generation as a guiding principle which states that Waste is a resource that can be harnessed to create wealth, employment and reduce pollution of the environment.

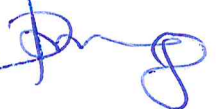
This plan outlines strategic short-term and long-term goals aimed at improving waste management services in Nyeri Municipality. The goals and objectives respond to existing service delivery challenges, projected increases in waste generation, and the need for sustainable and environmentally sound waste management systems. They provide a clear framework to guide planning, investment, and implementation over the plan period.

4.1 SHORT TERM GOALS (1 -3 years)

- a) Increase public awareness and adoption of sustainable waste management practices e.g waste segregation at the households, institutions, and commercial establishments level.
- b) Improve waste collection coverage and operational efficiency within the municipality, with emphasis on underserved areas.
- c) Enhance stakeholder participation by actively involving community groups, institutions, private providers, and informal actors in planning and implementing municipal waste management activities.
- d) Strengthening municipal capacity, both institutional and operational, for waste collection, transportation, and monitoring.

4.2 MEDIUM TERM GOALS (3 -5 years)

- a) Develop and upgrade waste management infrastructure, including a waste transfer station or Material Recovery Facility (MRF) within the municipality.
- b) Strengthen the legal and policy framework for solid waste management by developing and enforcing comprehensive municipal regulations that are aligned with existing county and national guidelines to guide, regulate, and promote sustainable waste management practices across the municipality.
- c) Establish operational waste management zones within the municipality to streamline collection, transportation, and disposal processes efficiently.



- d) Enhance public-private partnerships to mobilize resources, foster innovation, and improve the efficiency and sustainability of waste management services.

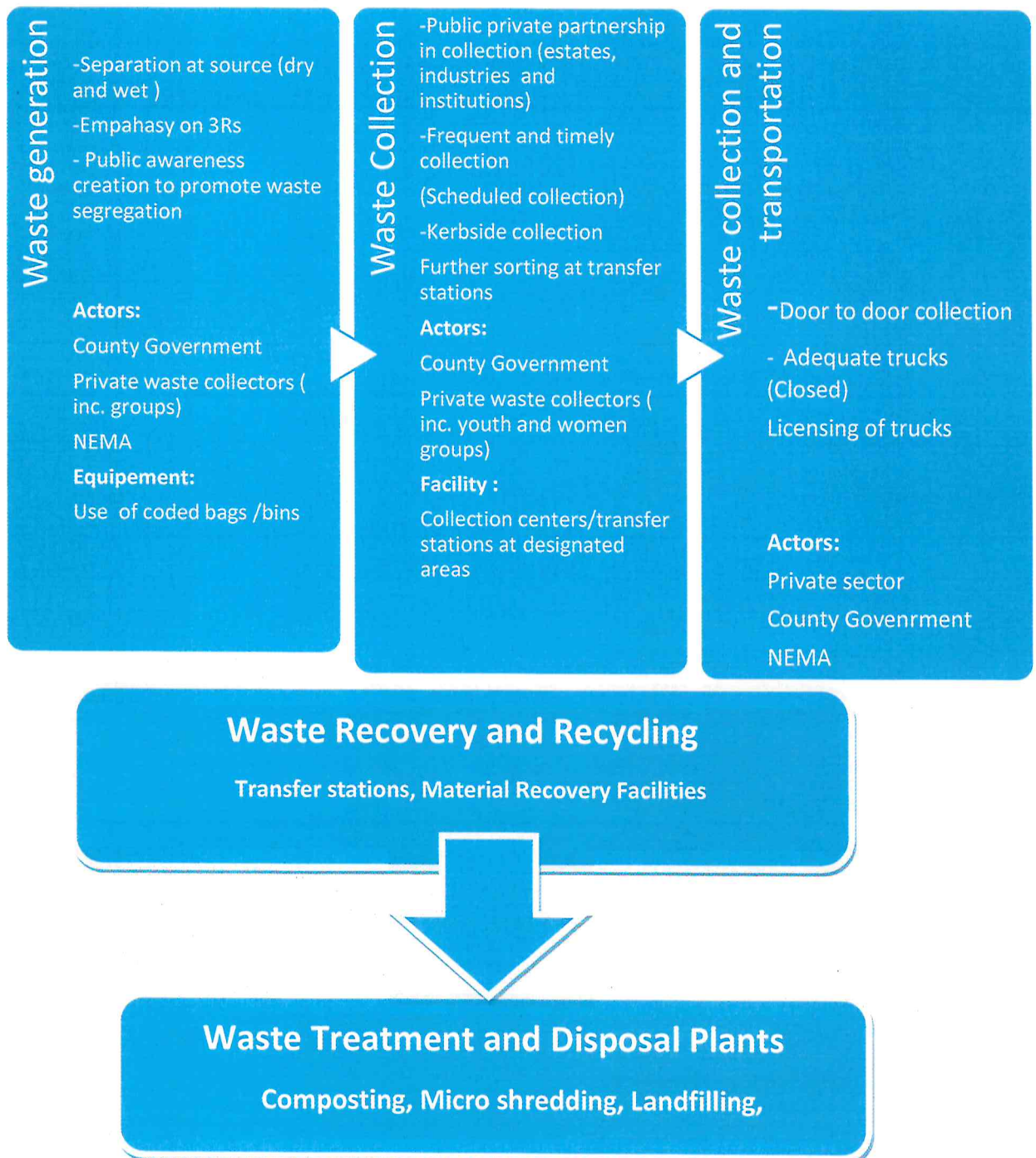
4.3 LONG TERM GOALS (5-10 years)

