REPUBLIC OF KENYA
COUNTY GOVERNMENT OF NYANDARUA

# Nyandarua County Action Plan for Food Loss and Waste Reduction

2026-2030

# Contents

# FOREWORD

Food is the foundation of life, livelihoods, and economic growth. In Nyandarua County, agriculture sustains most households, driven by dairy, potato, and vegetable value chains. Yet, despite thisvast potential, significant amount of food is lost or wasted along the supply chain-a challenge that undermines efforts to achieve food security, improve nutrition, and promote environmental sustainability.

This Food Loss and Waste (FLW) Action Plan provides a comprehensive framework to tackle these challenges by promoting better practices in production, handling, storage, processing, and marketing across key agricultural value chains. It focuses on three priority sectors—potato, dairy, and vegetables (cabbage, garden peas, carrots, kales, and spinach)—chosen for their importance to Nyandarua's food system, vulnerability to losses, and their potential for scalable, high-impact solutions.

The dairy sector supports approximately 80% of farming households and contributes over KES 12 billion annually to the County's economy. With over 349,000 dairy cattle producing an estimated 300 million liters of milk each year, dairy remains a pillar of rural livelihoods. However, inadequate infrastructure for milk cooling, storage, and handling continues to cause in significant post-harvest losses and reduced incomes for farmers. Strategic investments in milk collection, processing, and value addition are urgently needed to turn these losses into opportunities. Similarly, Nyandarua County is a leading producer of Irish potatoes, with an estimated output of 501,912 tons in 2024, accounting for nearly a quarter of national production. Other major contributors include maize (KES 1.6 billion), cabbages (KES 1.3 billion), and peas (KES 1.2 billion). Most production is rainfed and seasonal, often leading to market oversupply during harvest periods, resulting in low farm-gate prices and high post-harvest losses.

This Action Plan aligns with international, regional and national commitments aimed at reducing food loss and waste. At the global level, it supports Sustainable Development Goal (SDG) 12.3, which calls for halving per capita global food waste and significantly reducing food losses along production and supply chains by 2030. Regionally, it advances the goals of the Comprehensive Africa Agriculture Development Programme (CAADP), which targets halving post-harvest losses across Africa by 2035. Nationally, the Action Plan operationalizes the Kenya National Post-Harvest Management Strategy (2024), which seeks to reduce post-harvest losses by 50% by 2028 while strengthening food security, farmer incomes, and environmental sustainability.

By addressing Nyandarua's specific food systems challenges while aligning with broader national and international commitments, this Action Plan offers a clear, actionable roadmap for reducing food loss and waste. It promotes a more sustainable, inclusive, and productive agricultural sector that not only feeds our communities but also drives economic growth and environmental stewardship.

Success will depend on teamwork, commitment, and shared responsibility. I therefore call upon all stakeholders—farmers, cooperatives, processors, traders, consumers, and development partners—to take collective ownership of this Plan and work together towards its full implementation.

Let us value every harvest, reduce waste, and ensure that the food we produce truly nourishes our people, strengthens our economy, and protects our environment.

**H.E. (Dr.) Moses N. Badilisha Kiarie**

*Governor*

Nyandarua County

# PREFACE

Food loss and waste remain a critical challenge for Nyandarua County, with far reaching implications for food security, livelihoods, and environmental sustainability. As one of Kenya's leading producers of potatoes, vegetables, dairy, and other commodities, the County plays a pivotal role in local and national food supply. Yet, inadequate storage facilities, weak infrastructure, limited access to markets and technologies, and inefficiencies along the value chain mean that a significant share of this produce never reaches consumers. These losses reduce household incomes, undermine community resilience, and slow progress toward poverty reduction and climate adaptation.

To address these concerns, Nyandarua County has developed the Food Loss and Waste Reduction Action Plan - a five-year roadmap to cut food losses from production to consumption. The Plan aims to safeguard farmer incomes, improve nutrition, create employment opportunities, and promote sustainable resource use, while positioning Nyandarua as a leader in resilient and efficient food systems.

The Action Plan was shaped through an inclusive and participatory process involving farmers, traders, processors, private sector actors, civil society, development partners, and government institutions. It is evidence-based, drawing on County data, sector assessments, and research, and aligns with the County Integrated Development Plan (CIDP III), national priorities, and the Sustainable Development Goals. The Action Plan focuses on strengthening production, post-harvest handling, storage, processing, transport, market systems, and environmental management. Expected outcomes include enhanced food and nutrition security, strengthened agricultural value chains, empowered youth and women, and improved community resilience.

More than a guide, this Action Plan is a call to action. It invites all stakeholders to work collectively to reduce food loss and waste, ensuring that Nyandarua County secures a more inclusive, efficient, and sustainable food system for current and future generations. Despite its strong agricultural potential, FLW continue to undermine food security, erode farmer incomes, and strain local economies and ecosystems. Post-harvest losses remain a major challenge across key value chains, constraining household resilience, market competitiveness, and nutrition outcomes.

This Action Plan provides a coordinated, evidence-based framework to reduce FLW in Nyandarua by aligning County priorities with the Kenya National Post-Harvest Management Strategy (2024) and Sustainable Development Goal 12.3. It adopts a localized "Target-Measure-Act" approach to set reduction targets, track progress, and implement context-specific interventions that reflect Nyandarua's production realities. By strengthening governance, research, investment, and cross-sector collaboration, the Plan seeks to unlock Nyandarua's agricultural potential, enhance food system efficiency, and build resilience among farming communities.

**Francis Miring'u**

*County Executive Committee Member (CECM)*

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Nyandarua County

# ACKNOWLEDGEMENTS

The development of the Nyandarua County Food Loss and Waste (FLW) Action Plan was developed through an inclusive and consultative process, led by the County Government of Nyandarua through the Departments of Agriculture, Agri-business, Livestock and Fisheries (DAALF); Trade, Cooperatives and Industrialization; and Public Works, Infrastructure and Energy. This initiative reflects the County's commitment to sustainable food systems and inclusive development.

We extend our sincere appreciation the World Resources Institute (WRI Africa) supported by the Governments of Denmark, Sweden, and the Netherlands, and Food and Land Use Coalition Kenya Platform (FOLU-Kenya), supported by the Government of Norway, for their unwavering support, technical expertise, and resource investment throughout the development of this Plan.

We extend our deepest gratitude to His Excellency, the Governor, Hon. Dr. Moses N. Badilisha Kiarie, for his goodwill and strategic leadership throughout the preparation of this Action Plan. We also recognize the invaluable guidance and active participation of the County Executive Committee Member (CECM) for DAALF, whose dedication helped shape the direction and priorities of this document. The County Government further appreciates the support and policy direction provided by the Deputy Governor and other County Executive Committee Members.

Special thanks go to the Technical Working Group (TWG) from the County Government of Nyandarua, comprising officers from the Departments of Agriculture Livestock and Fisheries, Cooperatives and Trade, Environment, Planning and Finance, Health and Energy. Their expertise, dedication, and collaboration were instrumental in drafting and refining the Action Plan, ensuring that it reflects local realities and community needs. We are particularly grateful to individual TWG members whose insights strengthened the technical rigor of this document.

This Action Plan also embodies the voices and experiences of Nyandarua County residents. We thank the farmer groups and community-based organizations for their active participation in consultations which enriched the document and ensured its relevance to those most affected by food loss and waste. The implementation of this Action Plan marks a significant step toward realizing Nyandarua County's vision of *"We Feed the Nation."*

Finally, we express heartfelt thanks to the technical experts — Dr. Christopher Mutungi (WRI), Beryl Ajwang (WRI), Victor Otieno (WRI), Michael Onchabo (FOLU), Dr. Josiah Ateka (JKUAT), Dr. Forah Obebo (Kenyatta University), and Mercyline Njeri (JKUAT) whose research and expertise were pivotal in shaping the Action Plan.

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# DEFINITION OF TERMS

| | |
|---|---|
| **FOOD** | Food refers to any substance—whether processed, semi-processed, or raw—that is intended for human consumption. Food may have associated inedible parts. "Inedible parts" refers to components associated with a food that, in a particular food supply chain, are not intended to be consumed by humans, such as bones, rinds, peels, seeds, and pits, etc. What is considered inedible depends strongly on the cultural context. Sometimes, inedible parts may also be referred to as by-products or co-products. In this Action Plan, we consider food as material comprising both edible and associated inedible parts. |
| **FOOD LOSS** | Food loss is the reduction in quantity and quality of food at the upstream stages of the food supply chain—harvest, post-harvest, storage, aggregation, primary processing, and transport of food. It results from decisions and actions by food suppliers in the chain, excluding retailers, food service providers, and consumers. |
| **FOOD WASTE** | Food waste is the reduction in the quantity and quality of food at the downstream stage of the food supply chain—retail and consumption. It is attributable to decisions and actions by retailers, food service providers, and consumers. |
| **FOOD RECOVERY** | Food recovery is the process of collecting surplus or unused edible food that would otherwise go to waste and redirecting it to people in need. |
| **FOOD SYSTEM** | It encompasses the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption, and disposal of food products that originate from agriculture, forestry, or fisheries, and parts of the broader economic, societal, and natural environments in which they are embedded. |
| **HEALTHY AND SAFE DIET** | This is a diet that consists of adequate intake of fruits, vegetables, legumes, and clean drinking water; reduced intake of free sugars and fats; and food that is not contaminated with potentially harmful bacteria, parasites, viruses, toxins, and chemicals. |
| **QUALITY LOSS** | Losses associated with physical evidence of deterioration of the product due to damage, infestation, mycotoxins, and mold. The quality can be affected by abiotic factors such as temperature, humidity, and rain. |
| **QUANTITY LOSS** | Losses expressed in terms of losses in weight and/or monetary value, and occur when the crop produce is entirely removed from the value chain due to moisture loss, spoilage, spillage, consumption by pests, insects, or animals. |
| **ECONOMIC LOSS** | Losses in monetary value associated with the food loss or waste. This type of loss is therefore usually expressed as the difference between the initial value of the food that is lost or wasted and the current market price. |
| **SUSTAINABLE CONSUMPTION** | In the context of food systems, this refers to practices in food consumption that conserve natural resources, enhance environmental quality, and promote social equity. |
| **VULNERABLE GROUPS** | Vulnerable groups in society are those segments of the population that are more likely to suffer from disadvantages, marginalization, or discrimination due to various socioeconomic, physical, or psychological factors. Vulnerable groups within society, including women, older members of society, persons with disabilities, children, youth, members of minority or marginalized communities, and members of particular ethnic, religious, or cultural communities. |
| **PRODUCTIVE USE OF RENEWABLE ENERGY (PURE)** | Refers to applications of renewable energy that enable income generation, improve livelihoods, and support economic development beyond basic household consumption. Examples include solar-powered irrigation, agro-processing, refrigeration for perishable goods, and powering small enterprises |
| **VALORIZATION** | Refers to ways to turn food that would otherwise be wasted into valuable products, including converting surplus or discarded food and by-products into animal feed, compost, bioenergy, or processed food products. |

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| **ASTGS** | Agricultural Sector Transformation and Growth Strategy (2019-2029) |
| **BETA** | Bottom-Up Economic Transformation Agenda |
| **CIDP** | County Integrated Development Plan |
| **CECMs** | County Executive Committee Members |
| **CGs** | County Governments |
| **CSOs** | Civil Society Organizations |
| **FBOs** | Faith-Based Organizations |
| **FLW** | Food Loss and Waste |
| **GHGs** | Greenhouse Gas Emissions |
| **Ha** | Hectare |
| **JKUAT** | Jomo Kenyatta University of Agriculture and Technology |
| **MERLA** | Monitoring, Evaluation, Research, Learning, and Accountability |
| **NAS - FST** | National Agroecology Strategy for Food System Transformation (2024-2033) |
| **NGOs** | Non-Governmental Organizations |
| **PPPs** | Public-Private Partnerships |
| **PURE** | Productive Use of Renewable Energy |
| **SWOT** | Strengths, Weaknesses, Opportunities, and Threats |
| **TVETs** | Technical and Vocational Education and Training Centres |
| **TOC** | Theory of Change |
| **TWG** | Technical Working Group |

# CHAPTER 1: INTRODUCTION

## 1.1 Background

Food Loss and Waste (FLW) is a critical challenge within food systems in Sub-Saharan Africa (SSA). In Kenya, the situation is particularly severe — food loss alone was estimated to cost the country KES 72 billion annually (FAO, 2018), while wasteful consumption adds an additional cost of over KES 65 billion each year (Mbatia, 2021). The Food Waste Index Report reveals that each Kenyan wastes approximately 100 kg of food annually, contributing to a total of 5.2 million tonnes of food waste per year (UNEP, 2021). This massive inefficiency in the food system carries serious economic, social, and environmental impacts. Globally, FLW is estimated to result in economic losses of approximately US$940 billion annually, with over a billion tons of food going unconsumed each year, despite one in nine people remaining undernourished. Environmentally, FLW contributes to about 8% of global greenhouse gas emissions (GHGs), implying that if food loss and waste were a country, it would be the third-largest emitter, after China and the United States (Hanson and Mitchell, 2017). FLW also represents a substantial wastage of water, land, energy, and other natural resources used throughout the food production process.

Addressing FLW, therefore, offers a triple win—for the economy, food security, and the environment. It can save money for farmers, companies, and households; help feed more people; and reduce pressure on water, land, and the climate (Djekic et al., 2021). In this context, FLW refers to food intended for human consumption that leaves the food supply chain somewhere between being ready for harvest and being consumed—often referred to as farm to fork (Box 1).

Nyandarua is one of the 47 counties of Kenya, located in the central region, and covering an area of 3245 square kilometers. According to the 2019 census, the County had a population of 638,289 people (49.3% male, 50.6% female) in 179,686 households, with a density of 194 persons per km² and an average household size of 3.5. The population is projected to grow to 793,632 by 2030, with approximately 1,000 new households added yearly (KNBS, 2021). The County remains predominantly rural (89.6%), with only 10.4% of people living in urban centers. The demographic profile shows that 58.7% of residents are aged 15-64, 35.7% are children (0-14), and 5.6% are above 65 years. Rapid population growth, combined with a large youth demographic, is intensifying pressure on the Nyandarua food system by driving up demand for food and land in its predominantly rural areas.

Nyandarua is endowed with diverse agroecological zones and relatively fertile soils, making it one of Kenya's most agriculturally productive regions. The County is divided into ten agro-ecological zones, suitable for the production of specific crops and livestock. The upper highland and midland zones are highly suitable for dairy farming, horticulture, and food crop production, particularly potatoes and vegetables. The lower highlands support the production of maize, wheat, and pyrethrum. While the County depends on rain-fed agriculture, it also possesses significant potential for irrigation, with approximately 1755 Ha of land available for irrigation.

Despite its strong agricultural potential, Nyandarua faces several structural and systemic challenges that continue to constrain food system efficiency and resilience. High levels of post-harvest losses, especially in perishable crops and dairy, continue to undermine food security and income generation. Poor rural infrastructure, including inadequate storage facilities, poor road networks, and limited access to electricity, further exacerbates these losses. In addition, inefficient agricultural markets, low market participation, poverty, and limited value addition hinder the County's agricultural competitiveness. The absence of localized FLW reduction strategies is another inhibitor. The impact of climate change—including unpredictable rainfall and increased incidences of pests and diseases—poses additional threats to productivity and food availability. These challenges necessitated the development of this Action Plan as a strategic and coordinated response to unlock the County's full agricultural potential and strengthen food system resilience.

The Action Plan aligns with multiple policy frameworks at the county, national, regional, and global levels. At the County level, it supports the Nyandarua County Integrated Development Plan III (CIDP 2023-2027)

**Food loss:** Decrease in quantity or quality of food occurring along the food supply chain from harvest, slaughter, or catch aggregation, handling, transportation, storage, and processing - excluding retail, food service, and consumption stages.

