



MURANG'A COUNTY AGROECOLOGY

Strategic Plan
2026-2035



Foreword

Murang'a County has long been recognized as one of Kenya's leading agricultural counties. However, the challenges facing our food systems today require us to rethink how agriculture is practiced, how markets function, and how communities access nutritious food.

The Murang'a County Agroecology Strategic Plan 2026-2035 marks another important step in the pioneering role of the County in Food Systems Transformation in Kenya. While the Strategy arises from progress in strategic implementation of the Agroecology Policy 2022-2033 and the Murang'a Agroecology Act 2022 as enacted and launched in 2023, the strategy provides a clear roadmap for strengthening agroecological farming systems, expanding local markets, improving nutrition outcomes, and creating opportunities for youth and women across the agricultural value chain.

Through this strategy, Murang'a commits to promoting farming systems that protect soil health, conserve natural resources, and improve the resilience of farmers to climate change. At the same time, the strategy strengthens market linkages, institutional procurement systems such as school feeding programmes, and local enterprise development to ensure that farmers benefit economically from sustainable production practices.

The County will also strengthen collaboration across departments, including agriculture, health, education, trade, environment, and finance to ensure that food systems contribute to broader development outcomes. By integrating agriculture with nutrition, public health, and local economic development, Murang'a aims to build a food system that supports healthy communities and sustainable livelihoods.

I call upon all stakeholders, including farmers, youth, cooperatives, private sector actors, research institutions, and development partners, to support the implementation of this strategy. Together, we can build a resilient and sustainable food system that secures the future of Murang'a County.

H.E. Dr. Irungu Kang'ata, CBS
Governor
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Preface

Murang’a County recognizes that sustainable agriculture and resilient food systems are central to achieving food security, environmental sustainability, and inclusive economic development. Increasing climate variability, soil degradation, changing market conditions, and growing nutrition challenges require new approaches to agricultural development that restore ecosystems while supporting farmer livelihoods.

The Murang’a County Agroecology Strategic Plan 2026-2035 provides a long-term framework for transforming the county’s food system through agroecological practices, regenerative landscapes, and inclusive market systems. The strategy promotes diversified farming systems that restore soil fertility, conserve water, protect biodiversity, and strengthen climate resilience while supporting value addition, local enterprise development, and improved nutrition outcomes.

This strategy also recognizes the importance of linking agriculture to health, nutrition, and local economic development. Through initiatives such as local procurement for school feeding programmes, FoodFarmacies, and strengthened value chains for agroecological products, Murang’a seeks to create food systems that deliver both economic and social benefits. The strategy will also strengthen digital systems, governance arrangements, and investment pathways necessary to scale agroecology across the county.

The development of this strategy reflects the contributions of many stakeholders, including farmers, cooperatives, county departments, civil society organizations, research institutions, and development partners. Its successful implementation will require continued collaboration, innovation, and shared commitment to building a resilient and sustainable food system for the people of Murang’a.

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The preparation of the Murang'a County Agroecology Strategic Plan 2026-2035 was made possible through the collective efforts of many individuals and institutions who contributed their time, knowledge, and experience to the strategy development process.

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Special appreciation is extended to the Murang'a County Agroecology Multi-Stakeholder Platform whose members; including farmer organizations, civil society groups, research institutions, development partners, and private sector actors, provided valuable technical input, stakeholder perspectives, and practical insights that strengthened the strategy.

The County also appreciates the support provided by development partners and organizations, both as members of Murang'a County Agroecology Multi-Stakeholder Platform (MSP) and working to promote agroecology, regenerative food systems, and sustainable agriculture in Murang'a. I want to specifically isolate for special appreciation the Rockefeller Foundation for offering the Financial support to the process that was done through PeLUM Kenya in order to get this process successful. The technical contributions and participation in consultations helped ensure that the strategy reflects both local priorities and global best practices.

Finally, we recognize the contributions of farmers, cooperatives, youth groups, and community representatives across Murang'a County whose experiences and perspectives helped shape this strategy. Their commitment to sustainable agriculture and community wellbeing forms the foundation for the successful implementation of this strategic plan.