- a) Implement a zero-waste or circular economy approach that promotes waste minimization, resource recovery, sustainable consumption, wealth creation and employment.
- b) Enhanced adoption of technology for recovery, recycling, and composting, so as to achieve a significant reduction in the volume of waste disposed of at final disposal sites.
- c) Improve and modernize waste disposal facilities to meet environmental, public health, and regulatory standards.
- d) Strengthen adaptive governance through continuous monitoring, evaluation, and revision of waste management policies and strategies to address emerging challenges and incorporate technological advancements.

CHAPTER FIVE

5. WASTE MANAGEMENT STRATEGIES

Guided by the waste management hierarchy, Municipality of Nyeri seeks to employ waste management strategies that prioritize waste minimization and segregation at source, supported by efficient collection, transportation, recovery, treatment, and safe disposal of residual waste with an aim of improving efficiency, environmental protection, and service delivery.



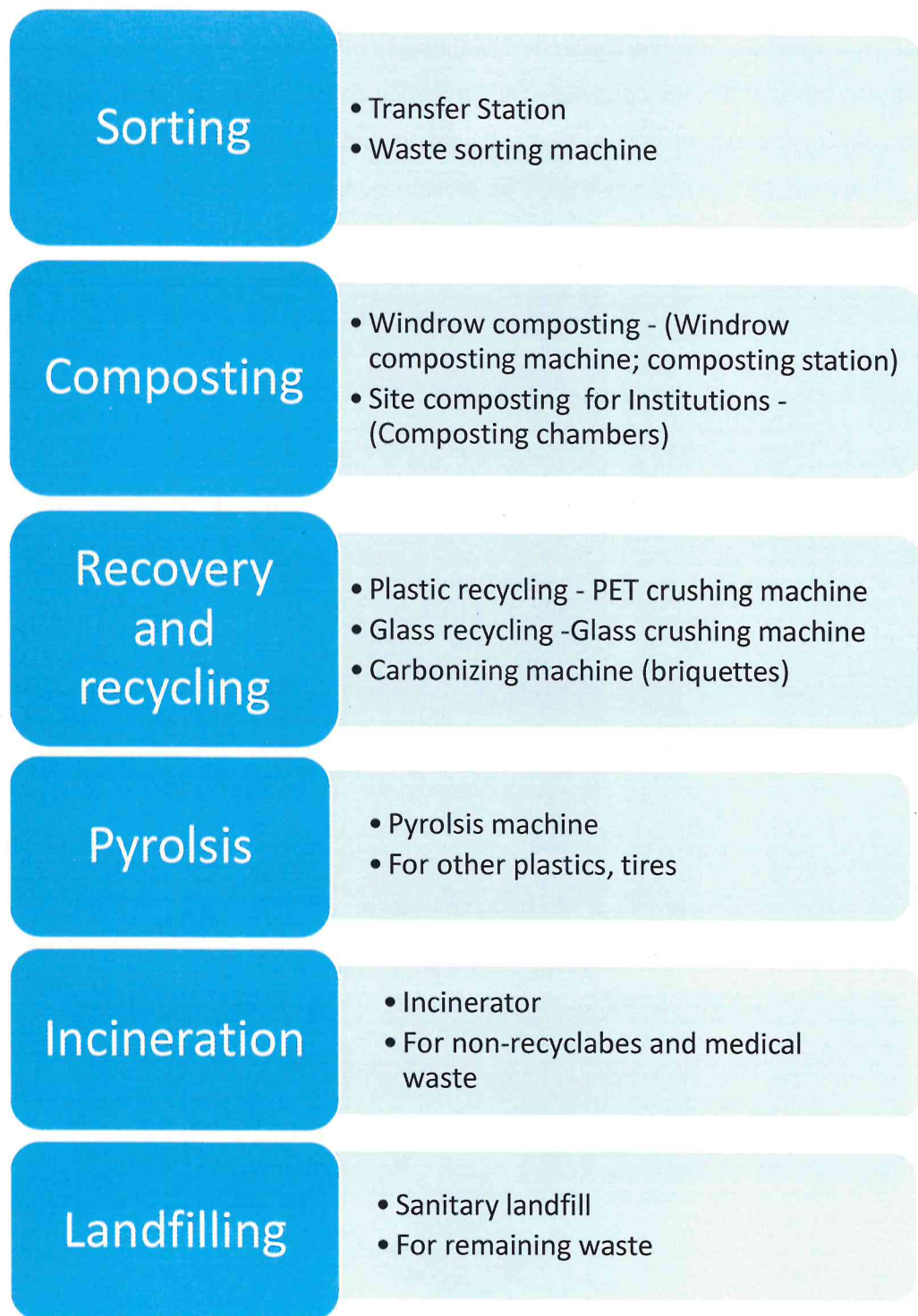


Fig 3: Ideal State and Roadmap

5.1 WASTE MINIMIZATION

Municipality of Nyeri shall promote waste minimization as a first line strategy to reduce quantity and environmental impact of waste generated. This will be done through education and public awareness campaigns targeting residents, businesses and institutions to promote waste separation at source and reduce overall waste generation, these initiatives aim to instill behavioral changes that lessen the volume of waste collected while enhancing recycling potential. In addition, the Municipality shall foster partnerships with local businesses and institutions to adopt sustainable packaging solutions and implement practical waste reduction strategies along supply chains thereby reducing solid waste volumes.

5.2 WASTE SEGREGATION AND COLLECTION

Municipality of Nyeri shall employ a dedicated collection system for segregated waste, utilizing color-coded bins and receptacles at households, businesses, and transfer stations to separately gather recyclables like plastics, paper, glass, and metals. The system shall seek to maximize on private-public partnerships to transport segregated loads efficiently to sorting facilities or recycling points. Public awareness initiatives shall accompany these measures to ensure compliance and proper use.

5.3 WASTE COLLECTION

Waste collection is the main point of interface between the public and waste service providers who are either the Municipality of Nyeri or the private operators. The Municipality strengthened its waste collection system so as to improve coverage and service reliability, by zoning and designating waste collecting zones, and integrating kerbside collection in the Central Business District with scheduled door-to-door collection services in the estates and other high waste generating zones.