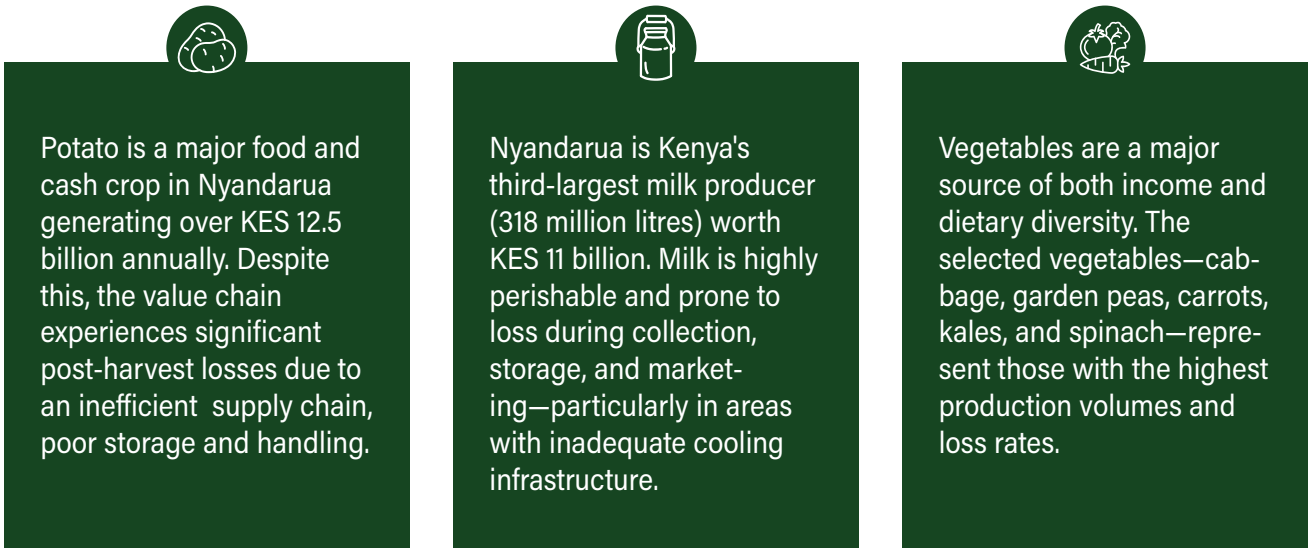
**Food waste:** Decrease in quantity or quality of food occurring at the retail, food service, and consumption stages of the food supply chain.

*Source:* FAO 2019; UNEP 2021.

and the County's Agriculture Sector Development Plan. Nationally, it aligns with the Kenya Constitution 2010, which enshrines the right to food, and Kenya Vision 2030, which prioritizes agricultural transformation for economic growth. The plan also supports the implementation of the Kenya National Post-Harvest Management Strategy (2024-2028), which aims to reduce post-harvest losses by 50% by 2028. The Plan further aligns with regional and global commitments, including CAADP, to halve post-harvest losses in Africa by 2035, and SDG 12.3, which targets halving global food waste and reducing losses along supply chains by 2030.

By addressing the specific challenges facing Nyandarua's food systems and aligning with broader development goals, this Action Plan provides a clear roadmap for reducing food loss and waste (FLW) while enhancing the sustainability, inclusivity, and productivity. To maximize impact, the Action Plan focuses on three priority value chains—potato, dairy, and vegetables (specifically cabbage, garden peas, carrots, kale, and spinach). These were selected based on their significance to local food systems, the high levels of post-harvest losses, their economic importance, and potential for scalable solutions.

**FIGURE 1.** **Priority value chains for FLW interventions in Nyandarua County**




Targeting the selected value chains aligns with County priorities and ensures that FLW reduction efforts are focused where they matter most for local livelihoods, food system sustainability, and market development.

## 1.2 Rationale for the Action Plan

Nyandarua County plays a critical role in Kenya's agri-food system, contributing significantly to national supplies of potatoes, dairy products, and vegetables. However, persistent levels of FLW continue to undermine food security, reduce producer incomes, and exert pressure on the environment. Although numerous viable solutions exist that could improve efficiency and reduce FLW, their uptake has remained limited. This is largely due to gaps in localized research, limited investment, and the absence of coordinated, multi-stakeholder, and multi-disciplinary engagement—factors critical to ensuring that policy and planning are grounded in science and responsive to local realities.

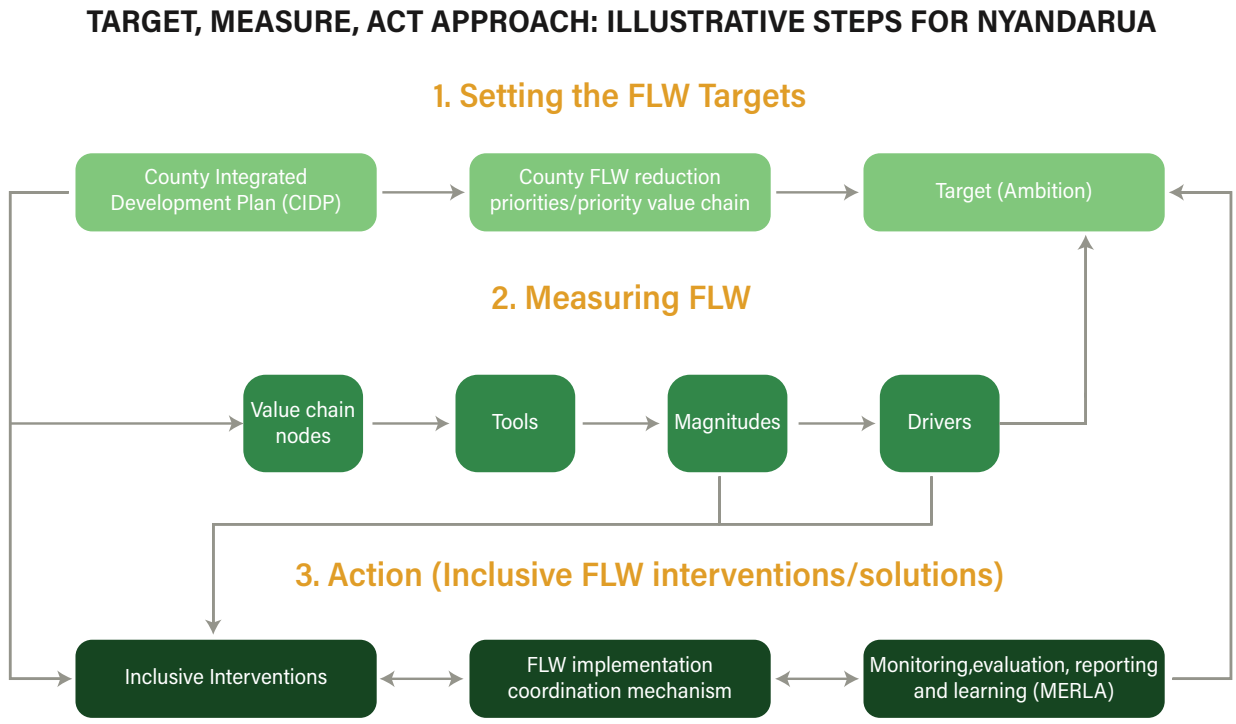
At the national level, the Government of Kenya has prioritized the reduction of FLW as a key pathway toward achieving food security, climate resilience, and sustainable economic growth. This commitment is articulated in the Kenya National Post-Harvest Management Strategy (2024), which sets an ambitious target of reducing post-harvest losses by 50% through climate-smart, market-oriented, and inclusive interventions across agricultural value chains. The strategy also contributes directly to the attainment of Sustainable Development Goal (SDG) 12.3, which calls for halving per capita global food waste and substantially reducing food losses along production and supply chains by 2030.

While the national strategy provides a broad framework for action, its effectiveness depends on how well it is translated and implemented at the County level. Kenya's counties differ widely in agroecological conditions, production systems, market structures, and infrastructure. In Nyandarua County, where agriculture is central to livelihoods and economic growth, food losses vary significantly by commodity, season, and actor—ranging from on-farm handling and storage challenges to inefficiencies in transportation, processing, and marketing. Such diversity of contexts and constraints calls for a localized approach that reflects the County's unique realities.

This Action Plan is a direct response to the need for a coordinated, evidence-based framework to reduce FLW in Nyandarua. It seeks to unlock the County's agricultural potential, guide targeted investments, and improve the efficiency of local food systems. The Plan also aims to strengthen the resilience of rural households by minimizing losses across production, handling, storage, and distribution stages. It therefore provides a practical mechanism for domesticating the national strategy. It adapts national goals to local priorities by focusing on Nyandarua's key value chains where the potential for FLW reduction is greatest. Through this targeted, evidence-based approach, the Plan ensures that national commitments are operationalized on the ground, translating policy ambitions into tangible outcomes for farmers, communities, and other value chain actors.

This Action Plan is framed upon the "Target-Measure-Act" approach (Figure 2), which is a results-based framework that relies on data and evidence to inform

**FIGURE 2.** **Target-Measure-Act Framework for FLW reduction in Nyandarua County**




*Source:* Adapted from the "Target Measure Act" Approach developed by WRI (2025); https://africa.wri.org/sites/default/files/2025-05/wri-africa-food-strategy-2024-2027.pdf

and track interventions (WRI, 2025). The Action Plan sets clear targets for FLW reduction in Nyandarua County and prioritizes actions to achieve food security, improved livelihoods, and environmental sustainability. This results-oriented approach is adopted to ensure focused efforts, learning, and continual improvement.

## 1.3 Vision and Mission

### Vision

A sustainable and resilient food system that minimizes loss and waste, enhances food security, livelihoods, and protects natural resources.

### Mission

To coordinate and implement interventions that reduce FLW through strengthened policies, improved market systems, capacity development, and partnerships, contributing to food security, livelihoods, and sustainable development.

## 1.4 Objectives of the Action Plan

The overall objective of the Action Plan is to reduce food loss and waste by 50% by the year 2030 for enhanced food security, livelihoods, and environmental sustainability in Nyandarua County.

The specific objectives of the Action Plan are to:

1. Promote awareness of FLW drivers and provide targeted training on practical prevention and mitigation measures.
2. Establish data and monitoring systems for priority value chains to generate actionable data, track FLW trends, and support evidence-based interventions.
3. Reduce losses and improve efficiency in priority value chains, ensuring better market access and increased value for stakeholders.
4. Promote circular economy solutions for transforming surplus food, by-products, and inedible parts associated with food into useful products and resources to generate greater value for all stakeholders.
5. Strengthen governance and institutional capacity for FLW reduction by aligning County policies with national policies, integrating FLW indicators, and mainstreaming FLW across relevant sectors.

## 1.5 Scope of the Action Plan

This Action Plan provides a structured and locally grounded framework for reducing FLW in Nyandarua County. While it is primarily framed around three prioritised value chains—potato, dairy, and vegetables (including cabbage, garden peas, carrots, and kale)—its implementation is intended to catalyse broader action across the entire agri-food system.

The plan will be implemented over a five-year period (2026-2030) and is aligned with national strategies such as the Kenya National Strategy for Food Loss and Waste Reduction (2024-2028) and global frameworks, including SDG 12.3. It targets a diverse group of stakeholders, including smallholder farmers, youth and women producers, farmer cooperatives, agri-enterprises, County government departments, civil society organizations, and private sector actors involved in the production, handling, transportation, processing, marketing, and consumption of food.

Through its multi-sectoral approach, this Plan aims to promote coordinated, evidence-based interventions that enhance food system efficiency, reduce wastage, improve livelihoods, and contribute to environmental sustainability in Nyandarua County.

## 1.6 Methodology of Developing the Action Plan

The development of the Action Plan was guided by a participatory, evidence-based, and multi-sectoral approach. The process was led by a multisectoral Technical Working Group (TWG) comprising representatives from key County departments (Agriculture and Livestock, Finance, Cooperatives and Trade, Health, Education, Roads, Public Works, Energy, Environment, and Water), farmer cooperatives, academia, and organizations implementing food systems-related projects in the County. This inclusive team ensured the Plan was firmly anchored on local realities while ensuring commitment to address FLW is mainstreamed across all relevant County departments.

The development of the Action Plan involved a five-stage process as shown in Figure 3. The process began with a comprehensive baseline review and situational analysis that included: a policy review examining the national and County laws and regulations to identify gaps and opportunities; value chain mapping and prioritization to pinpoint FLW hotspots along the supply chain; stakeholder mapping to identify key actors, their influence, and interest to inform collaboration and implementation. These analyses were synthesized into a SWOT (strengths, weaknesses, opportunities, and threats) thereby providing a clear understanding of the current FLW landscape and priority areas for action.

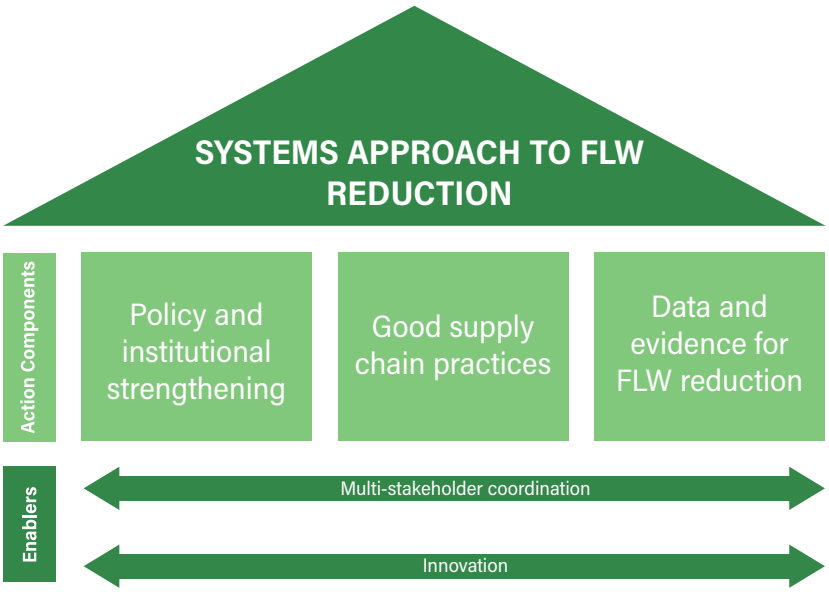
The situational analysis was followed by a visioning and strategic framing exercise using problem and objective trees and a Theory of Change (TOC) to identify key drivers of FLW and define strategic goals. Interventions were prioritized through structured dialogue, a logical framework, and an action planning matrix, applying multi-criteria analysis to rank actions by relevance, feasibility, and impact. Stakeholder socialization and validation were conducted via open forums to ensure local ownership, gather feedback, and align with community priorities. The Action Plan is designed for phased, adaptive implementation—emphasizing quick wins, integration with existing County initiatives, and sustained multi-sectoral collaboration.

**FIGURE 3.** The process for developing the Action Plan

The development of the Action Plan was guided by a framework built upon three action components: policy and institutional strengthening, data and evidence for FLW reduction, and good supply chain practices, which provide a structure for addressing food system gaps (FAO, 2023). For these action components to coherently achieve meaningful and lasting impact, they should be supported by system enablers, including system thinking, multi-stakeholder collaboration, and innovation (Figure 4).

Together, these action components and enablers offered the strategic lens through which actions were identified and prioritised in five strategic pillars (presented in Chapter 3).