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Acronyms and Abbreviations

Acronym	Meaning
ADP	Annual Development Plan
AFAAS	African Forum for Agricultural Advisory Services
AU	African Union
CAADP	Comprehensive Africa Agriculture Development Programme
CFSP	County Fiscal Strategy Paper
CIDP	County Integrated Development Plan
CSA	Climate-Smart Agriculture
DHIS2	District Health Information Software 2
DPI	Digital Public Infrastructure
FAO	Food and Agriculture Organization of the United Nations
GAIP	GODAN Agroecology Implementation Pillars
GESI	Gender Equality and Social Inclusion
GHG	Greenhouse Gas
GODAN	Global Open Data for Agriculture and Nutrition
ICT	Information and Communication Technology
IPM	Integrated Pest Management
KDHS	Kenya Demographic and Health Survey
M&E	Monitoring and Evaluation
MRV	Measurement, Reporting and Verification
MSP	Multi-Stakeholder Platform
MTEF	Medium-Term Expenditure Framework
NASFST	National Agroecology Strategy for Food Systems Transformation
NCDs	Non-Communicable Diseases
PAYG	Pay-As-You-Go
PES	Payment for Ecosystem Services
PGS	Participatory Guarantee System
QA	Quality Assurance
RAFT	Regenerative Agroecological Food Systems Transition
SACCOs	Savings and Credit Cooperative Organizations
SDGs	Sustainable Development Goals
SMEs	Small and Medium-sized Enterprises
SO	Strategic Objective
TAPE	Tool for Agroecology Performance Evaluation
TCIM	Traditional, Complementary and Integrative Medicine
TIFS	Transformational Investing in Food Systems
TVET	Technical and Vocational Education and Training
UNFCCC	United Nations Framework Convention on Climate Change
USSD	Unstructured Supplementary Service Data
WRA	Water Resources Authority

Definition of Terms

Term	Definition
Agroecology	A holistic approach to agriculture that applies ecological principles to the design and management of sustainable food systems. Agroecology integrates biodiversity conservation, soil health, traditional knowledge, and social equity to produce nutritious food while protecting ecosystems.
Agroecological Transition	The gradual process through which farming systems shift from conventional input-intensive production methods toward ecological farming practices that restore soil health, biodiversity, and climate resilience while supporting farmer livelihoods.
Agroecology Value Chain	The network of actors and activities involved in producing, processing, transporting, marketing, and consuming agroecological products while maintaining ecological integrity and fair economic returns for producers.
Agroforestry	A land-use system that integrates trees, crops, and sometimes livestock within the same landscape to enhance biodiversity, improve soil fertility, and increase farm productivity and climate resilience.
Blended Finance	A financing approach that combines public funds, private investment, concessional loans, grants, and development finance to mobilize capital for sustainable development initiatives while reducing financial risks for investors.
Climate-Resilient Agriculture	Agricultural practices that enhance the capacity of farming systems to withstand climate variability, extreme weather events, and environmental shocks while maintaining productivity and ecosystem health.
Digital Public Infrastructure (DPI)	Shared digital systems that enable governments, institutions, and communities to exchange data, deliver services, and coordinate development programmes. Examples include farmer registries, traceability platforms, digital certification systems, market information platforms, and monitoring dashboards.
Digital Traceability Systems	Digital tools that track the origin, production practices, and movement of food products through supply chains to ensure transparency, quality assurance, and consumer trust.
Ecosystem Services	Benefits provided by natural ecosystems that support human wellbeing and agricultural productivity, including soil fertility, pollination, water regulation, climate regulation, and biodiversity conservation.
Food System	The interconnected network of actors, institutions, processes, and infrastructure involved in food production, processing, distribution, consumption, and waste management.
Regenerative Food System	A food system designed to restore natural ecosystems, improve soil and biodiversity health, strengthen climate resilience, and deliver nutritious food while supporting sustainable livelihoods.
Food-as-Medicine Approach	A public health concept recognizing that access to healthy and nutritious food plays a key role in preventing and managing diet-related diseases and improving population health outcomes.
Institutional Markets	Large and predictable buyers such as schools, hospitals, public feeding programmes, and government procurement systems that purchase food products regularly and can provide stable market demand for farmers.