The Municipality shall also install or expand public waste bins and establish collection centers and transfer stations at strategic areas within the town, fully equipped with waste receptacles which should either be color coded or labeled with the specific waste stream to promote waste segregation. Collection frequencies shall be to avoid scattering and overflowing of waste into undesignated areas and maintain public health standards.



5.4 WASTE TRANSPORTATION

The Municipality of Nyeri shall identify current and future waste transportation needs based on waste quantities, collection coverage, and haulage distances and plan for adequate transport for the various segregated waste streams, in line with the set standards that include ensuring the waste transportation trucks are:

- a) closed and suitable for the transportation of the various waste streams to the waste treatment facilities and landfill,
- b) regularly serviced and maintained to avoid littering of waste, and
- c) licensed to operate by NEMA.

5.5 RECYCLING AND RESOURCE RECOVERY

In addition to promote composting under its waste management strategies by establishing community-based programs and initiatives at market areas to process organic waste, which constitutes 51% of collected solid waste, Municipality of Nyeri plans to invest in a material recovery facility to facilitate recovery of high-value fractions like plastics, paper, glass, and metals from segregated waste streams.

5.5 WASTE TREATMENT AND DISPOSAL

The Municipality shall work towards having Safe treatment and disposal of residual waste shall be undertaken as a last resort, by setting up compliant disposal sites, which is a sanitary landfill, which meet environmental and public health standards. The Sanitary landfills should be lined with systems to collect leachate and methane gas, with frequent spreading, compacting and covering of waste with soil or any other appropriate covering material to avoid environmental pollution and scavenging birds. For any residual waste streams, waste treatment technologies such as biogas production shall be explored with environmental safeguard measures put in place.

CHAPTER SIX

6. INSTITUTIONAL CAPACITY AND REGULATORY FRAMEWORK

6.1 COUNTY/URBAN AREAS GOVERNANCE AND INSTITUTIONAL ROLES

The roles of the Municipality, County Government, NEMA, waste service providers, and citizens in solid waste management are guided by existing legislation, including the Urban Areas and Cities Act No.13 of 2011(as amended, 2019), the Sustainable Waste Management Act (2022), the Nyeri Solid Waste Management Act (2021), and the EMCA (Waste Management Regulations, 2024). These legal frameworks provide the basis for planning, collection, transportation, disposal, regulatory oversight, and citizen participation in solid waste management.