**FIGURE 4.** **Framework of action for FLW reduction, adopted from FAO (2023)[1]**



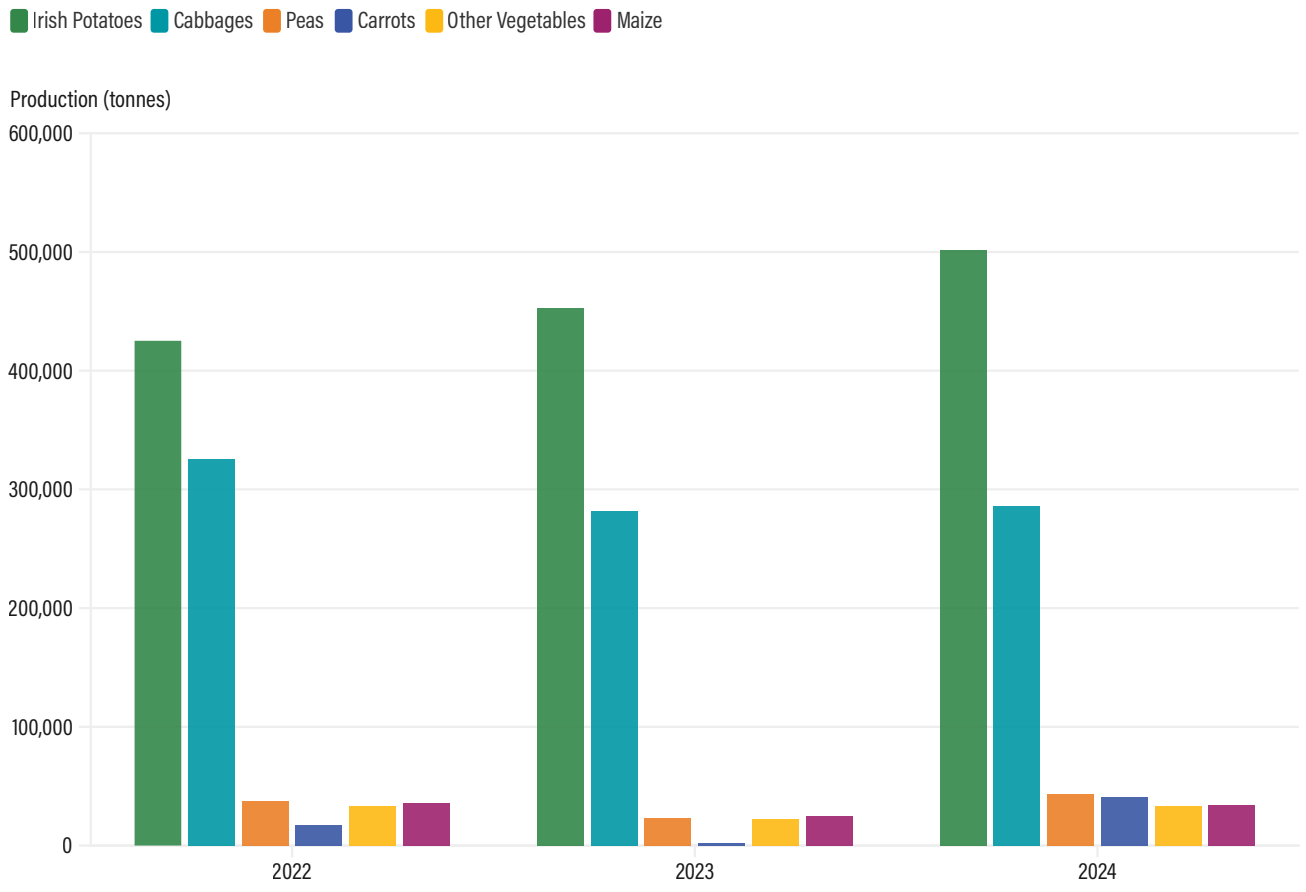

# CHAPTER 2: SITUATIONAL ANALYSIS

## 2.1 Agri-Food System Context of Nyandarua County

Nyandarua County contributes an estimated 1.5% to Kenya's Gross Domestic Product (GDP), valued at approximately KES 199 billion (USD 1.54 billion), making it a moderate-income county (KNBS, 2023). However, the County is the third largest contributor to Kenya's agriculture sector at 4.5%, after Meru (7.6%) and Nakuru (5.2%). The main agricultural produce includes Irish potatoes, cabbage, carrots, peas, floriculture, pyrethrum, sugar beets, and cereals (Figure 5). This is attributed to the favorable climate, characterized by long rains from March to May (up to 1,700 mm) and short rains from September to December (up to 700 mm), alongside fertile soils.

Nyandarua County is the second-largest producer of Irish potatoes in Kenya, with an estimated output of 501,912 tonnes in 2024 (Figure 5), accounting for nearly a quarter of national production. Cabbage is equally significant, contributing at least 30% of the country's total supply (AFA, 2025). However, cabbage production has declined in recent years due to increased pest and disease incidences, fluctuating market prices, and high post-harvest losses. Other major value chains include peas, carrots, and maize. Other crops with potential (2024 production) include wheat (6,490 MT), beans (3,550 MT), cut flowers (1,600 MT), snow peas (1,608 MT), pyrethrum (292 MT), and temperate fruits (980 MT). This diversity underscores the County's potential to meet its food system needs through crop diversification and the promotion of sustainable diets.

**FIGURE 5.** **Production of Crops in Nyandarua County**

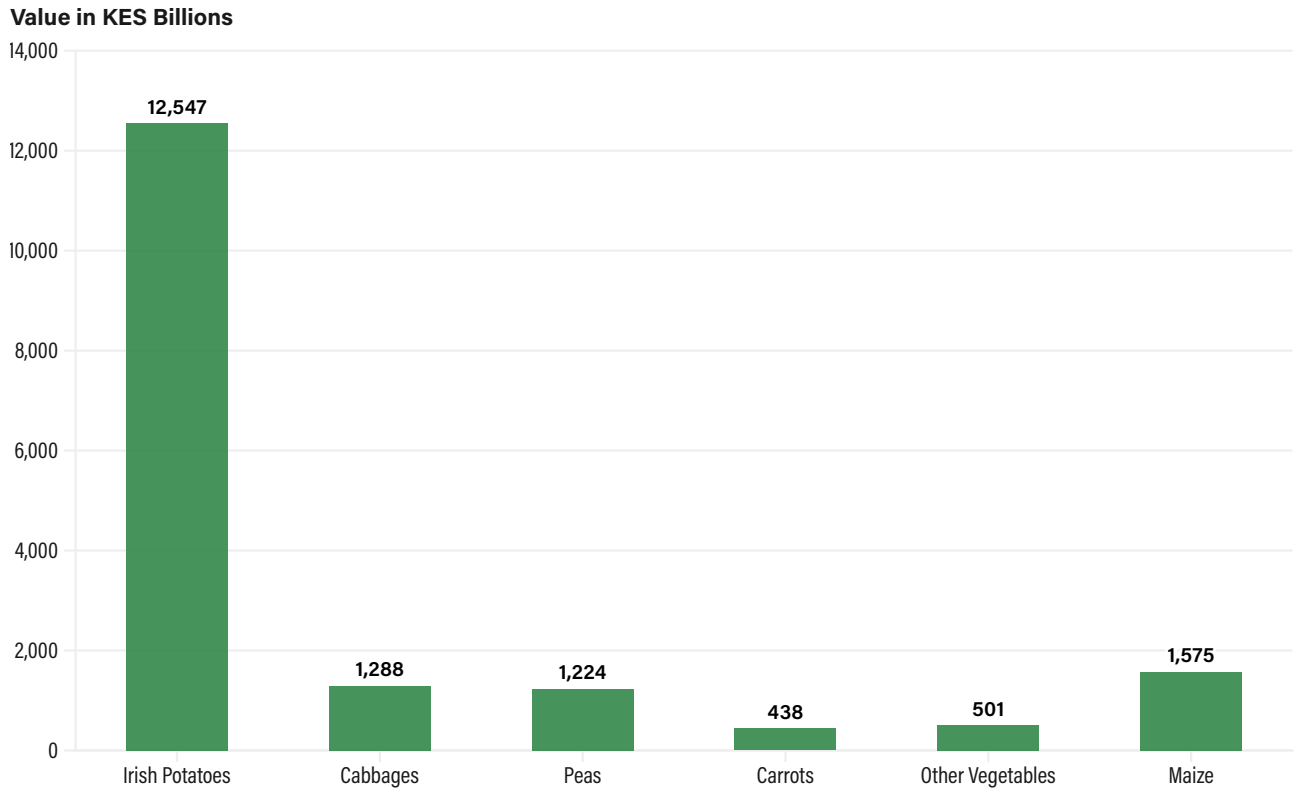



*Source:* County Government of Nyandarua, 2025

In terms of economic value, Irish potato is the most valuable crop at KES 12.5 billion, accounting for the bulk of agricultural earnings (Figure 6). Other important crops include maize (KES 1.6 billion), cabbage (KES 1.3 billion), and peas (KES 1.2 billion), with carrots and other vegetables contributing modestly.

The livestock sector is a cornerstone of Nyandarua County's economy, complementing crop production. In 2021, Nyandarua was Kenya's third-largest milk producer (318 million liters) behind Kiambu (344 million) and Meru (343 million) (KDB, 2024). This high production is supported by its cool climate, fertile pastures, and widespread adoption of zero-grazing systems. In addition to dairy, farmers engage in beef cattle rearing, sheep and goat production, poultry, and pig farming, which provide both food and income diversification. As shown in Figure 7, milk alone was valued at KES 11.3 billion, followed by beef (KES 2.95 billion), mutton (KES 1.01 billion), and poultry (KES 578 million). Others are eggs, honey, and chevon.

**FIGURE 6.** **Value of key crops in Nyandarua County (2024)**




*Source:* County Government of Nyandarua (2025)

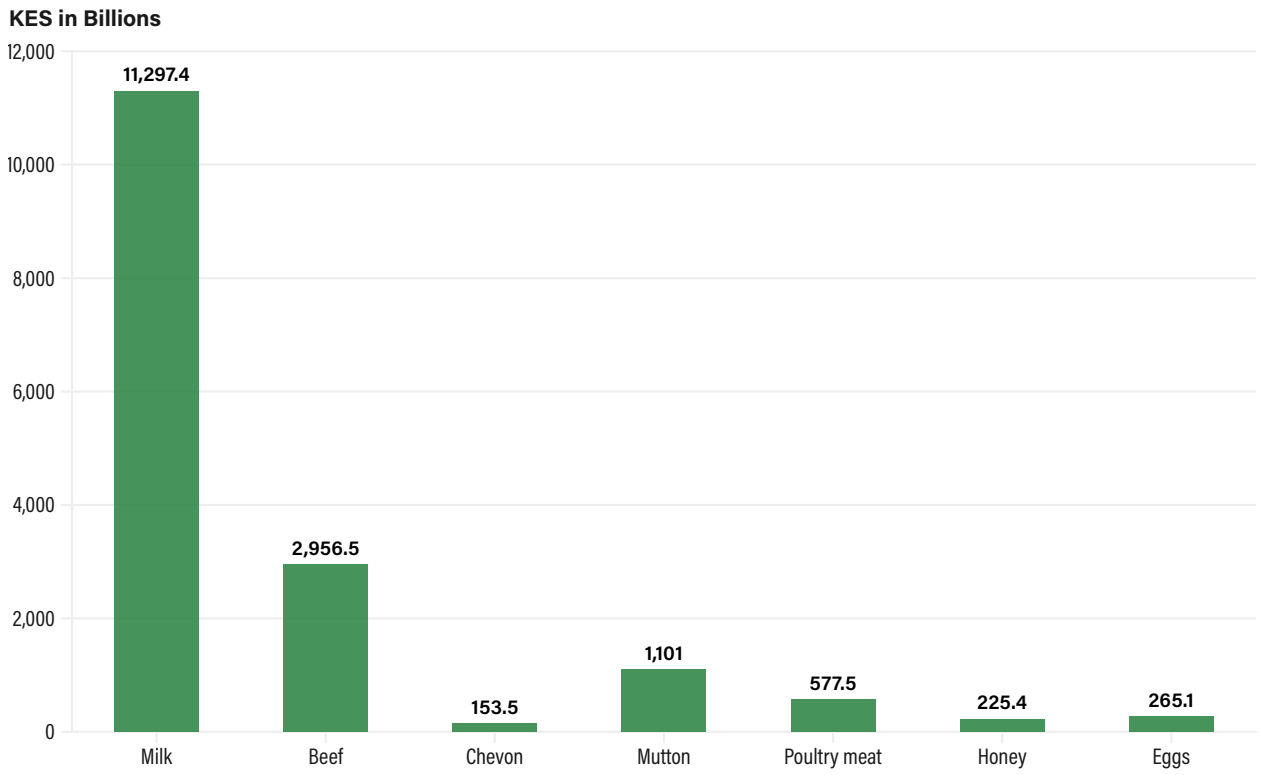
Despite the contributions of both crops and livestock to incomes and livelihoods, a number of challenges exist. Unpredictable weather patterns, soil degradation, and pests and diseases reduce crop yields and compromise the quality of produce. Post-harvest losses are high for Irish potatoes, cabbage, and other vegetables due to poor agricultural practices, inadequate storage facilities, the absence of cold-chain systems, and poor road infrastructure.

In the livestock sector, feed shortages, animal diseases, and unstable milk prices undermine productivity and result in waste along the value chain. Milk often goes to waste during periods of oversupply. The lack of adequate processing and value-addition facilities, coupled with poor road infrastructure, further exacerbates these losses, with farmers forced to dispose of or sell products at low prices. Whereas the County has a road network spanning approximately 3,400 kilometers, bitumen roads make up just around 7% of the network, highlighting the poor state of roads in the County. Electricity access in Nyandarua is approximately 41%, limiting access to reliable and affordable energy for cold chain and value addition solutions. These challenges are worsened by informal arrangements between farmers and other market actors (middlemen and brokers), which often exploit the farmers. In contrast, collective marketing and contract farming are not strong enough to mitigate against low prices and poor quality. Currently, only about 20% of farmers participate in value

addition activities, either individually or collectively. The main barriers are limited capital and technical knowledge; consequently, products such as wool, hides, and skins remain underdeveloped but offer promising opportunities for value addition and reducing FLW.

In Nyandarua, at least one-third of residents have moderate to severe food insecurity. About one in every five children (17.8%) below the age of five years in Nyandarua are stunted, and 4% are underweight. While these rates are slightly lower than national averages, they remain a public health concern. The situation is in part linked to low dietary diversification, influenced by shifts in food consumption preferences and reliance on starchy staples such as potatoes and maize.

**FIGURE 7.** **Livestock statistics in Nyandarua**




*Source:* County Government of Nyandarua (2025)

**TABLE 1.** **Nyandarua County indicators for food security and nutrition**

| INDICATOR | NYANDARUA COUNTY | NATIONAL (KENYA) |
|---|---|---|
| Prevalence of moderate/severe food insecurity (%) | 33.6% | 40.9% |
| Under-five stunting prevalence (%) | 17.8% | 18.0% |
| Under-five wasting prevalence (%) | 1.9% | 4.9% |
| Under-five underweight prevalence (%) | 4.0% | 11.9% |
| Consumption of iron-rich foods among pregnant and lactating women (%) | 10.1% | 20.0% |
| Proportion of women with minimum dietary diversity (%) | 41.4% | 59.8% |

*Source:* Kenya National Bureau of Statistics (2019), Kenya Population and Housing Census—KPHC (2019); and Kenya National Bureau of Statistics (2022)

The nutrition status of women in Nyandarua highlights significant gaps in dietary quality. Only 10.1% of pregnant and breastfeeding women in the County consume iron-rich foods, half of the national proportion (20%). Similarly, just 41.4% of women achieve minimum dietary diversity in the County, compared to the national average of 59.8%. This points to a disconnect between the County's agricultural abundance and household nutrition outcomes, suggesting that while food is available, it is not necessarily accessible or balanced in terms of dietary needs.

Other findings indicate that food poverty remains high, with urban populations more affected (49%) compared to rural populations (34%). Female-headed households are particularly vulnerable due to limited access to production inputs; a challenge often linked to cultural practices that marginalize women in asset ownership. On a positive note, school feeding coverage is relatively strong in Nyandarua, with 72% of learners benefiting from school meal programs compared to the national average of 48.5% (KIPPRA, 2024). This safety net for child nutrition and education is critical for the well-being of learners.

## 2.2 Status of Food Loss and Waste in Nyandarua County

In Kenya, up to 40% of food is lost or wasted between production and consumption, resulting in significant economic, social, and environmental costs—reduced farmer incomes, increased food insecurity, and greenhouse gas emissions (WRI, 2025). Reducing food loss and waste offers a triple benefit: increasing food availability without additional resource use, boosting farmer earnings, and lowering emissions. Losses vary by commodity, with fruits and vegetables (40–50%), fish (20–26%), and cereals (10–36%) experiencing the highest losses, followed by roots and tubers (15–23%), meat (7–12%), and milk (10–17%) (FAO, 2019; WRI, 2025). Drawing on this, the following section highlights the status of food loss and waste within Nyandarua's priority value chains.

### 2.2.1 Potato value chain

Based on a scoping review of existing studies, significant FLW occurs along multiple stages of the potato value chain in Nyandarua County, as summarized in Table 2 below.

**TABLE 2.** **Potato loss and waste (% of volume) in Kenya**

| POTATO LOSS OR WASTE | KAGUONGO (2014) | GIZ (2016) | SCOLLARD ET AL., 2022 |
|---|---|---|---|
| Left in the field | 2.1 | 1 | - |
| Damaged at harvesting | - | 12 | 5.8 (3.3) |
| Storage loss (farm) | 0.8 | 1 | 2.5 (3) |
| Transport from farm to market | 6 | 8 | 0.5 |
| Wholesale market damage | - | 1 | 0.5 (.01) |
| Retail-level damage | 9.3 | - | 9.3 (3.9) |
| Processing | 0.8 | - | 0.4 (1.6) |
| **Total FLW** | **19.4** | **23** | **21.7 (8.9%)** |

*Source :* (Kaguongo, 2014 ; GIZ, 2016 ; Scollard et al., 2022)

The results indicate that harvesting damage ranges from 5.8% to 12%, largely due to poor harvesting methods. On-farm storage losses are relatively low (up to 2.5%) but still contribute to total post-harvest losses. Transport to markets contributes to 0.5–8% losses, reflecting logistical challenges, while losses at wholesale and retail levels are significant, reaching up to 9.3%. Generally, the losses across the value chain are caused by several micro, meso, and macro issues (Figure 8). Addressing challenges across the levels of the value chain is essential to reduce post-harvest losses and improve potato quality and availability.