Term	Definition
Natural Capital	The stock of natural resources such as soil, water, forests, and biodiversity that provide ecosystem services essential for agriculture, livelihoods, and environmental sustainability.
Participatory Guarantee System (PGS)	A locally focused certification system in which farmers, consumers, and stakeholders collectively verify compliance with agroecological or organic standards based on trust, transparency, and social participation.
Payment for Ecosystem Services (PES)	A financial mechanism through which farmers or land managers receive compensation for protecting or restoring ecosystem services such as watershed protection, soil conservation, biodiversity restoration, or carbon sequestration.
Regenerative Agriculture	Agricultural systems designed to restore soil health, biodiversity, water cycles, and ecosystem functions while improving farm productivity, resilience, and long-term sustainability.
School Feeding Programmes	Public programmes that provide meals to schoolchildren, often using locally produced food. These programmes can serve as stable institutional markets that support local farmers and improve child nutrition outcomes.
Smallholders Farmers	Farmers operating on relatively small land holdings who rely primarily on family labour and local resources for agricultural production.
Sustainable Food Systems	Food systems that deliver food security and nutrition for all without compromising the economic, social, and environmental foundations required for future generations.
Traceability	The ability to track food products from production to consumption through documented information on origin, production practices, and supply chain movement.
Youth Service Delivery Systems	Structured programmes that engage young people in agricultural service provision such as extension, digital agriculture, agribusiness support, and innovation within the food system.
Agroecology Implementation Pillars (GAIP)	A structured framework used to organize agroecology transformation around key systems including regenerative production practices, digital infrastructure, youth engagement, inclusive finance, governance coordination, and knowledge and learning systems.
Multi-Stakeholder Platform (MSP)	A coordination mechanism that brings together government institutions, farmers, civil society organizations, private sector actors, research institutions, and development partners to jointly plan, implement, and monitor food system initiatives.
Inclusive Food Systems	Food systems designed to ensure equitable participation and benefits for all stakeholders including smallholder farmers, women, youth, and marginalized communities.
Landscape Restoration	The process of restoring degraded land, soils, forests, and ecosystems at landscape level to enhance biodiversity, ecosystem services, and sustainable agricultural productivity.
Value Addition	The process of improving the economic value of agricultural products through processing, packaging, branding, or other forms of transformation before marketing.
Agroecology Governance	The institutional and policy frameworks that coordinate agroecology implementation across sectors such as agriculture, environment, health, education, trade, and finance.

Executive Summary

Murang'a County's Agroecology Strategic Plan 2025–2035 sets out a ten-year pathway for transforming the county's food system into a regenerative, nutrition-secure, climate-resilient, inclusive, and economically viable system. The Plan recognizes that Murang'a's agricultural future can no longer be secured through production-focused interventions alone. Climate variability, soil degradation, declining ecosystem health, market instability, youth unemployment, rising diet-related health concerns, and growing pressure on land and water require a coordinated countywide transformation approach. Agroecology is therefore positioned not merely as a farming method, but as a practical development framework that connects agriculture, livestock, environment, water, health, education, trade, cooperatives, youth, energy, finance, digital systems, and governance into one integrated delivery agenda.

The Strategy is anchored in the County's vision of a regenerative, nutrition-secure, and climate-resilient Murang'a where agroecology supports sustainable livelihoods, healthy diets, and thriving local economies. It aligns with the Murang'a County Agroecology Policy, the County Integrated Development Plan, climate change and right-to-food frameworks, national agroecology priorities, and global food systems commitments. By 2035, Murang'a seeks to demonstrate that agroecology can become a normal way of planning, financing, producing, aggregating, procuring, consuming, monitoring, and learning within county development systems. The Strategy therefore moves beyond isolated projects and establishes agroecology as a whole-of-county delivery system supported by strong institutions, inclusive markets, digital traceability, public procurement, youth innovation, clean energy, blended finance, and adaptive learning.

Strategy Foundation and County Context

Agroecology is presented as Murang'a's sustainable development delivery nexus, linking farm productivity with ecosystem restoration, public health, local economic development, nutrition, climate resilience, and inclusive livelihoods. The Strategy frames agroecology as a countywide transformation agenda rather than a narrow agricultural programme. This means that every relevant county function has a role: agriculture and livestock support production and extension; environment and water protect landscapes and watersheds; health advances nutrition and preventive care; education anchors school feeding and food literacy; trade and cooperatives support aggregation and markets; ICT strengthens data systems; finance and planning align resources; and youth drive innovation and service delivery. Murang'a's 2035 end-state is defined as a resilient and low-emission food system where crops, livestock, trees, water, energy, markets, and institutions function together. Gender equality and social inclusion are introduced as cross-cutting requirements, recognizing that women, youth, persons with disabilities, low-income households, and marginalized producers must participate in and benefit from the transition. Murang'a is also positioned as a learning and demonstration county, capable of documenting lessons, hosting peer learning, and contributing to national and South–South agroecology implementation knowledge.

Regenerative Agroecology — Practice and Landscapes

Restoring Murang'a's ecological foundations is central to the county's agroecology transition. The Strategy recognizes the county's highland, midland, and lower transitional zones as different agroecological contexts requiring tailored responses. Upper catchments and steep slopes require watershed protection, agroforestry, riparian restoration, and erosion control.

Mid-altitude production belts require soil fertility rebuilding, diversified cropping, integrated crop-livestock systems, and stronger value chains. Lower and drier zones require water harvesting, drought-resilient crops, soil moisture conservation, and climate adaptation services.