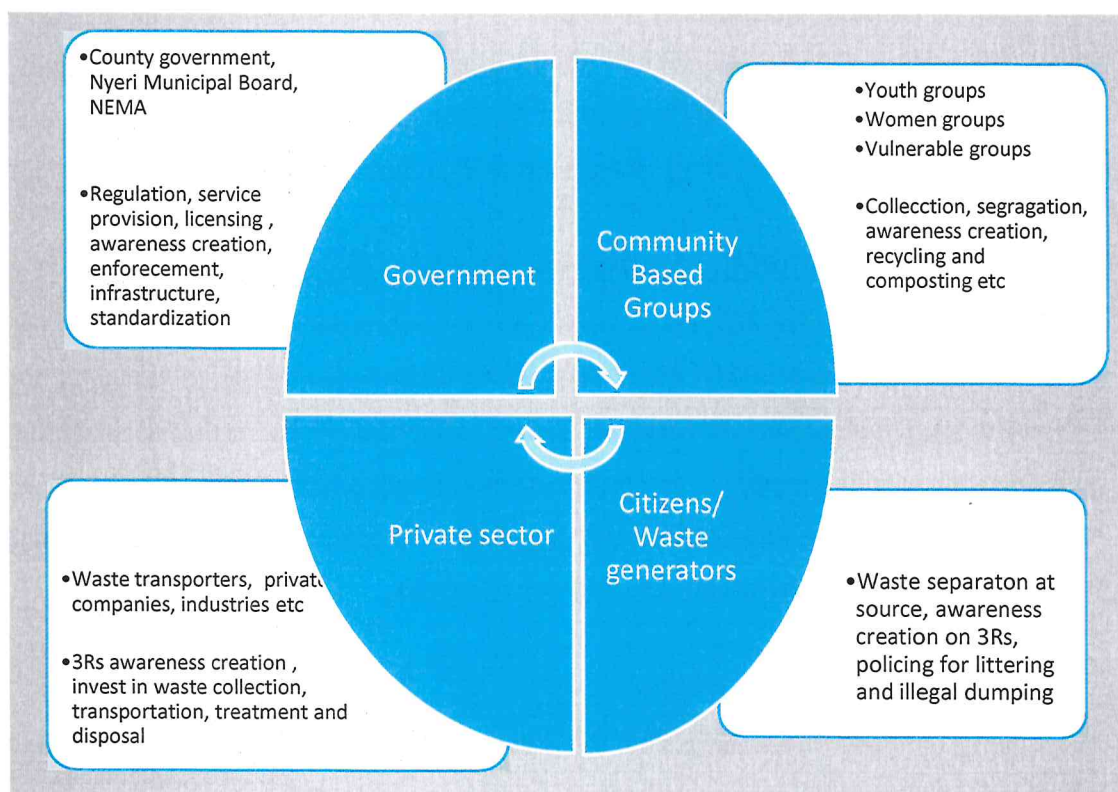


Fig 4: Stakeholders in solid waste management

1. Waste Generators / Citizen

Waste generators include households, businesses, institutions, industries, and any other entities that produce waste within Nyeri Municipality. Their responsibilities are focused on minimizing and managing waste at the source.

- **Segregation at Source:** Generators must separate hazardous waste from non-hazardous waste and further segregate non-hazardous waste into organic and non-organic fractions before it is placed in clearly labelled and colour-coded receptacles.
- **Proper Handling and Disposal:** After segregation, waste must be disposed of at an appropriate disposal site or be handed over to licensed waste collectors/transporters for further handling, treatment, or recovery.
- **Waste Minimisation:** Generators are required to adopt cleaner production and waste minimisation practices where possible, including conserving raw materials and energy, enabling reuse and recycling, and incorporating environmental considerations in products and processes.

Other responsibilities of the citizens include the adoption of the sustainable waste management practices such as no littering and circular economic approach in their day-to-day, as well as paying the Municipal/County prescribed fees in regard to waste management for effective delivery service. In Nyeri Municipality, this means that every resident, business, institution, or facility must actively participate in segregation and proper waste delivery as part of the overall system. Such responsibilities strengthen the municipal waste management process and reduce contamination of waste streams, improving recycling and recovery outcomes.

2. County Government of Nyeri

The County Government is responsible for ensuring the effective management of solid waste within its jurisdiction. Its key responsibilities include:

- **Policy and Regulation:** Developing and enforcing county waste management regulations and guidelines and ensuring they are aligned with broader national frameworks.
- **Planning and Integration:** Integrating waste management into county planning and budgeting processes to ensure sustainable service delivery.
- **Waste Infrastructure and Services:** Establishing and maintaining disposal sites, collection centers, and facilities for source segregation, recycling, reuse, and material recovery.

- **Operational Oversight:** Managing waste disposal within county boundaries, coordinating with service providers, and maintaining a register of all waste service operators.
- **Monitoring and Data Management:** Collecting and sharing information on waste management activities to support planning, regulation, and continuous improvement.