Currently, Nyandarua lacks a systematic framework for collecting FLW data. However, a WRI pilot study (2025) tested two approaches to measuring farm-level FLW (Table 3). The first approach measured absolute food loss—pathways that permanently remove produce from the human food chain—such as unharvested crops, composting, landfill, and land application, accounting for about 10.4% of harvestable produce. The second approach captured indirect losses—pathways where produce may re-enter the food chain—such as non-premium seed, very small tubers, and produce fed to livestock, representing an additional 10.3%. Together, these indicate that at least 20% of potatoes is lost at the farm level in the county. This level of loss translates into significant income reductions for farmers, decreased food availability, and wasted natural resources like land, water, and labor.

**FIGURE 8.** **FLW causes and drivers in the potato value chain**

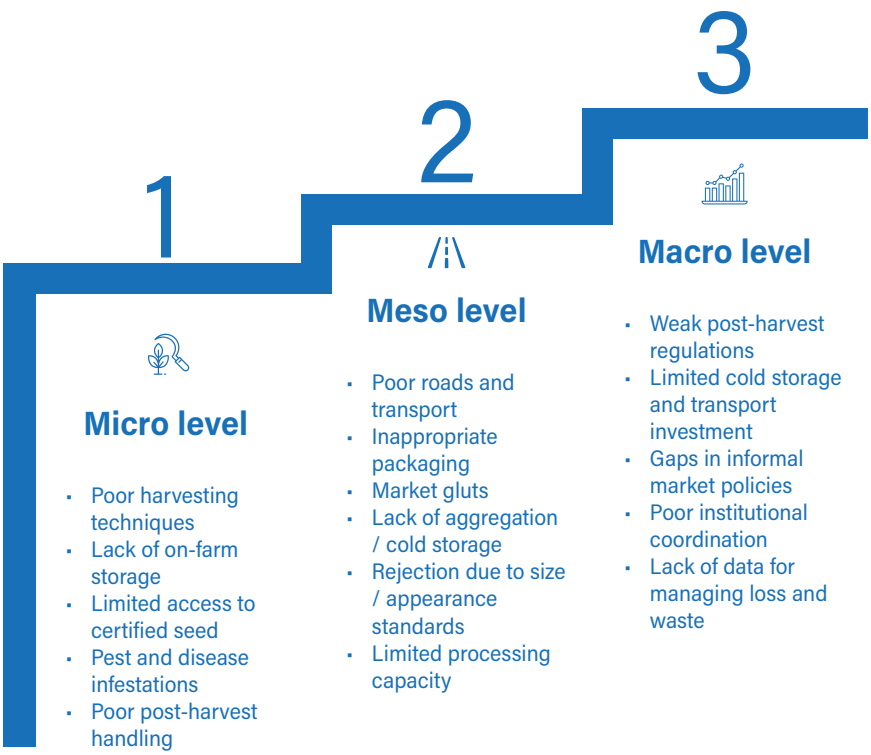



**TABLE 3.** **Calculating FLW at farm level using pilot data from Nyandarua County in 2025**

| DESCRIPTION BASED ON DESTINATION OF PRODUCE | DIRECT | HYBRID | AGGREGATE |
|---|---|---|---|
| Scenario A: Comprises destinations that remove produce entirely from the human food chain. This includes four specific pathways—unharvested produce, composting, landfill, and land application. | 9.7 | 13.7 | 10.4 |
| Scenario B: Includes destinations that could indirectly reintroduce produce into the human food chain. The pathways—non-premium seed, very small tubers, produce fed to livestock. | 10.6 | 8.5 | 10.3 |
| Aggregate food loss (A+B) | 20.3 | 22.2 | 20.7 |

*Source: WRI Pilot Report (2025)*

With an estimated production of 501,912 tons of potatoes in 2024, applying the aggregate food loss rate of 22.2% suggests that approximately 111,424 tons are lost annually. At a conservative farm-gate price of 30–40 KES/kg, Nyandarua County loses KES 3.3–4.5 billion annually from potatoes alone due to food loss and waste. This magnitude of loss underscores the urgency of targeted interventions in storage, handling, and market systems to safeguard both farmer incomes and County food security.

## 2.2.2 Dairy value chain

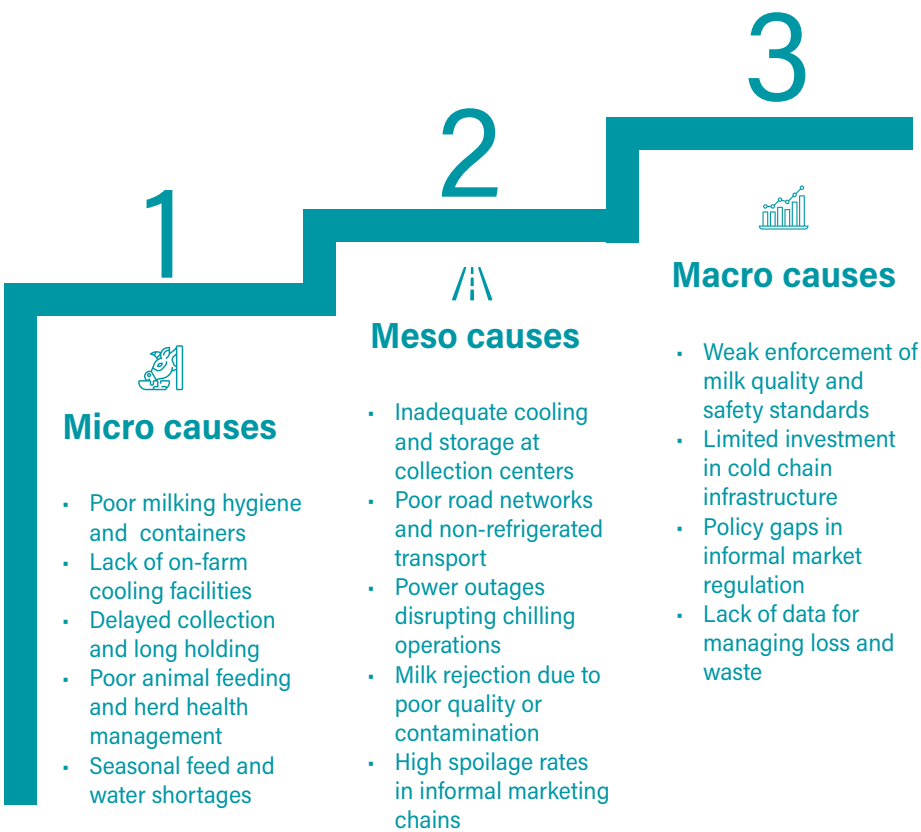
Smallholder farmers dominate the dairy sector, owning approximately 98% of the total dairy herd. The marketing system for milk can be divided into two subsystems, formal and informal (Kenya Dairy Board, n.d). Those engaged in formal marketing operate under a license issued by the KDB, or they may be agents of a licensed dairy dealer. They include private (large-scale dairy farmers or companies) and cooperative members (dairy farmers' cooperatives, consisting of small-scale dairy farmers) (Moturi et al., 2021). The informal milk marketing involves sales of raw milk by producers to consumers or by producers' agents to consumers. It may also involve the hawking of milk from home to home in the rural areas by itinerant traders who do not usually seek licenses to do such business.

**TABLE 4.** Comparison of Milk Marketing Channels in Nyandarua

| MARKETING CHANNEL | ANNUAL NET RETURNS FOR FARMERS (KES) | KEY CHARACTERISTICS AND SERVICES |
|---|---|---|
| Informal (Traditional) | 34,894 | Informal channels have limited regulation, characterised by direct sales or hawking of raw milk, higher transaction costs, and poor hygiene and quality standards. |
| Private | 58,109 | These are licensed individuals or companies with competitive pricing, access to breeding and veterinary services, farmer training, and prompt payments |
| Cooperative | 55,275 | Provides collective services such as milk cooling, access to credit, subsidized inputs, and structured payment schedules, i.e., weekly or monthly. |

*Note:* Price per liter is an estimate based on related studies.Net returns are based on findings from Moturi et al. 2021

**FIGURE 9.** Causes and drivers of losses and waste in the dairy value chain



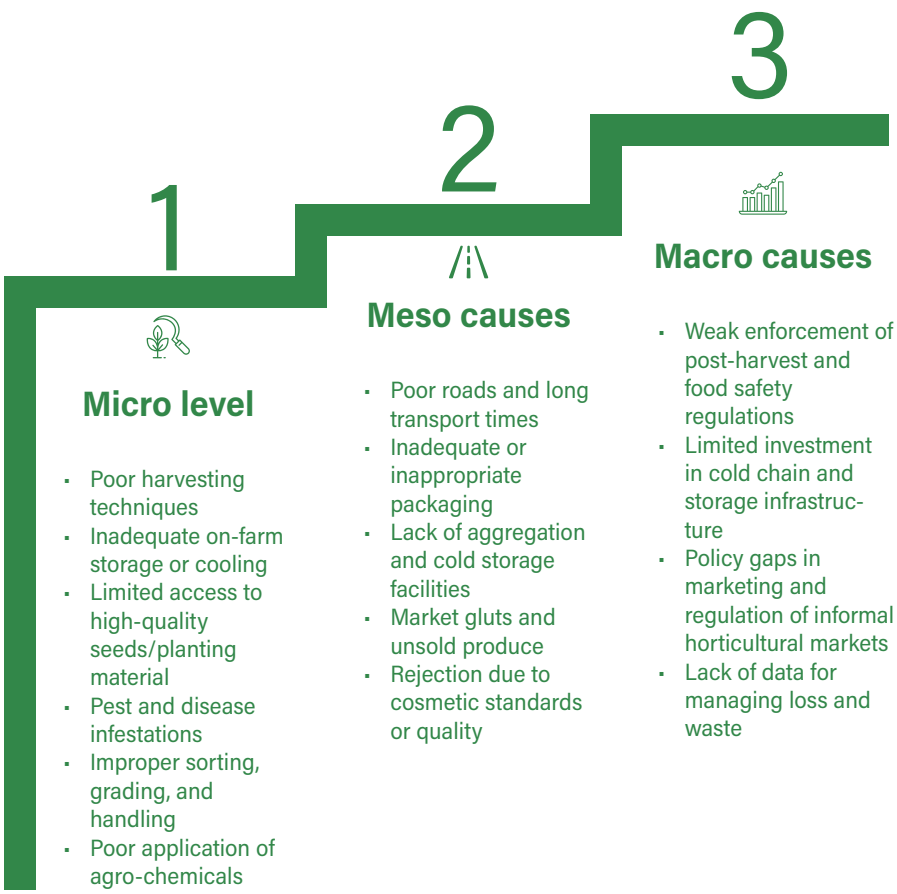
Despite growing commercialization, Kenya's dairy sector faces high post-harvest losses. Ndung'u (2021) found average daily milk yields of 18 liters in the high season and 9 liters in the low season, with transporters losing about 104 liters monthly. Lagat (2024) estimated that 15–20% of milk is lost in informal chains, due to multiple factors, including poor milking hygiene, lack of cooling facilities, weak transport and storage infrastructure, market rejections, and inadequate policy enforcement across the micro, meso, and macro levels (Figure 9).

These losses highlight underlying structural gaps in infrastructure, market access, and institutional support, leading to significant economic impacts. With a milk production of approximately 245,596 tons in 2022 and estimated losses ranging from 15% to 20%, Nyandarua County faces annual milk losses of between 36,840 and 49,120 tons. At an indicative farm-gate price of KES 40 per kilogram, these losses amount to KES 1.47 –1.96 billion annually. Addressing this challenge requires a multi-pronged approach focused on investment in decentralized storage and cooling facilities, training in post-harvest handling, and strengthening of farmer cooperatives.

### 2.2.3 Vegetable value chain

Nyandarua County is one of the leading producers of vegetables such as cabbage, carrot, peas, and leafy greens, supported by a favorable climate and fertile soils. However, post-harvest loss for horticultural crops have been reported to be as high as 50%, mainly due to poor storage and handling practices (Kitinoja and Kader, 2015). These losses are linked to a variety of factors as shown in Figure 10 below.

**FIGURE 10.** **Causes and drivers of losses and waste in the vegetable value chain**




Informal reports indicate that 30–40% of vegetables in Nyandarua are lost between harvest and sale due to spoilage, poor transport, and inadequate storage (Citizen Digital, 2023). Seasonal surpluses and weak market access worsen the problem. However, there is no formal data to quantify these losses by geographical location or specific value chain stages. Collecting such data is essential to guide targeted interventions and investments that could deliver significant economic, social, and environmental benefits (Mbeche et al., 2025).

Overall, despite Nyandarua's high food production potential, food poverty, gender disparities, and poor dietary diversity persist. Inefficiencies across the food system drive FLW, weakening both nutrition and economic returns. This underscores the need to reduce FLW through inclusive approaches that promote good agricultural practices, improved storage and processing, equitable market access for both women and men, and gender-responsive value addition initiatives

## 2.3 Data Gaps in Measurement in Nyandarua

Despite the County's key role as Kenya's leading producer of potato and a top contributor to national milk output, there are significant gaps in food loss and waste (FLW) data at the County level; the evidence that does exist is heavily skewed toward potato, where studies by Kaguongo (2014), GIZ (2016), and Scollard et al. (2022) estimate total losses of between 19 and 23% of harvested volume. These studies highlight critical loss points such as harvesting, storage, and retail, yet their findings vary considerably due to methodological differences and variations in measurement approaches. More importantly, no comparable studies exist for the County's other major commodities, such as milk, beef, poultry, and vegetables, even though national figures suggest milk losses of between 10 and 17% and beef losses between 7 and 12% (FAO, 2019). This lack of commodity coverage constrains comprehensive assessments of FLW in the County.

Reflecting on the value chain nodes, while there is some information on farm-level and retail losses for potato, there is very little data on storage, transport, and wholesale market dynamics in Nyandarua. Factors that include inadequate cold chain, poor warehouse management, and infrastructure bottlenecks are known to contribute to losses nationally, yet their specific magnitude and characteristics in Nyandarua are undocumented. Consumer-level waste, especially in growing urban centers such as Ol'Kalou, Njabini, and Ol'Joro Orok, has also not been studied, even though dietary changes and urbanization are increasingly shaping food demand and waste patterns across Kenya.

Equally notable is the absence of gender- and youth-disaggregated FLW data. Women and youth play critical roles in potato and dairy value chains in Nyandarua, particularly in harvesting, handling, and marketing. However, their specific challenges in reducing food losses—such as access to storage technologies, markets, or credit—are rarely captured in available statistics. Evidence from other parts of Kenya suggests that women farmers often face greater constraints in post-harvest management (Njenga et al., 2020), but there is no similar analysis for Nyandarua.

Finally, the lack of harmonized measurement tools has created inconsistencies across studies. Potato loss estimates, for example, range widely depending on recall periods, sample sizes, and data collection approaches. Without standardized and County-specific methodologies, it is challenging for policymakers and County governments to track progress toward Sustainable Development Goal (SDG) 12.3, which aims to halve food loss and waste by 2030. There is a need to establish institutional arrangements for coordinating FLW reduction interventions and efforts (Mbeche et al., 2025).

## 2.4 Policy, legal and institutional framework for FLW reduction

### 2.4.1 International and national policy frameworks

At the global level, the Sustainable Development Goals (SDGs) provide a key framework for addressing FLW, with SDG 12.3 explicitly calling for halving per capita global food waste at retail and consumer levels and reducing food losses along production and supply chains by 2030. Global conventions such as the Paris Agreement also indirectly link FLW to climate action, given that reducing food losses mitigates greenhouse gas emissions from agriculture and waste.