The Strategy promotes soil health restoration, biodiversity protection, agroforestry, integrated pest management, indigenous and climate-resilient crops, manure management, fodder systems, animal health, and integrated crop-livestock production. Clean energy is also introduced as an enabler of regenerative production, including solar irrigation, renewable-powered water pumping, drying, cold storage, and small-scale processing. The overall intention is to reduce climate risk, restore degraded landscapes, strengthen productivity, lower dependence on hazardous inputs, and ensure that farmers

can participate in verified agroecological markets.

Digital Public Infrastructure for Agroecology

Digital public infrastructure provides the evidence, traceability, and accountability backbone of Murang'a's agroecology transformation. The transition requires reliable data on farmers, producer groups, cooperatives, livestock producers, value chains, service providers, landscapes, soil health, procurement systems, and market flows. The Strategy therefore proposes interoperable registries, spatial planning tools, soil mapping, land health profiling, traceability systems, digital quality assurance, certification records, and performance scorecards.

Digital systems are treated as practical tools for better planning, targeting, monitoring, procurement integrity, investor confidence, and public accountability. Through farmer registries, digital traceability, procurement verification, and evidence packs, the County will be able to track adoption of agroecological practices, verify product origin and production standards, support public procurement, and generate decision-ready information for budgeting and adaptive management. FAIR, CARE, and TRUST principles are embedded to safeguard privacy, community rights, responsible data sharing, and market confidence.

Youth Innovation and Service Delivery

Youth are positioned as central actors in Murang'a's agroecology transformation. Rather than treating youth only as beneficiaries or land-constrained farmers, the Strategy opens multiple entry points for youth participation in extension, digital agriculture, traceability, aggregation, logistics, climate services, renewable energy, bio-inputs, processing, packaging, value addition, and enterprise development. Youth are therefore framed as service providers, innovators, technicians, entrepreneurs, data stewards, and market actors within the agroecology system.

Structured youth service delivery pathways will be linked to training, certification, incubation, mentorship, field placement, and market opportunities. Youth-led enterprises can support soil diagnostics, digital onboarding, farm advisory services, pest surveillance, fodder production, manure processing, dairy hygiene, poultry value addition, cold chain operations, and clean energy maintenance. This approach helps address youth unemployment while strengthening last-mile delivery capacity for the county's agroecology agenda.

Inclusive Financing for Agroecology

Financing is treated as a core condition for scaling agroecology beyond pilots and grant-funded activities. Farmers, cooperatives, youth enterprises, aggregators, and small businesses require transition finance, working capital, equipment finance, risk-sharing instruments, and patient capital. Agroecology must therefore become investable through a county financing architecture that combines public budgets, climate finance, development partner support, cooperative finance, SACCOs, private capital, guarantees, and results-linked financing.

An inclusive and blended finance approach will support regenerative production, clean energy infrastructure, aggregation, processing, market systems, FoodFarmacies, school feeding supply chains, youth enterprises, and value addition. The Strategy also emphasizes risk allocation, assurance, and investor confidence. By linking finance to verified outcomes and traceable value chains, Murang'a can mobilize capital while protecting smallholder inclusion and ensuring that investment contributes to ecological restoration, nutrition, incomes, and market resilience.

Governance and Institutional Coordination

Effective governance is essential for delivering agroecology as a whole-of-county agenda. Because agroecology cuts across departments and sectors, implementation requires clear leadership, coordination routines, role allocation, standards oversight, verification systems, grievance mechanisms, and partnership alignment. The Strategy introduces a Lead-Convener-Contributor model to clarify who is responsible for each programme or delivery cluster.

FarmHubs are institutionalized as county delivery platforms. They are not simply physical facilities, but service, aggregation, data, learning, enterprise, finance, and market nodes that connect farmers to extension, bio-inputs, quality assurance, traceability, youth services, procurement, and finance.

Governance will also be supported by the County Agroecology Multi-Stakeholder Platform, partner forums, standards oversight mechanisms, and South–South learning interfaces. The goal is to reduce duplication, strengthen accountability, and ensure that county institutions—not temporary projects—own implementation.

Nutrition, Food-as-Medicine and Institutional Markets

Nutrition and public health sit at the centre of Murang’a’s agroecology transformation. Food systems are expected not only to produce commodities, but also to improve diets, food safety, child nutrition, household resilience, and preventive health outcomes. The Strategy links agroecology to Food-as-Medicine, community health, FoodFarmacies, dietary diversity, reduced exposure to harmful chemicals, and better nutrition outcomes.