Through these functions, the County Government provides the framework and resources that enable municipalities, private operators, and communities to deliver efficient, safe, and sustainable waste management services.

3. Municipality of Nyeri

The Municipality of Nyeri has a capacity for functional and effective waste disposal thus is responsible for overseeing waste collection and service delivery within its jurisdiction, infrastructure development, maintaining collection vehicles, monitoring operations, enforcing municipal waste regulations, conducting public awareness and education campaigns, and forging partnerships for effective waste management. It coordinates with private service providers and community actors to ensure efficient, safe, and sustainable waste management.

4. National Environment Management Authority (NEMA)

NEMA provides regulatory oversight and guidance to support sustainable waste management at the county and municipal level. Key responsibilities include:

- **Standards and Guidelines:** Developing and disseminating standards, technical guidelines, and best practices for sustainable waste management.
- **Regulatory Oversight:** Enforcing compliance with waste management regulations in consultation with municipalities and counties, and issuing licenses for waste management activities where jurisdiction permits.
- **Information Management:** Establishing systems to collect, record, and analyze data on waste generation, collection, treatment, recycling, recovery, and disposal, as well as tracking service coverage, compliance, and environmental impacts.
- **Research, Awareness, and Capacity Building:** Conducting research, providing training, and creating public awareness programs to promote sustainable waste management practices.
- **Knowledge Sharing and Reporting:** Providing analytical reports and technical support to municipalities and counties, serving as the national hub for waste management information to guide planning and decision-making.



Through these functions, NEMA supports municipalities like Nyeri in implementing safe, efficient, and sustainable waste management practices, ensuring compliance with national environmental standards and promoting continuous improvement.

5. Private Sector

Private sector actors play a key role in complementing municipal services and enhancing efficiency, innovation, and sustainability in waste management. Their responsibilities span throughout the waste management cycle. Private entities within Municipality of Nyeri are encouraged to engage via public-private partnerships (PPPs) in collection and transportation, treatment and recovery, innovation and investment, public awareness and capacity building.

The private sector can provide color-coded bins, invest in waste recovery facilities, prioritize corporate social responsibility around sustainable waste management, link informal recyclers to markets, or get involved in waste collection and transportation by moving waste collected within the municipality to appropriate treatment, recovery, or disposal facilities in line with municipal schedules and standards.

In line with national regulations, waste transporters have responsibilities that include:

- **Licensing Requirement:** Transporters must be licensed to carry waste before undertaking any waste transportation activities. Waste vehicles must be clearly marked to indicate they are used for waste transportation and specify the type of waste carried.
- **Safe Handling and Transportation:** Licensed transporters must ensure that waste collection and transport are conducted in a manner that prevents scattering, leaks, contamination, or noxious emissions during transit.
- **Documentation and Tracking:** Transporters are required to maintain and produce documentation for every load of waste transported, demonstrating accountability and traceability of waste movement when requested by enforcement officers.

6. Community groups including CSOs

Community groups - informal or formal - besides allowing for inclusion of the vulnerable and marginalized groups in society have a role in waste management, they play a critical role in municipal solid waste management, especially in towns like Nyeri where municipal coverage is

limited. Their involvement helps improve efficiency, sustainability, and environmental awareness through:

- a) **Street Clean-Ups and Drain Maintenance:** Organizing and participating in regular clean-ups of streets, estates, markets, and public spaces and clearing litter from drains to prevent blockages and flooding.
- b) **Waste Segregation and Recycling Initiatives:** Establishing local recycling or composting initiatives, including small-scale material recovery centers.
- c) **Public Awareness and Education:** Educating residents on proper waste handling, segregation, and environmental best practices, and promoting behavior change campaigns to reduce littering, illegal dumping, and open burning of waste.
- d) **Partnership with Municipal and Private Actors:** Collaborating with municipal authorities, private service providers, and informal waste collectors to expand waste collection coverage.
- e) **Advocacy and Policy Support:** Representing community interests in planning and decision-making processes related to waste management including local adoption of circular economy principles, such as composting organic waste or reusing materials.

6.2 REGULATORY COMPLIANCE

The Municipality of Nyeri shall ensure full adherence to all applicable National and County policies, regulations, and standards governing all solid waste management activities, with compliance being achieved through:

- monitoring and oversight of municipal operations – regular inspections and field observations to ensure safe, efficient, and environmentally sound collection, transport, and disposal of waste,
- coordinating with oversight agencies and collaborating with other relevant stakeholders ensure municipal operations meet regulatory requirements and maintain accountability, and
- enforcement measures for non-compliance with municipal guidelines through warnings, penalties, or suspension of services in line with legal and operational standards.
- undertaking internal compliance such as staff training, developing operational manuals and vehicle maintenance, to support consistent adherence to regulations.
- public awareness and reporting - encouraging community participation through reporting illegal dumping or unsafe waste practices,



6.3 PUBLIC–PRIVATE–PEOPLE PARTNERSHIPS (PPPPS)

The Municipality of Nyeri shall promote collaborative arrangements and structured partnerships that actively involve the private sector in waste collection, treatment, recycling, and resource recovery initiatives to enhance efficiency and sustainability of solid waste management.