At the national level, Kenya has several policy instruments that support FLW reduction. The Constitution of Kenya (2010) guarantees the right to food, providing a strong legal basis for interventions that improve food availability. Kenya Vision 2030 and the Bottom-up Economic Transformation Agenda (BETA 2022–2027) promotes aggregation, value addition and agro-industrialization, which could indirectly mitigate FLW by improving post-harvest handling and market linkages. Aside from these overarching policy frameworks, Kenya has established a robust policy and legal environment to guide FLW reduction, although integration and coordination across sectors remains uneven:

- **The Agriculture Policy (2021)** recognizes post-harvest losses as a major barrier to food security and commits to reducing losses across crops, livestock, and fisheries. It calls for investments in infrastructure, public-private partnerships, adoption of affordable technologies, and a reliable energy supply for storage and processing. For Nyandarua, where perishable crops are grown, these measures are particularly key for improving farmer incomes, stabilizing supply, and reducing the environmental impacts of waste.
- **The Postharvest Management Strategy for Food Loss and Waste Reduction (2024–2028)** is Kenya's first dedicated FLW strategy, which seeks to cut food losses across value chains, strengthen food safety, enhance farmer incomes, and mainstream circular economy practices. It explicitly assigns counties the responsibility of developing action plans, integrating FLW into CIDPs, and coordinating non-state actors. County responsibilities include:
    - Collaborating with non-state actors to promote capacity building and best practices for postharvest food loss and waste reduction.
    - Providing leadership by establishing County-level committees on food loss and waste, tasked with, among others:

- Mainstreaming postharvest food loss and waste management into County Integrated Development Plans (CIDPs).
- Coordinating the development and execution of annual work plans.
- Overseeing the implementation and domestication of strategies to reduce food loss and waste at the County level.
- Developing and supervising the adoption of a County Action Plan on FLW Reduction.
- Facilitating regular communication and information flow on FLW management across the County.

- **The National Agroecology Strategy for Food System Transformation (2024–2033)** links closely to food loss and waste by promoting sustainable farming systems that emphasize efficient use of resources, resilience to climate change, and reduced reliance on wasteful practices. The strategy recognizes FLW reduction as a pathway to sustainable consumption, improved efficiency, and reduced environmental pressure.
- **The National Potato Value Chain Development Strategy (2024)** aims to reduce post-harvest losses by improving cold storage, standardized packaging, and aggregation centers. It also focuses on certified seed, suitable processing varieties, and farmer training in best practices, enhancing market access, product quality, and overall food security.

### 2.4.2 Nyandarua County Frameworks supporting FLW reduction

- The **County Integrated Development Plan (CIDP III, 2023–2027)** links to food loss and waste by prioritizing post-harvest management, rural roads, and agro-processing—critical areas for reducing losses in production and marketing. However, the Plan lacks FLW-specific indicators or measurable targets, limiting the County's ability to track progress and assess impact. Strengthening the CIDP with clear FLW metrics would enhance accountability and ensure that infrastructure and processing investments translate into tangible reductions in food losses.
- The **Nyandarua County Climate Change Action Plan (2023–2027)** recognizes food loss reduction as both a mitigation and adaptation measure within the agriculture and waste management sectors. By linking FLW reduction to climate resilience, the action plan provides an avenue for mobilizing climate finance and integrating waste minimization into broader sustainability programs.
- The **County Fiscal Strategy Paper (2025/26)** identifies agricultural value chain investments as a priority, creating opportunities to channel resources into FLW-related infrastructure such as storage facilities, aggregation centers, and cold chain systems.
- The **County Nutrition Action Plan (2024–2028)** underscores the importance of reducing food losses in improving dietary diversity and nutrition outcomes, thereby strengthening the human development rationale for FLW interventions.

Despite these policy advances, gaps remain in addressing food loss and waste (FLW) in the County. Current agricultural policies focus on value addition but lack specific targets or monitoring frameworks for FLW. Climate-FLW linkages are recognized but not clearly operationalized in the County plans. Household and market-level waste is largely overlooked, as policies emphasize post-harvest handling, food safety, and hygiene. Finally, economic planning does not yet leverage FLW reduction as a tool for income generation, job creation, or circular economy growth. These gaps underscore the need for a more integrated and strategic approach to FLW in the County.

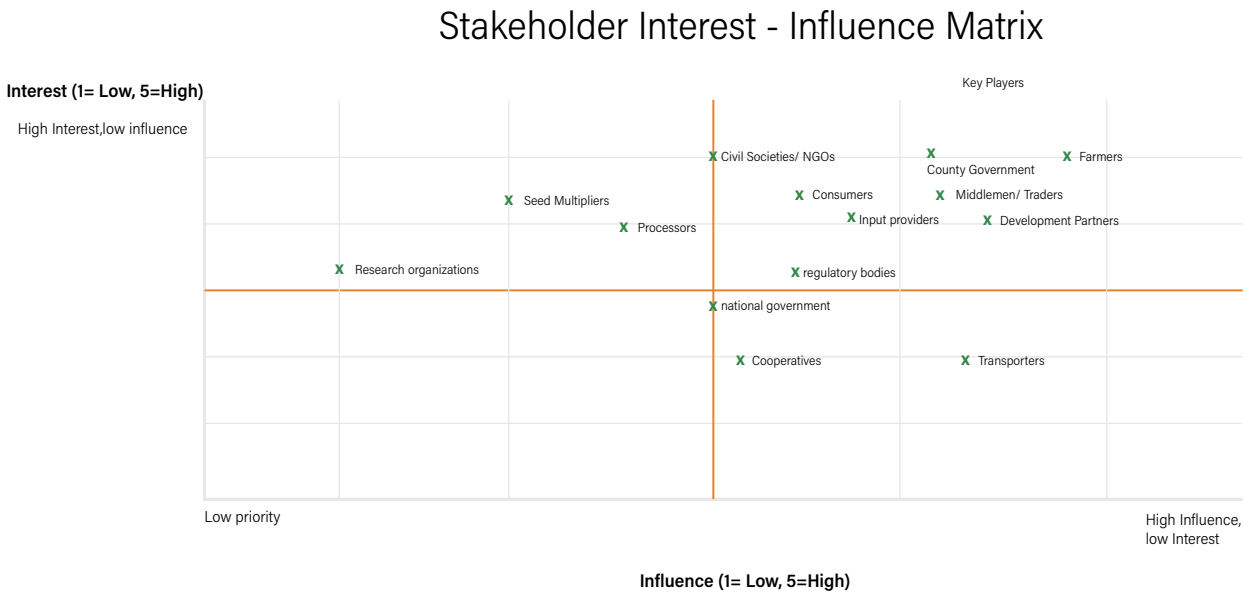
### 2.4.3 Stakeholder mapping and analysis

Effective FLW reduction in Nyandarua requires coordinated engagement of stakeholders across different levels of the priority value chains. Figure 11 maps out the key actors, their roles, and their relative influence and interest. Interest shows how much a stakeholder cares about FLW, while Influence shows their ability to support, enable, or obstruct FLW reduction efforts. The analysis indicates that farmers, the County government, and development partners are key decision-makers and influencers, with the greatest impact on the success of the action plan. Therefore, they should be closely managed to ensure effective engagement and support.

Low interest-high influence stakeholders include the national government, processors, middlemen, traders, and regulatory bodies. While their interest is limited, their influence is significant. As such, FLW implementers must keep these actors informed and satisfied, carefully managing their expectations and involvement to prevent unintended negative impacts on the project. Stakeholders with high interest but low influence include consumers, civil society organizations and NGOs, seed multipliers, and research organizations. They should be kept well-informed to identify emerging issues and can provide valuable support with project details.

The stakeholder landscape in Nyandarua's priority value chains presents both the opportunities and challenges in addressing food loss and waste. Poor coordination among actors often results in fragmented interventions, duplication of efforts, and underutilized resources. Furthermore, limited engagement of low-influence but

**FIGURE 11.** Stakeholder Influence – Interest Matrix




high-interest stakeholders undermines the system's ability to generate inclusive solutions. Strengthening multi-stakeholder collaboration and establishing clear coordination platforms will be essential to bridge these gaps. In particular, leveraging Public-Private Partnerships (PPPs) and blended financing models can align government, private sector, and development partners around shared priorities—mobilizing resources for infrastructure, innovation, and behavior change.

## 2.5 Summary of issues for FLW reduction in Nyandarua County

The SWOT (strengths, weaknesses, opportunities, and threats) analysis involves examining the environment in which the Action Plan will be implemented or operationalized. This environment can either facilitate or hinder the realization of the objectives and goals of the Action Plan (Table 5):

**TABLE 5.** SWOT Analysis for FLW reduction

| STRENGTHS (S) | WEAKNESSES (W) |
|---|---|
| • The presence of processors, a thriving cooperative movement, and development partners providing technical and financial support for innovation, postharvest handling, and market linkages.<br>• As a producer County, Nyandarua's central location allows easy access to consumer counties, including Nairobi, Nakuru, and other regional markets.<br>• A strong commitment from the County government to strengthen local food systems.<br>• An established seed multiplication unit, with potential to provide a strong base for scaling seed systems-related FLW interventions. | • Inadequate data to inform targeted matching of solutions to demand.<br>• Poor rural roads and market infrastructure raise transport costs and postharvest losses.<br>• Limited access to reliable and affordable energy to support cold-chain infrastructure.<br>• Underutilised aggregation centers and existing market infrastructure.<br>• Weak extension capacity for FLW reduction and other value chain interventions.<br>• Weak value chain collaboration and market coordination leading to a mismatch between farm production (quality, varieties, and quantity) and market requirements.<br>• Limited capacity of farmers (knowledge and resources) to adopt FLW interventions and other good agricultural practices (GAPs).<br>• Weak enforcement of regulations (potato packaging, milk safety, food hygiene), reducing compliance with standards and perpetuating losses and waste. |

**TABLE 5. SWOT Analysis for FLW reduction (Cont.)**

| OPPORTUNITIES (O) | THREATS (T) |
|---|---|
| • National government and donor interest in developing industrial parks (CAIPS) to support aggregation, cold storage, food processing, and value addition.<br>• Introduction of improved potato varieties, long-life dairy products, and value-added vegetables creates opportunities for higher-value markets.<br>• There is an opportunity to embed FLW into County programming and development budgets (CIDPs, sector policies) and donor-supported programs to strengthen systemic responses.<br>• Presence of a repository of tested technologies and innovations for FLW reduction that can be scaled up.<br>• An expanding landscape of green financing in Kenya offers opportunities to invest in waste recovery and recycling, including clean energy (biogas) production, biofertilizer, and nutrient-cycling innovations.<br>• Growing evidence of Productive Use of Renewable Energy (PURE) technologies (solar cold storage and dryers, biogas) for FLW reduction in the priority value chains. | • Climate change poses risks through erratic rainfall, prolonged droughts, and soil erosion, which threaten yields and production cycles.<br>• Disinformation and misinformation on GAPs, e.g., pesticide use, vaccines, and food safety standards, undermining consumer confidence and market access.<br>• Growing informality of the supply chain encourages exploitation by middlemen and limits incentives for investment in improved practices.<br>• Declining farmer extension workforce in the County.<br>• Price volatility across the three value chains undermines farmer profitability and discourages investment in improved practices.<br>• Market distortions from imports, weak enforcement of standards, policy shifts, and geopolitical economic dynamics. |

## 2.6 Theory of Change

The County's strategic pathway towards achieving a 50% reduction in FLW is anchored on the five strategic pillars (Figure 12). This pathway is anchored in the vision of reducing food loss and waste while enhancing food security, livelihoods, and environmental sustainability, all while acknowledging the systemic challenges in achieving the vision.

**FIGURE 12. Theory of change**

| VISION<br><br>A SUSTAINABLE AND RESILIENT FOOD SYSTEM THAT MINIMIZES LOSS AND WASTE, ENHANCES FOOD SECURITY, LIVELIHOODS AND PROTECTS NATURAL RESOURCES | | | | | |
|---|---|---|---|---|---|
| **Outcomes** | Stakeholders have increased knowledge to reduce FLW | Reliable data and monitoring for evidence based FLW interventions | Efficient priority value chains with reduced FLW and enhanced market access | Increased adoption of circular economy solutions; reduce waste,boosts sustainability | Improved institutional capacity to enforce FLW regulations and standards |
| **Strategic pillars** | Awareness raising and capacity strengthening | Data and evidence for FLW management | Supply Chain efficiency of priority value chains | Food recovery and waste valorization | Policy and institutional strengthening |
| **Challenges** | Weak extension capacity for FLW reduction and other interventions<br><br>Limited capacity of farmers to adopt FLW reduction interventions and GAPs<br><br>Declining farmer extension workforce | Inadequate data to inform targeted matching solutions to demand<br><br>Disinformation and misinformation on GAPs i.e. pesticides use | Poor rural roads and market infrastructure<br><br>Weak value chain collaboration and market coordination<br><br>Growing informality of supply chains<br><br>Price volatility | Limited access to reliable and affordable energy to support cold- chain infrastructure | Weak enforcement of regulations(packaging, safety and food hygiene in reducing compliance with standards and perpetuating losses and waste |

# CHAPTER 3: STRATEGIC PILLARS FOR THE ACTION PLAN

The Action Plan is structured around five strategic pillars, which provide clear and actionable pathways for reducing FLW.

## 3.1 Awareness Raising and Capacity Strengthening for FLW Reduction

This pillar aims to enhance knowledge and understanding of food loss and waste among all stakeholders in Nyandarua County. It emphasizes education, training, and outreach programs to highlight the causes, impacts, and mitigation strategies for FLW reduction.

### Strategic Objective

Promote awareness of FLW and the drivers, and provide targeted training on practical prevention and mitigation.

### Strategic Outcome

Stakeholders have increased knowledge of FLW drivers and apply practical measures to prevent and mitigate losses.

### Strategic Actions

1. Design and facilitate ward-level forums to train and strengthen the capacity of farmers, vendors, and households on proper handling and storage practices for priority value chains (potato, dairy, and vegetables), covering techniques such as temperature control, hygiene, moisture management, food recovery and redistribution, and waste management.
2. Implement behavior-focused training programs to increase awareness among households and institutions on practical ways to reduce food waste, including avoiding excessive purchases, extending shelf life, adopting zero-waste cooking, and preserving leftovers.
3. Organize and facilitate sessions to train extension staff and community health volunteers to deliver targeted FLW education during routine household and farmer visits and other community engagements.
4. Leverage local radio and media to disseminate approaches for proper food handling, safety, and FLW reduction within priority value chains.
5. Designate an FLW week in the County calendar to promote the reduction of FLW, linking it to the implementation of the County FLW Action Plan and the International Day of Awareness on FLW.
6. Integrate FLW education into school nutrition programs and agriculture clubs, using interactive lessons, posters, and student-led campaigns to promote responsible household consumption and reduce waste in institutional feeding.
7. Engage youth, women, and persons with disabilities to co-create relevant FLW education content—including skits, posters, and social media—and lead peer-to-peer outreach in local communities.

## 3.2 Data and Evidence for Food Loss and Waste Reduction

Nyandarua County faces significant gaps in County-level FLW data, with existing studies primarily focusing on potato and limited information on other commodities, value chain stages, or consumer waste. The lack of gender- and youth-disaggregated data, along with inconsistent methodologies, hampers the implementation of inclusive solutions and progress tracking. Given the diverse stakeholders involved—from smallholder farmers to waste managers—systematic data collection is crucial to pinpoint loss hotspots and inform targeted interventions.

### Strategic Objective

Establish data and monitoring systems for priority value chains to generate actionable data, track FLW trends, and support evidence-based interventions.

### Strategic Outcome

Reliable data and monitoring systems enable stakeholders to implement evidence-based interventions and track FLW progress.

### Strategic Actions

1. Strengthen the capacity of County staff and value chain actors on FLW data collection, analysis, and reporting for decision-making and accountability.
2. Coordinate data collection and reporting through a dedicated County office to optimize resource use, avoid duplication, and align with existing national data systems.
3. Conduct comprehensive mapping and baseline surveys across all nodes of priority value chains using standardized protocol and tools to identify FLW hotspots, quantify losses, and generate evidence to guide targeted interventions.

4. Establish a monitoring system leveraging ICT, GIS, and AI tools to map, visualize, and track intervention impacts and use dashboards and mobile reporting systems to enhance data visibility and real-time decision-making.
5. Collaborate with research institutions and the private sector to build the business case for FLW reduction, and develop a suite of bankable investment options.
6. Publish and disseminate periodic FLW reports and bulletins summarizing trends, insights, and progress across wards and sub-counties.
7. Integrate FLW indicators into County M&E systems and link them to CIDP targets, annual performance reviews, and budget tracking tools.

## 3.3 Strengthening Supply Chain Efficiency of Priority Value Chains

This pillar focuses on improving storage, transportation, processing, and market access to reduce post-harvest losses and increase profitability for farmers and traders.

### Strategic goal

Reduce losses and improve efficiency in priority value chains, ensuring better market access and increased value for stakeholders.

### Strategic Outcome

Reduced losses and improved efficiency, leading to better market access and greater value for stakeholders.