FoodFarmacies are positioned as community-level and facility-linked platforms that connect agroecological production with nutrition counselling, diet-risk screening, referrals, and access to safe, diverse, and locally produced foods. School meals are treated as a strategic institutional market and nutrition driver, providing predictable demand for local agroecological produce while improving learner nutrition and food literacy. Hospitals and other public institutions are also recognized as potential procurement channels, while nutrition, health, education, agriculture, and procurement systems are coordinated as part of one food systems pathway.

Market and Enterprise Development

Murang’a’s market systems agenda is consolidated around the need to make agroecology economically viable for farmers, cooperatives, youth enterprises, and private sector actors. Farmers will only sustain agroecological practices if they can access reliable, fair, and rewarding markets. The Strategy therefore focuses on aggregation, cooperatives, value addition, private sector participation, product development, institutional markets, certification, traceability, branding, and market confidence. It also recognizes that markets include inputs, services, logistics, finance, processing, retail, and institutional procurement—not only food sales.

Cooperative aggregation, agroecology enterprise development, value addition, and stronger private sector engagement will be promoted for local products such as arrowroots, sweet potatoes, fruits, vegetables, dairy, poultry, and medicinal plants. School feeding is presented as an important but not exclusive market channel, alongside domestic markets, institutional buyers, retail, processors, hospitals, hospitality, and specialized agroecological markets. Standards, Participatory Guarantee Systems, traceability, and certification are expected to convert agroecology from good practice into verifiable market value.

Monitoring, Learning and Adaptive Implementation

Implementation will be phased, evidence-driven, and adaptive. Murang’a will begin with minimum viable delivery systems, scale successful models, and gradually institutionalize agroecology within county planning, budgeting, procurement, and performance systems. The Strategy links implementation to MEAL systems, indicators, evidence generation, data collection, reporting, learning reviews, and risk management.

Progress will be tracked across production, landscapes, markets, finance, youth employment, nutrition, gender and social inclusion, digital systems, institutional coordination, and climate resilience. Evidence packs, scorecards, annual reviews, and periodic evaluations will guide decision-making and course correction. This ensures that the Strategy remains a living framework, capable of learning from implementation, adjusting to risks, and scaling what works.

Conclusion and Strategic Outlook

Murang’a’s long-term commitment is to use agroecology as a transformative development pathway. The Strategy’s central message is that the County is not only improving farming practices, but redesigning the food system to deliver better livelihoods, healthier diets, restored ecosystems, stronger markets, youth employment, inclusive enterprise, clean energy adoption, and accountable governance. Success will depend on sustained political leadership, interdepartmental coordination, stakeholder ownership, adequate financing, strong data systems, and disciplined implementation.

By 2035, Murang'a aims to be recognized as a leading county in agroecology and sustainable food systems transformation. The county's strategic outlook is to demonstrate that agroecology can deliver practical results when it is embedded in public institutions, supported by markets, financed through blended mechanisms, verified through digital systems, and shaped by communities. The Plan is therefore both a development roadmap and a public commitment to build a resilient food system that benefits people, nature, and future generations.

Chapter

01



Chapter 1:

Strategy Foundation and County Context

1.1 Agroecology as Sustainable Development Delivery Nexus

Murang’a County recognizes agroecology as a practical pathway for advancing sustainable development across agriculture, nutrition, climate resilience, environmental stewardship, and inclusive economic growth. In this Strategy, agroecology is understood not merely as a set of farming practices, but as a comprehensive food systems transformation approach that links farm productivity, ecosystem restoration, public health, and local economic development. It provides a unifying framework through which the County can address multiple development objectives at the same time.

Murang’a’s economy and livelihoods are deeply anchored in agriculture and natural resources, yet the county faces increasingly interconnected challenges, including climate variability, soil degradation, youth unemployment, and rising diet-related health concerns. These pressures require a coordinated response that strengthens ecological resilience while improving livelihoods, food security, and social well-being. Agroecology offers such a response by promoting diversified production systems, regenerative land management, water conservation, biodiversity protection, and improved nutrition outcomes.

In Murang’a, agroecology is applied as an integrated system that combines crops, livestock, trees, water, and markets, recognizing that sustainable food systems depend on the combined management of soils, animals, biodiversity, nutrition, and livelihoods. Livestock is therefore treated not as a separate subsector outside agroecology, but as a core component of nutrient cycling, household resilience, income generation, and diet quality. Through practices such as soil regeneration, agroforestry, integrated crop–livestock systems, and ecological pest management, agroecology strengthens productivity, restores natural systems, and builds resilience over time.