There is need to leverage on resources and expertise in the local private sector through joint planning and resource sharing for optimized service delivery and maximize resource efficiency. For example, having more licensed private operators support municipal services by providing collection, transportation, treatment, and recovery of waste in areas not fully covered by municipal involvement introduces operational efficiency, technological innovation, and expanded recycling and recovery capacity.

6.4 COMMUNITY ENGAGEMENT

The Municipality of Nyeri shall strengthen collaboration with local communities, community-based organizations, and informal waste actors, particularly in informal settlements to promote inclusive participation, awareness, and ownership of solid waste management practices. This will be undertaken through targeted education and awareness programs, encouraging communities in organizing and participating in clean-up activities, embracing and acting on feedback and reports on illegal dumping, open burning, and service gaps as well as fostering solid waste management community planning through the citizen fora's, ensuring local priorities and needs are reflected in waste management strategies.

CHAPTER SEVEN

7. PUBLIC EDUCATION, AWARENESS AND STAKEHOLDER ENGAGEMENT

Effective solid waste management in Municipality of Nyeri depends on informed, engaged, and empowered stakeholders. Public education and awareness initiatives, combined with structured stakeholder engagement, ensure that residents, businesses, and institutions actively participate in sustainable waste management practices.

7.1 PUBLIC EDUCATION CAMPAIGNS

The Municipality shall implement targeted awareness and sensitization initiatives to educate and encourage the public towards proper waste segregation, promote separate collection systems, increase awareness of recycling opportunities and, and responsible waste disposal behaviors.

The campaigns shall be implemented through multiple channels, including community foras and workshops, schools, media, social media platforms, and municipal outreach programs, ensuring broad coverage and consistent messaging.

7.2 STAKEHOLDER CONSULTATION

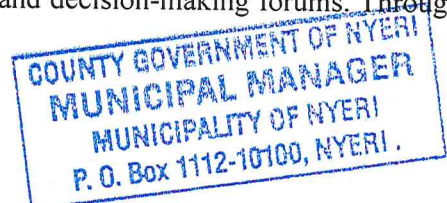
The Municipality shall actively and inclusively involve key stakeholders, including residents, businesses, community groups, and non-governmental organizations in the planning, design, and execution of waste management policies and programs for contribution of insights on service needs, operational challenges, and innovative solutions. This participatory approach will ensure that municipal waste management strategies are responsive, practical, and aligned with local priorities.

7.3 FEEDBACK MECHANISMS

To continuously improve services, the Municipality shall establish accessible complaint-handling and feedback systems to capture community views, monitor service performance, and use public input to enhance the quality and effectiveness of waste management services. The mechanisms deployed may include dedicated hotlines, online reporting platforms, suggestion boxes in strategic locations, and structured community meetings.

7.4 SOCIAL INCLUSION AND GENDER INTEGRATION

Noting that waste management programs must address the needs of all residents, particularly vulnerable groups and marginalized populations, the Municipality shall ensure equal access to information, participation, and services for the vulnerable groups and undertake gender-sensitive approaches in awareness campaigns, clean-up initiatives, and decision-making forums. Through



social inclusion and gender integration, the Municipality will strengthen the sustainability and fairness of waste management programs, ensuring that no group is left behind.

CHAPTER EIGHT

8. FINANCIAL STRATEGY

This chapter outlines the financial framework for the implementation of the Municipal Solid Waste Management Plan. It identifies revenue sources, cost recovery mechanisms, investment opportunities, and financial planning approaches required to ensure the long-term sustainability and efficiency of waste management services. The strategy emphasizes prudent resource mobilization, shared responsibility, and innovative financing models.

8.1 REVENUE SOURCES

The Municipality shall mobilize financial resources for waste management through a diversified funding mix including:

- Annual County Government budget allocations to Annual allocations from county and municipal budgets to support waste collection, infrastructure development, enforcement, and institutional strengthening.
- User fees and service charges on waste collection and disposal fees charged to households, commercial entities, institutions, and industries based on service levels and waste generation.
- Capital investments from private operators involved in waste collection, recycling, composting, and recovery activities.
- Support from development partners and Non-Governmental Organizations such as grants, technical assistance, and concessional financing
- Revenue from resource recovery initiatives undertaken by the Municipality.