### 3.3.1 Potato Value Chain

1. Strengthen farmer and extension capacity on improved agronomic, harvesting, and post-harvest practices, including timely harvesting, reducing physical damage, and storage.
2. Promote access to quality seed by strengthening the County Seed Unit and supporting seed multiplication, distribution, and farmer training on proper seed handling, storage, and use.
3. Collaborate with development partners and private service providers to pilot and scale mechanized potato production and harvesting to reduce FLW.
4. Collaborate with research organizations and industry to test and develop affordable on-farm storage technologies for both ware and seed potatoes.
5. Develop and implement sustainable operational models for existing and new cold storage and value-addition facilities, addressing gaps in ownership, financing, governance, and maintenance.
6. Equip existing aggregation centers with essential post-harvest handling tools such as sorting sheds, breathable packaging, and grading equipment to improve product quality and reduce physical damage.
7. Promote value-addition innovations, including starch extraction from rejected or undersized potatoes, and production of potato flour.
8. Facilitate engagements of farmers with institutional buyers, farm-facing companies (processors), and traders to increase offtake, outreach, and transfer of technologies.
9. Leverage digital platforms and market information systems to link farmers with traders, processors, and institutional buyers.

### 3.3.2 Dairy Value Chain

1. Strengthen training of farmers on good dairy practices—including animal husbandry, feeding, milking hygiene, and milk storage—by leveraging farmer field schools, cooperatives, and extension services to improve milk quality, reduce losses, and increase productivity.
2. Facilitate training for cooperative members and dairy vendors on safety and quality assurance systems such as Hazard Analysis and Critical Control Points (HACCP), and value addition techniques.
3. Strengthen quality assurance systems by equipping inspectors and extension officers with rapid testing kits for milk safety and spoilage detection, and enforcing compliance through regular market and cooperative inspections.
4. Construct and equip dairy collection centers with modern pasteurization and small-scale processing facilities, including solar-powered milk coolers and mobile chilling units.
5. Conduct structured training programs for dairy inspectors and public health officers on sampling techniques, microbial testing, traceability systems, and enforcement procedures, using certified curricula and practical demonstrations.
6. Align County dairy bylaws with national food safety regulations and EAC standards for improved milk quality and market access.

### 3.3.3 Vegetable Value Chain

1. Strengthen the capacity of farmers, vendors, and transporters on best practices in harvesting, grading, packaging, and temperature management, with practical demonstrations and continuous extension support.
2. Establish and equip ward-level aggregation and collection hubs with shaded structures, sorting and grading stations, clean water points, appropri-

ate market storage, waste segregation facilities, and renewable energy solutions to minimize handling-related spoilage.

3. Strengthen existing County Aggregation and Industrial Parks (CAIPs) to expand access to processing facilities, improving value addition and market access for vegetable products.
4. Promote use of and access to reusable, food-grade crates and mobile cold storage units for farmers, producers, marketing groups, and cooperatives, to improve shelf life and reduce mechanical damage during food transport.
5. Pilot and promote renewable-energy technologies for vegetable processing, storage, and preservation—such as ambient cooling and solar drying for leafy greens—to extend shelf life.
6. Strengthen farmer linkages with processors and off-takers of vegetable produce through contract farming to reduce FLW.
7. Promote local consumption of vegetables by developing localized and regional food guides to improve nutrition and reduce FLW.

## 3.4 Food Recovery and Waste Valorization

This strategic pillar focuses on minimizing FLW by promoting recovery of surplus food and recycling organic waste into valuable products such as bioenergy (biogas, briquettes, pellets) and soil amenders (biofertilizers and biochar).

### Strategic Goal

Promote circular economy solutions for transforming surplus food, by-products, and inedible parts associated with food into useful products and resources to generate greater value for all stakeholders.

### Strategic Outcome

Increased adoption of circular economy solutions leading to reduced food waste, creation of value-added products, and improved sustainability across the food system.

### Strategic Actions

1. Establish and strengthen local food banks in the County to recover surplus produce from farms, aggregation centers, and markets, and facilitate its timely redistribution to vulnerable households, schools, and food-insecure communities.
2. Promote waste recovery technologies among farmers and businesses —including composting, bio-digestion, and biochar production—from agricultural residues, processing by-products, through capacity strengthening, technical assistance, and access to green financing.
3. Foster partnerships with training centers and research institutions, e.g., Universities, Kenya Agricultural and Livestock Research Organization (KALRO), and Technical and Vocational Education and Training Centres (TVETS) to advance skills in circular economy for farmers, cooperatives, and businesses.
4. Forge strategic partnerships with financial institutions, businesses, and ecosystem actors to finance, promote, and scale markets for circular economy products.
5. Document and disseminate successful circular economy models in the priority value chains through County media platforms, TVETs, schools, and stakeholder forums to foster learning, replication, and scale-up across communities.
6. Facilitate public institutions—such as schools, health facilities, and county offices—to source circular economy products through sustainability-focused county tenders, helping increase demand and build steady markets for these products.

## 3.5 Policy, Regulatory, and Institutional Strengthening

In Nyandarua County, key gaps in addressing food loss and waste (FLW) include weak policy alignment, unclear indicators, and limited cross-sector coordination. This pillar will strengthen governance by aligning County policies with national frameworks, integrating FLW indicators into county plans, and mainstreaming FLW actions across sectors.

### Strategic Objective

Strengthen governance and institutional capacity for FLW reduction by aligning County policies with national policies, integrating FLW indicators, and mainstreaming FLW across relevant sectors.

### Strategic Outcome

Improved County governance and institutional capacity across sectors for effective FLW reduction.

### Strategic Actions

1. Establish an inclusive County FLW Committee to coordinate FLW reduction efforts, develop work plans, and ensure communication with all stakeholders across priority value chains.
2. Embed FLW reduction targets and monitoring indicators into CIDPs, annual work plans, and food system programs to institutionalize accountability and ensure integration across sectors.

3. Develop a County framework to coordinate food recovery and redistribution systems to minimize wastage of surplus food and enhance access for vulnerable groups and food-insecure communities within and outside the County.
4. Establish an inter-agency coordination framework outlining roles and responsibilities across agriculture, public health, trade, and environment departments to streamline surveillance, minimize duplication, and enhance enforcement efficiency.
5. Develop County FLW regulations and relevant bylaws for handling produce in priority value chains, with clear enforcement protocols and penalties to ensure compliance.
6. Train County staff, including market officials, ward administrators, extension staff, and health officers on FLW enforcement protocols, standards, and food safety compliance to strengthen monitoring and regulatory oversight.
7. Allocate dedicated funding for FLW reduction into County and sectoral budgets, embedding these allocations within CIDPs and annual work plans.
8. Develop incentive schemes, including recognition programs, fee rebates, and County grant access for cooperatives and traders who demonstrate progress towards FLW reduction.
9. Develop sustainability criteria in County procurement systems to expand institutional uptake (schools, hospitals, and prisons) of circular economy products, including regeneratively produced foods, bio-inputs (e.g., biofertilizers, soil amenders), and biogas.
10. Integrate productive uses of renewable energy (PURE)—such as solar dryers, solar-powered cold storage, market biogas systems in the county energy plan—to support food loss and waste (FLW) reduction.

# CHAPTER 4: IMPLEMENTATION FRAMEWORK

The successful implementation of this Action Plan requires coordinated action, sustainable financing, robust monitoring and reporting systems, knowledge sharing, and proactive risk management. The implementation framework provides the foundation for translating the County's Food Loss and Waste (FLW) commitments into practical action across all the priority value chains.

## 4.1 Coordination Mechanism

Implementation of the Food Loss and Waste (FLW) Action Plan will be anchored within the County's Department of Agriculture, Livestock, and Fisheries (DALF), which will serve as the lead implementing agency. Given that FLW is a cross-cutting issue, the Department will work in close collaboration with other County departments, including Health, Trade, Environment, Energy, and Education. A County FLW Steering Committee, chaired by the County Executive Committee Member (CECM) for Agriculture, will provide high-level policy direction, resource mobilization, and oversight. A County FLW Secretariat, hosted within the Department of Agriculture, will serve as the operational arm of the Steering Committee. The Secretariat will coordinate day-to-day implementation, consolidate monitoring data, facilitate partner engagement, and prepare quarterly progress reports.

Membership of the steering committee will include;

1. Representatives from relevant County departments responsible for Agriculture and Livestock, Finance, Cooperatives and Trade, Health, Education, Roads, Public Works, Energy, Environment, and Water.
2. Representatives from farmer organizations.
3. Representatives from the private sector associations (traders, transporters, and processors).
4. Representatives from Non-Governmental Organizations (NGOs), Civil Society Organizations (CSOs), and Faith-Based Organizations (FBOs).
5. Representatives from national government agencies, including the Kenya Bureau of Standards (KEBS), Kenya National Bureau of Statistics (KNBS), Kenya Plant Health Inspectorate Service (KEPHIS), National Drought Management Authority (NDMA), National Environment Management Authority (NEMA), Kenya Dairy Board (KDB), among others.
6. Representatives from research institutions and Universities, including KALRO, JKUAT, and Nyandarua University College.

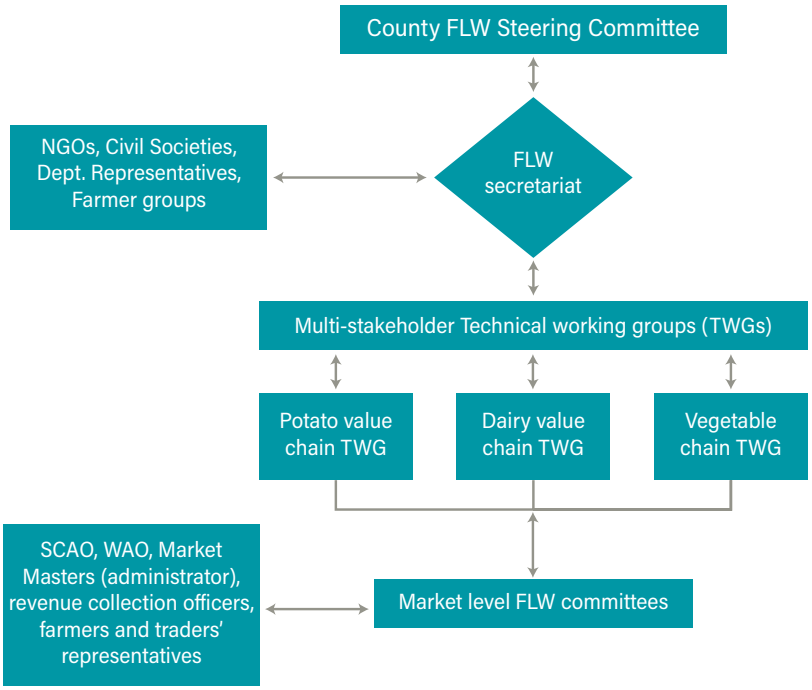
Multi-stakeholder Technical Working Groups (TWGs) will be established along priority value chains (Figure 13). Each TWG will comprise subject-matter experts, cooperative leaders, research institutions, and private sector actors. Their role will be to provide technical support, develop value-chain specific guidelines, support innovation pilots, and track implementation progress.

At the lowest level of the coordination, the market FLW committees will be led by the Sub-County Agriculture Officers (SCAOs), with members of the committees including Ward Agricultural Officers (WAOs), Market administrators, revenue officers, and representatives from traders and farmer groups within each value chain at the Sub-County level.

To strengthen local ownership, Ward FLW Committees will be established under the leadership of Ward Agricultural Officers. Membership will include farmers' representatives, traders, consumer groups, and market managers. These committees will coordinate community-level interventions, enforce local FLW bylaws, mobilize farmer groups, and provide feedback to the County.

The implementation of the Nyandarua FLW Action Plan will be firmly anchored in the existing national and County-level policy frameworks to ensure coherence, legitimacy, and sustainability. This includes the National Postharvest Management Strategy (2024-2028), National Food and Nutrition Security Policy (2011), National Sustainable Waste Management Policy (2021), Nyandarua County Nutrition Action Plan 2023/2024-2027/2028, Nyandarua County Agricultural Sector Development Strategy (ASDS) (2021-2025), and the County Integrated Development Plan (CIDP) (2023-2027).

**FIGURE 13.** Action Plan Coordination Structure




## 4.2 Financing of Implementation of the Action Plan

The financing of the Nyandarua Food Loss and Waste (FLW) Action Plan will be anchored on a blended model that leverages public resources, development partner support, and private sector investment. This diversified approach is designed to ensure both sustainability and scalability of interventions across the priority value chains.

### 4.2.1 Public financing

At the County level, financing will be drawn from the integration of FLW priorities into the County Integrated Development Plan (CIDP 2023-2027) and the subsequent annual budgets. Specific budget lines will be allocated under agriculture, trade, environment, and health to ensure cross-sectoral support for FLW initiatives. Where applicable, the County will leverage conditional grants and matching funds from the national government to scale interventions.

### 4.2.2 Partner support

The strategy recognizes the critical role of development partners, bilateral and multilateral agencies, including the World Resources Institute (WRI) operating within the county, in financing and technical assistance. Partnerships with local universities and research institutions will provide innovation, data, and technical expertise to inform evidence-based action. Non-state actors (NGOs, CSOs, and CBOs) that are already implementing food security, nutrition, PURE, and waste reduction programs will be engaged to complement county interventions and ensure that community-level impacts are realized.

### 4.2.3 Private sector financing

Private sector participation will be promoted through Public-Private Partnerships (PPPs), particularly in financing critical infrastructure such as cold storage facilities, market sheds, composting units, and productive use of renewable energy solutions. To incentivize investments, the County will explore fee rebates, concessional loans, and subsidies for Small and Medium Enterprises (SMEs) investing in recycling, biogas, and value addition of surplus or sub-standard produce. Additionally, agribusinesses, supermarkets, and processors will be encouraged to mobilize Corporate Social Responsibility (CSR) funds in support of FLW awareness campaigns and community-driven recycling initiatives.

### 4.2.4 Community-based Contribution

Community-based contributions refer to the tangible and intangible inputs provided by local stakeholders to support project implementation and sustainability. The community can contribute land for infrastructure, demonstration plots, or training facilities, voluntary or

compensated labor for construction, maintenance, or operational support, oversight of shared assets such as aggregation, and be responsible for upkeep, repairs, and safeguarding of project infrastructure and equipment.

## 4.3 Monitoring, Evaluation and Reporting

A comprehensive Monitoring, Evaluation, Research, Learning, and Accountability (MERLA) framework will be embedded within the Nyandarua FLW Action Plan to ensure accountability, continuous learning, and adaptive management. This framework will guide the tracking of progress across strategic action pillars and priority value chains, enabling evidence-based decision-making and stakeholder engagement.

### Monitoring

Monitoring will be a continuous process. A set of SMART indicators will be developed for each strategic intervention/action, aligned with the CIDP 2023-2027, national food systems metrics, and SDG targets. Indicators will be disaggregated by gender, age, and geography to support inclusive analysis by the specific TWGs. Sectoral TWGs will oversee indicator tracking and ensure alignment with departmental mandates.

### Evaluation

Baseline assessments will be conducted in the first year to establish reference points for FLW levels, infrastructure gaps, and stakeholder capacity. Annual targets will be set collaboratively with the implementing departments and partners. These will assess strategic alignment, resource utilization, and impact, informing policy adjustments and resource reallocation.

### Reporting

County departments will lead quarterly reporting, supported by local universities, CBOs, and extension officers. A centralized digital dashboard will be developed to store, visualize, and analyze data in real time. Quarterly briefs will be provided for the internal performance updates for County departments and technical working groups. Biannual reports will be shared with the County Executive Committee, development partners, and the public. Annual Learning Reviews will be conducted during the multi-stakeholder forums to assess progress, share lessons, and recalibrate strategies.

### Learning

Lessons derived from monitoring and evaluation will be documented and translated into practical recommendations. The County will institutionalize annual FLW Learning Forums where farmers, civil society, researchers, development partners, and government representatives will exchange knowledge, share innovations, and showcase best practices. Policy briefs, case studies, and research papers will also be developed and disseminated to enrich decision-making and promote evidence-based advocacy. The MERLA system will ensure that the voices of communities and stakeholders are heard and acted upon. The Ward FLW Committees will provide platforms for receiving feedback and concerns from the farmers at the ward levels for action.

## 4.4 Knowledge management and communication

Effective knowledge management and strategic communication will be essential to scaling FLW interventions and fostering behavioral change. This will be undertaken in the following ways;

1. Knowledge repositories: A centralized digital platform will be developed to host policy briefs, case studies, datasets, and implementation tools accessible to all stakeholders.
2. Community engagement: Local radio stations, social media platforms, and community *barazas* will be leveraged to disseminate FLW messages in local languages, emphasizing cultural relevance.
3. Capacity strengthening: Regular training for County staff, extension officers, and youth champions will be conducted to enhance technical and facilitation skills.
4. Documentation of best practices: Success stories and innovations will be documented and shared across counties to foster replication and peer learning.