The Strategy also recognizes energy transition as a critical cross-cutting enabler of agroecology

delivery. Murang’a’s ability to support resilient production, functioning markets, trusted digital systems, and nutrition-sensitive public programmes will increasingly depend on access to affordable, reliable, and clean energy. Renewable energy solutions such as solar-powered irrigation, cold storage, aggregation facilities, digital service points, and small-scale processing can reduce production costs, lower post-harvest losses, improve climate resilience, and reduce emissions. Agroecology is therefore positioned as a county development driver that connects agriculture, environment, health, education, trade, youth empowerment, energy, and planning into a single transformation pathway capable of delivering measurable gains in livelihoods, nutrition, ecosystem health, and local economic growth.

1.2 Agroecology as a Countywide Transformation Agenda

Murang’a County adopts agroecology as a countywide transformation agenda rather than a stand-alone agricultural programme. The Strategy provides a common framework through which county departments, development partners, communities, and private sector actors can work together to build a resilient, inclusive, and sustainable food system. In this approach, agroecology is embedded in the County’s broader development pathway and is used to connect production, nutrition, environmental stewardship, livelihoods, and local economic growth.

This transformation agenda recognizes that sustainable food systems require coordinated action across multiple sectors. Agriculture drives production and extension; environment and water support ecosystem restoration and watershed protection; health promotes nutrition and preventive care; education strengthens school feeding and food literacy; trade and cooperatives support aggregation and markets; while planning and finance ensure policy alignment and sustainable investment. Livestock systems are integrated within this framework as part of Murang’a’s wider agroecology pathway,

including dairy, poultry, small stock, fodder systems, manure-based soil fertility management, livestock-linked enterprises, and safe animal-source foods that contribute to resilience, income, and nutrition.

By aligning these sectors around a shared strategy, Murang'a seeks to move from fragmented projects to coordinated delivery programmes capable of generating measurable countywide impact. Agroecology is therefore embedded in routine county governance and development systems, including planning frameworks, budgeting cycles, and monitoring processes, while ward-based implementation platforms enable farmers, youth enterprises, cooperatives, and community institutions to participate directly in delivery and accountability.

To strengthen this system, the County will also progressively integrate clean and energy-efficient technologies across agroecology value chains and service platforms, including solar-powered irrigation, renewable-powered FarmHubs, cold storage, aggregation, processing equipment, and energy for digital public infrastructure. Clean energy will be treated as a practical enabler of productivity, lower transaction costs, stronger market reliability, and low-emission county development.

1.3. Normative Foundations of Murang'a's Agroecology Strategy

The Murang'a County Agroecology Strategic Plan is anchored on two complementary foundations that guide both the technical integrity and implementation architecture of agroecology transformation in the county. First, the Strategy aligns with FAO's 13 Principles of Agroecology, which provide the normative framework for regenerative agriculture, ecosystem restoration and sustainable food systems. Second, the Strategy organizes implementation through GODAN's six Agroecology Implementation Pillars (GAIP), which function as the county's systems framework for coordinating actions across sectors. Together, these foundations ensure that agroecology is implemented as a coherent food systems transformation rather than a set of isolated agricultural practices.

The FAO principles including recycling, input reduction, soil and animal health, biodiversity, synergies, economic diversification, co-creation of knowledge, social values and diets, fairness, connectivity, land and natural resource governance, and participation guide how agroecology practices

are applied across Murang'a. In practical terms, this includes composting and bio-input systems to reduce chemical inputs, agroforestry and watershed restoration to improve soil health and biodiversity, cooperative value chains and youth enterprises to strengthen economic diversification, and participatory governance mechanisms that support inclusive and nutrition-sensitive food systems.

To operationalize these principles, the Strategy uses GODAN's six Agroecology Implementation Pillars (GAIP) as the organizing logic for countywide transformation. The pillars provide a systems map linking regenerative practices, markets, youth service delivery, finance, governance and learning into a single delivery architecture. This approach ensures coherence across departments and partners, allows priorities to be packaged into investable programmes, and strengthens accountability through measurable results.

Through this framework, the Strategy advances four transformation domains; Food-Land-Water-Climate systems, Inclusive Economic Transformation, Human Capital and Social Well-being, and Governance and Partnerships, which together define Murang'a's vision for a resilient and sustainable agroecological food system by 2035.

1.4. Vision, Mission and Strategic Objectives

Vision

A regenerative, nutrition-secure and climate-resilient Murang'a where agroecology supports sustainable livelihoods, healthy diets and thriving local economies.

Mission

To guide Murang'a County's transition toward sustainable food systems by coordinating regenerative agriculture, ecosystem restoration, inclusive markets, youth innovation and evidence-based planning across county institutions and partnerships.