8.2 COST RECOVERY MECHANISMS

To enhance financial sustainability, the Municipality shall implement cost recovery measures that balance affordability with service efficiency. These may include:

- Revision of waste collection fees to reflect the actual cost of service provision.
- Zoning of waste generation zones and mapping of commercial, industrial and institutional waste generators for improved billing, fee collection, and enforcement systems to reduce revenue leakages.
- Incentivizing waste segregation and recycling through reward-based schemes.

8.3 PUBLIC–PRIVATE–PEOPLE PARTNERSHIPS

Municipality of Nyeri promotes Public–Private–People Partnerships as a key approach to improving financing and implementation of waste management services. To enhance these partnerships, the Municipality may:

- Leverage private sector capital, innovation, and operational efficiency in waste treatment, recycling, and composting projects.
- Encourage community-based organizations and cooperatives to participate in resource recovery and localized waste solutions.
- Mobilize for joint funding and operation of infrastructure such as material recovery facilities, composting plants, transfer stations, and recycling hubs.
- Pilot privatization of waste collection and transportation as a means to improve waste management service coverage and quality.

8.4 FINANCIAL PROJECTIONS

Municipality of Nyeri shall outline financial projections for anticipated costs and revenues over the short, medium, and long term to guide planning and investment decisions. These projections shall account for capital and operational expenditure including equipment, infrastructure development, human resources, and operational activities noting any financing gaps, alongside expected improvements in revenue from user fees and resource recovery. The projection plan shall be reviewed and adjusted regularly to reflect changing waste volumes, technologies, and economic conditions.

CHAPTER NINE

9. MONITORING AND EVALUATION

A Monitoring and Evaluation (M&E) framework will be established to track implementation progress, assess performance, and support continuous improvement of the solid waste management system in Nyeri Municipality. The framework will have clearly defined Key Performance Indicators (KPIs), with each KPI having defined baselines, periodic target, responsible institution and reporting timelines to ensure accountability and transparency. The framework will also have reporting structures, and review mechanisms aligned with county planning and budgeting cycles.

Monitoring will be conducted through routine data collection by the Municipality in collaboration with various other stakeholders, through mechanisms that will include:

- Daily operational records.
- Monthly performance reports from service providers.
- Periodic field inspections of collection points and disposal sites.
- Community feedback systems, including complaint registers and digital reporting platforms.
- Quarterly and annual consolidated reports submitted to the County Government.

Data will be analyzed to identify service gaps, operational inefficiencies, financial performance trends, and environmental compliance issues, informing corrective action where necessary, with the Municipality designating staff to be responsible for coordinating monitoring and evaluation in the implementation of this plan.

The Plan will undergo structured periodic reviews to remain responsive to population growth, urban expansion, regulatory changes, technological advancements, and emerging environmental challenges. These reviews will involve stakeholder consultations, to ensure transparency, inclusivity, and evidence-based decision-making.

Below are sample templates that can be adopted /customized for the monitoring and assessment of this plan.

Sample Monitoring Status as per Identified Indicators

KPI Category	Indicator	Unit	Baseline (Period)	Target	Week 1	Week 2	Week 3	Week 4	Monthly Total	Status
COLLECTION PERFORMANCE	Waste Collected Per Day	Tonnes		—	—	—	—	—	—	—
	Coverage of Collection Routes	%		—	—	—	—	—	—	—
	Collection Frequency (per week)	Times		—	—	—	—	—	—	—
DIVERSION FROM DISPOSAL SITE	Waste Diverted (%)	%		—	—	—	—	—	—	—
	Total Waste Diverted	Tonnes		—	—	—	—	—	—	—
RECYCLING PERFORMANCE	Waste Recycled	Tonnes		—	—	—	—	—	—	—
	Materials Recovered (Plastic, Metal, Paper)	Tonnes		—	—	—	—	—	—	—
ILLEGAL DUMPING	Reduction in Incidents	Number		—	—	—	—	—	—	—
	Illegal Sites Cleaned	Number		—	—	—	—	—	—	—
	Monitoring Conducted	Number		—	—	—	—	—	—	—
EQUIPMENT & OPERATIONS	Equipment Availability	%		—	—	—	—	—	—	—
	Operational Vehicles	Number		—	—	—	—	—	—	—
	Equipment Maintenance Completed	Number		—	—	—	—	—	—	—

Sample Quarterly Performance Summary Sheet

KPI	Q1 Target	Q1 Actual	Q2 Target	Q2 Actual	Q3 Target	Q3 Actual	Q4 Target	Q4 Actual	Annual Target	YTD Actual	Variance
Total Waste Collected (Tonnes)	—	—	—	—	—	—	—	—	—	—	
Waste Diverted from Landfills (%)	—	—	—	—	—	—	—	—	—	—	
Waste Recycled (Tonnes)	—	—	—	—	—	—	—	—	—	—	
Recycling Rate (%)	—	—	—	—	—	—	—	—	—	—	
Collection Coverage (%)	—	—	—	—	—	—	—	—	—	—	
Illegal Dumping Incidents Reduced (%)	—	—	—	—	—	—	—	—	—	—	
Equipment Availability (%)	—	—	—	—	—	—	—	—	—	—	