## 4.5 Risk and mitigation

The implementation of the FLW Action Plan may face several risks. These risks will be proactively managed through targeted mitigation strategies embedded within the MERLA framework and stakeholder engagement processes.

**TABLE 6. Risks and Mitigation Measures for the Action Plan Implementation**

| RISK | DESCRIPTION | MITIGATION MEASURES |
|---|---|---|
| Policy Misalignment/ fragmentation | Fragmentation between County-level FLW priorities and national frameworks may lead to duplication, inefficiencies, or delayed approvals. | Convene regular policy harmonization workshops; establish cross-sectoral Technical Working Groups (TWGs) to align County actions with national strategies and international commitments. |
| Funding Gaps/Limitations | Delays or limited budget allocations may hinder the timely implementation of priority interventions. | Adopt a blended financing model; integrate FLW into CIDP and annual budgets; pursue conditional grants, donor support, and contingency planning. |
| Low Private Sector Uptake | Limited investment in FLW infrastructure due to perceived risks, unclear incentives, or lack of awareness. | Develop targeted Public-Private Partnership (PPP) frameworks; offer tax incentives, concessional loans, and investment guarantees; conduct outreach to agribusinesses and SMEs. |
| Community Resistance | Cultural norms, misinformation, or low awareness may result in resistance to behavioral change or adoption of FLW practices. | Apply participatory design approaches; conduct sustained awareness campaigns through local media, barazas, and youth champions; integrate FLW into school and community programs. |
| Data Gaps | Inconsistent or non-disaggregated data may undermine monitoring, evaluation, and adaptive planning. | Strengthen M&E capacity at the County level; establish partnerships with universities and research institutions; develop digital tools for real-time data collection and validation. |

# Endnote

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# ANNEXES

## Implementation Matrix

### Annex 1. Awareness Raising and Capacity Strengthening

**STRATEGIC OBJECTIVE: PROMOTE AWARENESS OF FLW AND THE DRIVERS, AND PROVIDE TARGETED TRAINING ON PRACTICAL PREVENTION AND MITIGATION.**

**STRATEGIC OUTCOME: STAKEHOLDERS HAVE INCREASED KNOWLEDGE OF FLW DRIVERS AND APPLY PRACTICAL MEASURES TO PREVENT AND MITIGATE LOSSES**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST < 1YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Design and facilitate ward-level forums to train and strengthen the capacity of farmers, vendors, and households on proper handling and storage practices for priority value chains. | i. No. of ward-level trainings conducted.<br>ii. No. of farmers/vendors trained.<br>iii. % of trainees adopting improved handling & storage practices. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Farmer Cooperatives; NGOs; Extension Officers | ST | | |
| 2. Implement behavior-focused training programs to increase awareness among households and institutions on practical ways to reduce food waste. | i. No. of community trainings conducted.<br>ii. % of households implementing FLW reduction practices.<br>iii. Trends in waste-reducing behaviors.<br>iv. Reduction in household-level FLW. | County Dept. of Health; Dept. of Agriculture; Community Health Promoters (CHPs); NGOs; CBOs | ST | MT | |
| 3. Organize and facilitate sessions to train extension staff and community health volunteers (CHVs) to deliver targeted FLW education during routine household and farmer visits and other community engagements. | i. No. of extension staff/CHVs trained.<br>ii. No. of households reached through FLW messaging.<br>iii. % of staff integrating FLW education in visits. | County Dept. of Agriculture, Livestock and Fisheries; County Dept. of Health; NGOs | | MT | |
| 4. Leverage local radio and media to disseminate approaches for proper food handling, safety, and FLW reduction within priority value chains. | i. No. of radio programs aired.<br>ii. No. of digital/print FLW messages published.<br>iii. % of audience reach. | County Communications Office; Dept. of Agriculture; Local Radio Stations; Media Houses; Digital Content Creators | ST | | |
| 5. Designate an FLW week in the County calendar to promote reduction of FLW, linking it to the implementation of the County FLW Action Plan and the International Day of Awareness on FLW. | i. FLW Week institutionalized in the county calendar.<br>ii. No. of events conducted.<br>iii. No. of participants reached. | County Dept. of Agriculture; County Executive Office; Media Partners; NGOs; Youth & Women Groups | ST | | |
| 6. Integrate FLW education into school nutrition programs and agriculture clubs, using interactive lessons, posters, and student-led campaigns to promote responsible household consumption and reduce waste in institutional feeding. | i. No. of schools integrating FLW modules.<br>ii. No. of students participating.<br>iii. No. of school FLW campaigns conducted. | County Dept. of Education; Dept. of Agriculture; Dept. of Health (School Feeding); School Boards; NGOs | ST | MT | LT |
| 7. Engage youth, women, and persons with disabilities to co-create relevant FLW education content—including skits, posters, and social media—and lead peer-to-peer outreach in local communities. | i. No. of FLW content pieces produced (skits, songs, posters, social media).<br>ii. No. of outreach events led by youth/women/PWDs.<br>iii. No. of community members reached. | County Dept. of Gender & Social Services; Youth Office; PWD Associations; Community-Based Groups; NGOs | | MT | |

# Annex 2. Data and Evidence for Food Loss and Waste Reduction

**STRATEGIC OBJECTIVE: ESTABLISH DATA AND MONITORING SYSTEMS FOR PRIORITY VALUE CHAINS TO GENERATE ACTIONABLE DATA, TRACK FLW TRENDS, AND SUPPORT EVIDENCE-BASED INTERVENTIONS**

**STRATEGIC OUTCOME: RELIABLE DATA AND MONITORING SYSTEMS ENABLE STAKEHOLDERS TO IMPLEMENT EVIDENCE-BASED INTERVENTIONS AND TRACK FLW PROGRESS**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST <1YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Strengthen the capacity of County staff and value chain actors on FLW data collection, analysis, and reporting for decision-making and accountability. | i. No. of County staff and value chain actors trained on FLW data collection and reporting.<br>ii. % of staff demonstrating improved knowledge and skills on FLW assessment. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Farmer Cooperatives; NGOs; Extension Officers | ST | | |
| 2. Coordinate data collection and reporting through a dedicated County office to optimize resource use, avoid duplication, and align with existing national data systems. | i. Existence of a dedicated County office or unit responsible for FLW data coordination.<br>ii. No. of joint data reports produced through the coordinated County office. | County Executive Office; County Dept. of Agriculture; NGOs; CBOs | ST | MT | |
| 3. Conduct comprehensive mapping and baseline surveys across all nodes of priority value chains using standardized protocol and tools to identify FLW hotspots, quantify losses, and generate evidence to guide targeted interventions. | i. No. of value chain nodes mapped and surveyed using standardized protocols and tools.<br>ii. No. of priority value chains mapped and with identified FLW hotspots. | County Dept. of Agriculture, Livestock and Fisheries; County Dept. of Health; NGOs, academia, Research institutions | | MT | |
| 4. Establish a monitoring system leveraging ICT, GIS, and AI tools to map, visualize, and track intervention impacts and use dashboards and mobile reporting systems to enhance data visibility and real-time decision-making. | i. Existence and operationalization of an ICT/GIS/AI-based monitoring system for FLW interventions.<br>ii. No. of decisions or actions informed by data from the monitoring system. | WRI, NGOS, academia, County Communications Office, Dept. of Agriculture | ST | MT | LT |
| 5. Collaborate with research institutions and the private sector to build the business case for FLW reduction, and develop a suite of bankable investment options . | i. No. of bankable investment options or proposals developed for FLW interventions.<br>ii. No. of investment options or proposals adopted, funded, or implemented by stakeholders. | County Dept. of Agriculture; research and academia; Partners and NGOs | ST | | |
| 6. Publish and disseminate periodic FLW reports and bulletins summarizing trends, insights, and progress across wards and sub-counties . | i. Number of FLW reports and bulletins produced per year. | County Dept. of Agriculture; research and academia; Partners and NGOs | ST | MT | LT |
| 7. Integrate FLW indicators into County M&E systems and link them to CIDP targets, annual performance reviews, and budget tracking tools. | i. No of FLW indicators incorporated into the County M&E system.<br>ii. No. of County departments regularly reporting FLW indicators in their performance reports. | County Dept. of Gender & Social Services; Youth Office; PWD Associations; Community-Based Groups; NGOs | | MT | LT |

# Annex 3. Strengthening Supply Chain Efficiency of Priority Value Chains

## Annex 3.1. Potato Value Chain

**STRATEGIC OBJECTIVE: REDUCE LOSSES AND IMPROVE EFFICIENCY IN PRIORITY VALUE CHAINS, ENSURING BETTER MARKET ACCESS AND INCREASED VALUE FOR STAKEHOLDERS**

**STRATEGIC OUTCOME: REDUCED LOSSES AND IMPROVED EFFICIENCY, LEADING TO BETTER MARKET ACCESS AND GREATER VALUE FOR STAKEHOLDERS**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST < 1YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Strengthen farmer and extension capacity on improved agronomic, harvesting, and post-harvest practices, including timely harvesting, reducing physical damage, and storage. | i. % of trained farmers adopting recommended practices (e.g., timely harvesting, improved handling, better storage, etc.).<br>ii. % Reduction in FLW reported at the farm level among farmers. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Farmer Cooperatives; NGOs; Extension Officers | ST | | |
| 2. Promote access to quality seed by strengthening the County Seed Unit and supporting seed multiplication, distribution, and farmer training on proper seed handling, storage, and use. | i. % increase in adoption of quality seed among target farmers . | County Executive Office; County Dept. of Agriculture; NGOs; CBOs | ST | MT | |
| 3. Collaborate with development partners and private service providers to pilot and scale mechanized potato production and harvesting to reduce FLW. | i. No. of mechanized potato production pilots implemented.<br>ii. No. of farmers or producer groups adopting mechanized technologies.<br>iii. % reduction in on-farm and harvesting-related potato losses in pilot or scaled sites.<br>iv. No. of partners engaged in mechanization initiatives. | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | | MT | LT |
| 4. Collaborate with research organizations and industry to test and develop affordable on-farm storage technologies for ware and seed potato. | i. No. of on-farm storage technologies for ware and seed potato tested or piloted with research and industry partners.<br>ii. No. of farmers or producer groups adopting improved on-farm storage technologies.<br>iii. No. of research and industry partners engaged in co-developing or validating affordable storage solutions. | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | ST | | |
| 5. Develop and implement sustainable operational models for existing and new cold storage and value-addition facilities, addressing gaps in ownership, financing, governance, and maintenance. | i. No. of new and existing cold storage facilities operating efficiently or optimally, as measured by uptime and utilization rate. | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | ST | | |
| 6. Equip existing aggregation centers with essential post-harvest handling tools such as sorting sheds, breathable packaging, and grading facilities to improve product quality and reduce physical damage. | i. No. of aggregation centers equipped with essential post-harvest handling tools (sorting sheds, breathable packaging, grading equipment). | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | ST | MT | LT |

## Annex 3.1. Potato Value Chain (cont.)

| STRATEGIC OBJECTIVE: REDUCE LOSSES AND IMPROVE EFFICIENCY IN PRIORITY VALUE CHAINS, ENSURING BETTER MARKET ACCESS AND INCREASED VALUE FOR STAKEHOLDERS<br><br>STRATEGIC OUTCOME: REDUCED LOSSES AND IMPROVED EFFICIENCY, LEADING TO BETTER MARKET ACCESS AND GREATER VALUE FOR STAKEHOLDERS | | | | | | |
|---|---|---|---|---|---|---|
| **Activities** | **Indicators** | | **Responsible Actors** | **Priority** | | |
| | | | | **ST < 1YR** | **MT 2-3 YRS** | **LT 4-5 YRS** |
| 7. Promote value-addition innovations, including starch extraction from rejected/ small potatoes, potato flour production. | i. | No. of value-addition innovations (e.g., starch extraction, potato flour production) piloted or adopted. | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | | MT | LT |
| | ii. | No. of processors, cooperatives, or enterprises supported to implement starch extraction or potato flour production. | | | | |
| | iii. | No. of products developed or commercialized through value-addition initiatives . | | | | |
| 8. Facilitate engagements of farmers with institutional buyers, farm-facing companies (processors), and traders to increase offtake, outreach, and transfer of technologies. | i. | No. of farmers participating in engagements with buyers, processors, or traders. | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | ST | MT | |
| | ii. | No. of technology transfer initiatives or demonstrations facilitated through these engagements. | | | | |
| 9. Leverage digital platforms and market information systems to link farmers with traders, processors, and institutional buyers. | i. | No. of farmers registered or actively using digital platforms/market information systems. | County Dept. of Agriculture, Livestock and Fisheries; partners, Research institutions, private sector, processors | ST | LT | |
| | ii. | No. of traders, processors, or institutional buyers registered on digital platforms. | | | | |

## Annex 3.2. Dairy Value Chain

**STRATEGIC OBJECTIVE: REDUCE LOSSES AND IMPROVE EFFICIENCY IN PRIORITY VALUE CHAINS, ENSURING BETTER MARKET ACCESS AND INCREASED VALUE FOR STAKEHOLDERS**

**STRATEGIC OUTCOME: REDUCED LOSSES AND IMPROVED EFFICIENCY, LEADING TO BETTER MARKET ACCESS AND GREATER VALUE FOR STAKEHOLDERS**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST < 1 YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Strengthen training of farmers on good dairy practices—including animal husbandry, feeding, milking hygiene, and milk storage—by leveraging farmer field schools, cooperatives, and extension services to improve milk quality, reduce losses, and increase productivity. | i. No. of dairy farmers trained.<br>ii. % adopting improved milking/storage practices.<br>iii. Reduction in milk spoilage at the farm level.<br>iv. % increase in average milk productivity. | County Dept. of Agriculture & Livestock; Dairy Cooperatives; Extension Officers; NGOs; Kenya Dairy Board (KDB) | ST | MT | |
| 2. Facilitate training for cooperative members and dairy vendors on safety and quality assurance systems such as Hazard Analysis and Critical Control Points (HACCP), and value addition techniques. | i. No. of vendors/cooperative members trained.<br>ii. No. of cooperatives implementing HACCP.<br>iii. % increase in value-added dairy products. | County Dept. of Livestock; Cooperatives Department; KDB; Dairy Training Institutes; NGOs | ST | MT | |
| 3. Strengthen quality assurance systems by equipping inspectors and extension officers with rapid testing kits for milk safety and spoilage detection, and enforcing compliance through regular market and cooperative inspections. | i. No. of rapid testing kits distributed.<br>ii. No. of market & cooperative inspections conducted.<br>iii. % reduction in unsafe or adulterated milk cases. | County Dept. of Livestock; Public Health Office; KDB; Quality Assurance Units | ST | | |
| 4. Construct and equip dairy collection centers with modern pasteurization and small-scale processing facilities, including solar-powered milk coolers and mobile chilling units. | i. No. of dairy collection centers constructed/equipped.<br>ii. No. of farmers accessing cooling/pasteurization.<br>iii. % reduction in post-collection FLW. | County Dept. of Agriculture & Livestock; Public Works; Cooperatives; Energy Office; Private Sector Processors; NGOs | | ST | MT |
| 5. Conduct structured training programs for dairy inspectors and public health officers on sampling techniques, microbial testing, traceability systems, and enforcement procedures, using certified curricula and practical demonstrations. | i. No. of inspectors trained/certified.<br>ii. No. of tests conducted.<br>iii. % compliance with dairy safety requirements. | County Dept. of Public Health; Dept. of Livestock; KEBS; KDB; Training Institutions (Universities, ATCs and TVETs) | | MT | |
| 6. Align County dairy by-laws with national food safety regulations and EAC standards for improved milk quality and market access. | i. Up-to-date County dairy bylaws enacted.<br>ii. % of dairy enterprises certified for market access. | County Legal Office; Dept. of Livestock; County Assembly; KDB; KEBS; EAC Standards Committees | ST | MT | |

## Annex 3.3. Vegetables Value Chain

**STRATEGIC OBJECTIVE: REDUCE LOSSES AND IMPROVE EFFICIENCY IN PRIORITY VALUE CHAINS, ENSURING BETTER MARKET ACCESS AND INCREASED VALUE FOR STAKEHOLDERS**