Theory of Change

Murang'a County will transform its food system by coordinating agriculture, climate, health, education, trade, water, finance and ICT functions under a unified agroecology delivery framework. By scaling regenerative farming and landscape practices, strengthening digital data and traceability systems, deploying youth-led extension services, and mobilizing blended and

climate finance tied to verified outcomes, the county aims to reduce climate and ecosystem risks, increase farm productivity and incomes, improve food safety and diet diversity, and strengthen nutrition and preventive health outcomes. Continuous monitoring, learning and adaptive management will ensure accountability, build investor and market trust, and sustain agroecology transformation through county planning and budgeting systems.

Strategic Objectives

1. Promote regenerative agroecology practices that restore soil health, biodiversity, watershed integrity, and ecosystem resilience.
2. Strengthen data, monitoring, traceability, and knowledge systems to support evidence-based planning, accountability, and learning.
3. Expand youth participation, innovation, and service delivery in agroecology and related enterprise systems.
4. Strengthen market systems and enterprise development to improve value addition, aggregation, local procurement, and inclusive agroecology business growth.
5. Mobilize inclusive financing mechanisms that support agroecological transition, rural enterprises, and investment in value chains.
6. Strengthen governance and institutional coordination for integrated food systems transformation.
7. Improve nutrition outcomes and learning systems through integrated food, health, education, and community-based initiatives.

1.5 Murang'a 2035 End-State

By 2035, Murang'a County aims to establish a resilient, inclusive, and low-emission food system in which regenerative and agroecological farming practices, functioning markets, strong institutions, active community participation, and clean energy systems work together to support sustainable development outcomes. Farms across the county will increasingly adopt diversified agroecological practices that improve soil fertility, conserve water, restore biodiversity, and strengthen climate resilience, while also using appropriate renewable and energy-efficient technologies to improve productivity and reduce losses. Farmers and cooperatives will be integrated into reliable value chains and institutional markets that reward quality production, strengthen local enterprises, and support fair and stable incomes.

Murang'a envisions farming systems in which crops, livestock, trees, water resources, and energy are managed in an integrated manner to improve productivity, reduce waste, strengthen resilience, and diversify incomes. Livestock value chains will be more organized, traceable, and market-linked, while animal-source foods will contribute more effectively to county nutrition goals and local economic development. At the same time, decentralized clean energy will be embedded across priority agroecology value chains and public delivery platforms.

Solar-powered irrigation will support production in water-stressed areas; renewable-powered cold storage, aggregation, and processing systems will reduce post-harvest losses and stabilize supply into markets and school meals; and FarmHubs, digital service points, and other delivery platforms will operate with more reliable and affordable clean power.

As part of the transition pathway, Murang'a will implement the Regenerative Agroecological Food Systems Transition (RAFT) commitments as a catalytic 3–4-year framework to accelerate progress in priority areas, particularly local procurement and school feeding systems. Aligned with the Bellagio Communiqué on regenerative food systems, RAFT will serve as an early implementation platform to test procurement reforms, strengthen local supply chains, connect agroecological production with nutrition outcomes and institutional markets, and demonstrate the value of clean-energy-enabled aggregation, storage, and service delivery. Lessons from this phase will guide scaling within the broader ten-year strategy, recognizing that RAFT represents an initial implementation pathway rather than the full transformation agenda.

The strategy also recognizes the importance of understanding Murang'a's current position across key agroecology transition pillars, including practice adoption, market development, youth participation, nutrition systems, institutional coordination, and energy access for production and value-chain services. Assessing these areas will help identify structural constraints that have slowed progress in the past. Strengthened monitoring, planning, and coordination systems will allow the County to track progress, adapt programmes, and mobilize investment, enabling measurable improvements in soil health, climate resilience, food security, rural livelihoods, and energy transition outcomes.

By 2035, youth-led enterprises are expected to play an important role in installation, maintenance, and service provision linked to clean energy for agroecology, helping to lower operating costs,

improve resilience to climate and energy shocks, strengthen market reliability, and contribute to Murang'a's broader low-carbon development pathway.

1.6 Integrated Implementation Approach

The Strategy adopts an integrated implementation approach to ensure that agroecology initiatives reinforce one another across sectors and levels of government. First, county planning and budgeting systems are aligned to agroecology priorities through integration into the County Integrated Development Plan (CIDP), Annual Development Plans (ADPs), and sector workplans. This ensures that agroecology investments are embedded within routine government functions rather than external projects.

Second, Multi-Stakeholder collaboration is strengthened through county coordination platforms that bring together public institutions, civil society, farmer organizations, research institutions and private sector actors. These platforms support joint planning, knowledge sharing and coordinated implementation. Third, monitoring and evaluation systems are strengthened to track progress across production systems, markets, environmental restoration and nutrition outcomes. Evidence generated through these systems informs policy decisions, resource allocation and programme adjustments.