Sample Monitoring Framework Table Guide

Frequency	Monitoring Type	Time	Responsible Person	Tools/Methods
Daily Monitoring				
Weekly Reviews				
Bi-Weekly Inspections				
Monthly Analysis				
Quarterly Assessment				
Annual Evaluation				

COUNTY GOVERNMENT OF NYERI
MUNICIPAL MANAGER
MUNICIPALITY OF NYERI
P. O. Box 1112-10100, NYERI.

CHAPTER TEN

10. IMPLEMENTATION MATRIX.

Goal	Key Activities	Actors (Lead & supporting)	Indicator	Indicative Budget	Remarks
Short Term (1-3 years)					
Increase public awareness and adoption of sustainable waste management practices	Conduct municipal-wide public awareness campaigns on waste segregation	Municipality, County Gov., CBOs, NGOs, Schools, Private Collectors	% households practicing segregation	Medium	
	Develop and distribute IEC materials	Municipality, Development Partners (Private sector, CBOs, NGOs)	No. of IEC materials produced & distributed	Low	
	Integrate waste education into school programs	Municipality, Education Institutions (both National and County), CBOs, NGOs	No. of schools implementing program	Low	
Improve waste collection coverage and operational efficiency	Expand door-to-door collection to underserved areas	Municipality, Private Operators	% increase in collection coverage	High	
	Procure additional collection trucks and equipment	Municipality, County Treasury	No. of equipment acquired	High	
	Optimize collection routes and zoning	Municipality, Private Operators	% in reduced fuel cost; % in improved haulage turnaround time	Medium	
Enhance stakeholder participation	Establish stakeholder coordination forums	Municipality, CBOs, Informal Sector, Businesses	Functional forum established	Low	
	Develop partnership framework	Municipality, County Govt., Private Sector	Signed partnership agreements	Low	
	Support community clean-up initiatives	Municipality, Community Groups, Private sector, Education institutions	No. of clean-up exercises conducted	Medium	
Strengthen municipal institutional and	Recruit/designate additional waste management staff	Municipality, County Public Service Board	Improved staffing levels	Medium	
	Conduct technical training programs	Municipality	No. of staff trained	Medium	

operational capacity	Develop monitoring and reporting tools	Municipality, County Gov.	Functional monitoring system	Medium	
Medium Term (3-5 years)					
Develop and upgrade waste management infrastructure (Transfer Station/MRF)	Conduct feasibility study	Municipality, Consultants, County Govt.	Study completed	Medium	
	Designate/secure land and approvals	Municipality, County Govt.	Site secured; approvals obtained	Medium	
	Construct and operationalize facility	Municipality, County Gov., Private Sector	Facility operational	High	
Strengthen legal and policy framework	Develop municipal waste regulations	Municipality, County Gov.	Regulations developed	Medium	
	Enforce compliance mechanisms	Municipality, Enforcement Officers	Improved compliance rate	Medium	
Establish operational waste management zones	Map and designate collection zones	Municipality, County Gov (Dept of LPPUH)	Zoning map approved	Low	
	Assign operators/municipality team per zone	Municipality, Private Collectors	Zones operational	Low	
Enhance Public-Private Partnerships	Develop PPP framework	Municipality, County Govt., Private Sector	Frameworks adopted	Low	
	Mobilize investment for relevant waste management facilities and technology	Municipality, County Govt., Private Sector Investors	Investment secured	High	
Long term goals (5-10 years)					
Implement Zero-Waste / Circular Economy approach	Develop circular economy strategy	Municipality, County Govt., Private Sector	Strategy adopted	Medium	
	Promote market for recyclables	Municipality, County Gov., Private Sector, CBOs	% waste diverted from disposal	Medium	
Enhance adoption of recovery and treatment technologies	Introduce composting and recovery technologies	Municipality, Private Sector	Reduction in waste disposed	High	
	Conduct feasibility study for waste-to-energy	Municipality, County Gov., Development Partners	Feasibility study completed	Medium	
Modernize disposal facilities	Upgrade disposal site to controlled landfill	County Gov., Municipality	Site meets environmental standards	High	
	Install leachate and gas management systems	County Gov., Contractors	Systems operational	High	

Strengthen adaptive governance and monitoring	Establish periodic plan review mechanism	Municipality, County Govt.	Review reports produced	Low	
	Develop digital waste data tracking system	Municipality, County Gov.	Functional data system	Medium	