**STRATEGIC OUTCOME: REDUCED LOSSES AND IMPROVED EFFICIENCY, LEADING TO BETTER MARKET ACCESS AND GREATER VALUE FOR STAKEHOLDERS**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST < 1YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Strengthen the capacity for farmers, vendors, and transporters on best practices in harvesting, grading, packaging, and temperature management, with practical demonstrations and extension follow-up. | i. No. of farmers/ vendors/ transporters trained.<br>ii. % adopting improved post-harvest practices.<br>iii. %reduction in mechanical & temperature-related losses. | County Dept. of Agriculture & Livestock; County Dept. of Trade; Extension Officers; Farmer Cooperatives; NGOs | ST | MT | |
| 2. Establish and equip ward-level aggregation and collection hubs with shaded structures, sorting and grading stations, clean water points, appropriate market storage, waste segregation facilities, and renewable energy solutions to minimize handling-related spoilage. | i. No. of ward-level aggregation hubs established/ equipped.<br>ii. % reduction in handling-related spoilage.<br>iii. No. of farmers using aggregation hubs. | County Dept. of Agriculture; Public Works; Dept. of Trade; Cooperatives; Development Partners; Private Sector | | MT | LT |
| 3. Strengthen existing County Aggregation and Industrial Parks (CAIPs) to expand access to processing facilities, improving value addition and market access for vegetable products. | i. No. of CAIP facilities upgraded.<br>ii. Volume of produce processed.<br>iii. No. of SMEs accessing value-addition facilities. | County Dept. of Agriculture; Dept. of Investment & Trade; CAIP Management; Private Sector Processors | | MT | |
| 4. Promote use of and access to reusable, food-grade crates and mobile cold storage units for farmers, producers and marketing groups, and cooperatives, to improve shelf life and reduce mechanical damage during food transport . | i. % of producers using food-grade crates & mobile cold-storage units.<br>ii. % reduction in transport-related FLW. | County Dept. of Trade & Cooperatives; Agriculture Dept.; Farmer Cooperatives; Transporters Associations; Private Logistics Firms | ST | MT | |
| 5. Promote and pilot renewable-energy technologies for vegetable processing, storage, and preservation—such as ambient cooling and solar drying for leafy greens—to extend shelf life. | i. No. of renewable-energy pilots implemented.<br>ii. No. of farmers using renewable energy technologies for drying, cooling, etc. | County Dept. of Agriculture; County Energy Office; Research Institutions; NGOs; Private Technology Providers | | MT | |
| 6. Strengthen farmer linkages with processors and off-takers of vegetable produce through contract farming to reduce FLW. | i. No. of contract farming agreements signed.<br>ii. % increase in volume of produce absorbed by processors.<br>iii. % reduction in unsold produce. | County Dept. of Agriculture; Private Processors; Aggregators; Cooperatives; Producer Organizations | ST | MT | |
| 7. Promote local consumption of vegetables by developing localized and regional food guides to improve nutrition and reduce FLW. | i. Food guides developed and disseminated.<br>ii. No. of households reached. | County Dept. of Health; Dept. of Agriculture; Education Department; Nutritionists; NGOs | ST | | |

# Annex 4. Food Recovery and Waste Valorization

**STRATEGIC OBJECTIVE: PROMOTE CIRCULAR ECONOMY SOLUTIONS FOR TRANSFORMING SURPLUS FOOD, BY-PRODUCTS, AND INEDIBLE PARTS ASSOCIATED WITH FOOD INTO USEFUL PRODUCTS AND RESOURCES TO GENERATE GREATER VALUE FOR ALL STAKEHOLDERS.**

**STRATEGIC OUTCOME: INCREASED ADOPTION OF CIRCULAR ECONOMY SOLUTIONS LEADING TO REDUCED FOOD WASTE, CREATION OF VALUE-ADDED PRODUCTS, AND IMPROVED SUSTAINABILITY ACROSS THE FOOD SYSTEM.**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST <1YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Establish and strengthen local food banks in the County to recover surplus produce from farms, aggregation centers, and markets, and facilitate its timely redistribution to vulnerable households, schools, and food-insecure communities. | i. No. of functional food banks established.<br>ii. No. of households and schools receiving redistributed food.<br>iii. Tonnes of food recovered and redistributed. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Education; Food Banking Kenya; | ST | MT | |
| 2. Promote waste recovery technologies among farmers and businesses —including composting, bio-digestion, and biochar production—from agricultural residues, processing by-products, through capacity strengthening, technical assistance, and access to green financing. | i. No. of capacity-building sessions conducted on waste-recovery technologies.<br>ii. No. of actors adopting waste-recovery technologies .<br>iii. Tonnes of waste recovered and converted into value. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Environment; Circular Companies | | MT | |
| 3. Foster partnerships with training centers and research institutions (such as Universities, Kenya Agricultural and Livestock Research Organization (KALRO), and Technical and Vocational Education and Training Centres (TVETS) to advance skills in circular economy for farmers, cooperatives, and businesses. | i. No. of partnerships established with research and academic institutions.<br>ii. No. of circular-economy training programs developed and delivered.<br>iii. No. of farmers, cooperatives, and businesses trained. | County Dept of Education; Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Environment; Circular companies; Academic and Research Institutions | ST | MT | LT |
| 4. Forge strategic partnerships with financial institutions, businesses, and ecosystem actors to finance, promote, and scale markets for circular economy products. | i. No. of partnerships established with financial institutions, businesses, & other actors.<br>ii. KES of financing mobilized for circular-economy products.<br>iii. No. of circular-economy products or enterprises supported or scaled. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Environment; Circular companies; Academic and research institutions | | MT | LT |
| 5. Document and disseminate successful circular economy models in the priority value chains through County media platforms, TVETs, schools, and stakeholder forums to foster learning, replication, and scale-up across communities . | i. No. of successful circular-economy models documented in priority value chains.<br>ii. No. of communication materials produced and disseminated.<br>iii. No. of stakeholders or community members reached through dissemination. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Environment; Academic and research institutions | | MT | LT |
| 6. Facilitate public institutions—such as schools, health facilities, and county offices—to source circular economy products through sustainability-focused county tenders, helping increase demand and build steady markets for these products. | i. No. of public institutions sourcing circular-economy products.<br>ii. No. of sustainability-focused county tenders developed or implemented.<br>iii. KES of procurement spending on circular-economy products by public institutions. | County Dept of Education; County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Environment; Circular Companies; | | MT | LT |

# Annex 5. Food Recovery and Waste Valorization

**STRATEGIC OBJECTIVE: STRENGTHEN GOVERNANCE AND INSTITUTIONAL CAPACITY FOR FLW REDUCTION BY ALIGNING COUNTY POLICIES WITH NATIONAL POLICIES, INTEGRATING FLW INDICATORS, AND MAINSTREAMING FLW ACROSS RELEVANT SECTORS**

**STRATEGIC OUTCOME: IMPROVED COUNTY GOVERNANCE AND INSTITUTIONAL CAPACITY ACROSS SECTORS FOR EFFECTIVE FLW REDUCTION**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST <1YR | MT 2-3 YRS | LT 4-5 YRS |
| 1. Establish an inclusive County FLW Committee to, among other things, coordinate FLW reduction efforts, develop work plans, and ensure communication with all stakeholders across priority value chains. | i. County FLW Committee established and functional.<br>ii. FLW work plans developed and approved.<br>iii. No. of stakeholders engaged across priority value chains. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Private sector; Farmers; Cooperatives; development partners | ST | | |
| 2. Embed FLW reduction targets and monitoring indicators into CIDPs, annual work plans, and food system programs to institutionalize accountability and ensure integration across sectors. | i. FLW reduction targets integrated into CIDPs and annual work plans.<br>ii. No. of sectors or programs incorporating FLW indicators.<br>iii. Evidence of cross-sector coordination on FLW monitoring and reporting. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Private sector; Farmers; Cooperatives; development partners | ST | MT | LT |
| 3. Develop a county framework to coordinate food recovery and redistribution systems to minimize wastage of surplus food and enhance access for vulnerable groups and food-insecure communities within and outside the County. | i. County food recovery and redistribution framework developed and approved.<br>ii. No. of food recovery partners (CSOs, businesses, institutions) engaged.<br>iii. No of redistribution channels established or strengthened. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Food Banking Kenya; | | MT | |
| 4. Establish an inter-agency coordination framework outlining roles and responsibilities across agriculture, public health, trade, and environment departments to streamline surveillance, minimize duplication, and enhance enforcement efficiency. | i. Inter-agency coordination framework developed and approved.<br>ii. No. of agencies participating in the framework.<br>iii. Evidence of improved enforcement efficiency in surveillance activities. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Health; Department of Environment; Private sector; Farmers; Cooperatives; development partners | ST | MT | |
| 5. Develop County FLW regulations and relevant bylaws for handling produce in priority value chains, with clear enforcement protocols and penalties to ensure compliance. | i. County FLW regulations and by-laws developed and approved.<br>ii. Enforcement protocols are clearly defined within the regulations.<br>iii. Level of compliance among actors in priority value chains. | County Dept. of Agriculture & Livestock; Dept of Health; Department of Environment; County Assembly | | MT | |
| 6. Train County staff, including market officials, ward administrators, extension staff, and health officers on FLW enforcement protocols, standards, and food safety compliance to strengthen monitoring and regulatory oversight. | i. No. of County staff trained on FLW protocols and food safety.<br>ii. No. of training sessions conducted for FLW actors.<br>iii. Evidence of improved compliance with FLW and food safety standards. | County Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Health; Department of Environment; Private sector; Farmers; Cooperatives; development partners | ST | MT | LT |

## Annex 5. Food Recovery and Waste Valorization (cont.)

**STRATEGIC OBJECTIVE: STRENGTHEN GOVERNANCE AND INSTITUTIONAL CAPACITY FOR FLW REDUCTION BY ALIGNING COUNTY POLICIES WITH NATIONAL POLICIES, INTEGRATING FLW INDICATORS, AND MAINSTREAMING FLW ACROSS RELEVANT SECTORS**

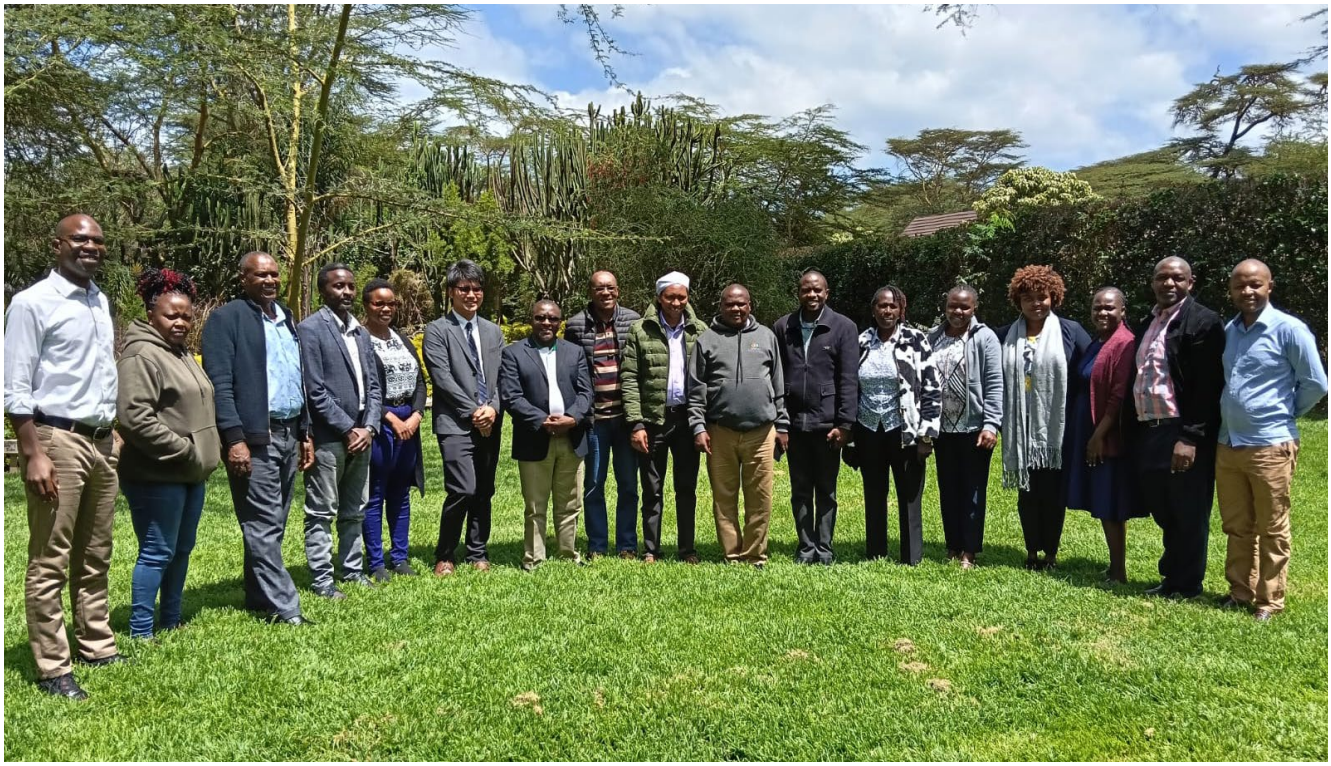
**STRATEGIC OUTCOME: IMPROVED COUNTY GOVERNANCE AND INSTITUTIONAL CAPACITY ACROSS SECTORS FOR EFFECTIVE FLW REDUCTION**

| Activities | Indicators | Responsible Actors | Priority | | |
|---|---|---|---|---|---|
| | | | ST <1YR | MT 2-3 YRS | LT 4-5 YRS |
| 7. Allocate dedicated funding for FLW reduction into County and sectoral budgets, embedding these allocations within CIDPs and annual work plans. | i. KES allocated in County and sectoral budgets for FLW reduction.<br>ii. No. of annual work plans incorporating FLW budget lines.<br>iii. Evidence of funded FLW interventions implemented as planned. | County Dept of Finance; Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Health; Department of Environment | ST | MT | |
| 8. Develop incentive schemes, including recognition programs, fee rebates, and County grant access for cooperatives and traders who demonstrate progress towards FLW reduction. | i. No. of incentive schemes developed for cooperatives and traders, reducing FLW.<br>ii. No. of cooperatives, farmers, and traders recognized for FLW reduction efforts.<br>iii. Evidence of FLW reduction among incentivized actors. | County Dept. of Agriculture & Livestock; Dept of Finance; Dept. of Trade & Cooperatives; Dept of Health; Department of Environment; Private sector; Farmers; Cooperatives; Development partners | | MT | |
| 9. Develop sustainability criteria in County procurement systems to expand institutional uptake (schools, hospitals, and prisons) of circular economy products including regeneratively produced foods, bio-inputs (e.g., biofertilizers, soil amenders) and biogas. | i. Sustainability criteria developed for County procurement systems.<br>ii. No of institutional procurement processes adopting the criteria.<br>iii. Evidence of increased demand for circular-economy products through institutional procurement. | County Dept of Finance; Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Health; Department of Environment | | MT | |
| 10. Integrate productive uses of renewable energy (PURE)—such as solar dryers, solar-powered cold storage, market biogas systems in the county energy plan—to support food loss and waste (FLW) reduction. | i. PURE technologies integrated into the County energy plan.<br>ii. No. of renewable energy interventions supporting FLW reduction implemented.<br>iii. No. of farmers, cooperatives, or markets using PURE technologies. | County Dept of Energy; Dept. of Agriculture & Livestock; Dept. of Trade & Cooperatives; Dept of Health; Department of Environment | ST | MT | |

## Annex 6. Technical Working Group

| | NAME | DESIGNATION |
|---|---|---|
| 1 | Francis Miring'u | CECM Agriculture, Agribusiness, Livestock, and Fisheries |
| 2 | John Kariuki | Chief Officer, Livestock and Fisheries |
| 3 | David Njoroge | Chief Officer, Agriculture, Agribusiness and Irrigation |
| 4 | Dr. Ndung'u Teresa | Director Livestock Production |
| 5 | Fatuma Hassan | Director of Energy |
| 6 | John Gichuki | Deputy Director Livestock Production |
| 7 | Njenga Hannah | Deputy Director of Agriculture – Crops Development |
| 8 | Risper Macharia | Senior Trade Development Officer |
| 9 | Rev. David Kanyoni Kimani | Chairman, Ol kalou Dairy Cooperative Society |
| 10 | Dr. Edward Kanyari | Director of Veterinary Services |
| 11 | Joseph Kirimi Mutuma | Deputy Director of Agriculture – Agribusiness and Marketing |
| 12 | Daniel N. Muchiri | Director of Agriculture |
| 13 | Lincoln Mwaura | Senior Agricultural Officer |
| 14 | Salome Matiba | Senior Assistant Agricultural Officer |
| 15 | Jackson Meeme | Programme Officer, MESPT |
| 16 | Justin Murigu | Regional Manager, OCP Kenya Limited |
| 17 | Shadrack Kanyugo | Senior Industrial Development Officer |

*Team involved in development of Nyandarua FLW Action Plan*



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