1.7 Murang'a as a Learning and Demonstration County

Murang'a County aims to position itself as a learning and demonstration county for agroecology implementation. This involves documenting experiences, sharing lessons and supporting peer learning across counties, institutions and partners. The county will strengthen collaboration with research institutions, universities, technical training institutions and civil society organizations to support innovation and knowledge generation. Demonstration farms, farmer learning networks and youth innovation platforms will provide practical training and knowledge exchange opportunities.

Regular learning forums and review processes will allow stakeholders to assess progress, identify challenges and refine strategies. Through this continuous learning process, Murang'a can adapt interventions to local realities while contributing knowledge to broader food systems

transformation efforts.

1.8 Policy and Legal Landscape

The Murang'a Agroecology Strategic Plan aligns with key policy frameworks at county, national and international levels.

At the county level, agroecology implementation builds upon several policy instruments including:

- Murang'a County Agroecology Policy (2022–2032)
- Murang'a County Integrated Development Plan (CIDP)
- Murang'a County Climate Change Action Plan
- Right to Food Policy
- County agricultural and environmental programmes

These frameworks collectively prioritize food and nutrition security, climate resilience, sustainable land management and inclusive economic development.

At the national level, the strategy aligns with:

- Kenya's National Agroecology Strategy for Food System Transformation
- Kenya's Nationally Determined Contributions (NDCs) under the Paris Agreement
- Agricultural transformation prioritise under the Comprehensive Africa Agriculture Development Programme (CAADP)

Murang'a is also part of global food system transformation efforts including the Milan Urban Food Policy Pact, which encourages sub-national governments to strengthen sustainable food systems and improve nutrition. Alignment with these frameworks ensures policy coherence and strengthens the strategic legitimacy of Murang'a's agroecology agenda.

1.9 Situational Analysis of Murang'a Food Systems

Murang'a County faces several interconnected challenges that influence agricultural productivity, food security and environmental sustainability. Climate variability has increased the frequency of droughts, floods and landslides, affecting farm productivity, infrastructure and the stability of farming systems. Soil degradation and erosion resulting from unsustainable land management practices and declining soil fertility are reducing agricultural productivity in some areas. Additional environmental pressures include pollution from improper waste disposal and agricultural

chemicals, quarrying activities and sand harvesting that degrade landscapes and accelerate erosion, as well as limited soil mapping and monitoring systems that constrain evidence-based land management planning.

Rapid population growth is also increasing demand for food, land and natural resources, intensifying pressure on ecosystems and agricultural land. At the same time, nutrition challenges persist in the form of both undernutrition and diet-related non-communicable diseases, highlighting the need for more diversified and nutritious food systems. Despite these challenges, Murang'a possesses strong opportunities for transformation. The county has productive agricultural zones, active farmer organizations, growing youth interest in agribusiness and strong institutional frameworks for planning and development.

Harnessing these opportunities through coordinated agroecology initiatives will help restore soil health, protect watersheds, enhance biodiversity and strengthen climate resilience while improving livelihoods and supporting long-term sustainable development.

1.10 External Environment Influencing Agroecology Transformation

Murang'a's agroecology transition is shaped by a range of external political, economic, social, technological, environmental and legal factors. Kenya's devolved governance system provides counties with authority over agriculture, climate change adaptation and local economic development, creating an enabling policy environment for Murang'a to implement its Agroecology Policy and related initiatives.

Economically, agriculture remains a key source of livelihoods and employment, although farmers face constraints such as high input costs, limited access to finance and fluctuating commodity prices. Socially, the county's rural population relies heavily on agriculture, with women playing a major role in food production despite limited access to land and financial resources, while youth participation in agriculture remains relatively low. Technological developments, including digital agriculture platforms, mobile extension services and product traceability systems; offer opportunities to improve productivity, transparency and market access for farmers. However, environmental pressures such as climate change, soil degradation and ecosystem stress continue to threaten agricultural sustainability.

At the same time, national and county policy frameworks provide a supportive legal and institutional environment for scaling agroecology as a pathway for sustainable food systems transformation.

A summary SWOT assessment highlights the strategic context for agroecology in Murang'a. Strengths include favourable agroecological conditions, strong farmer organizations, supportive county policies and growing institutional commitment to food systems transformation. Weaknesses include fragmented land holdings, limited access to finance and technology, and uneven extension coverage.

Opportunities arise from growing demand for sustainable and nutritious food, expanding climate and green financing opportunities, youth agribusiness potential and digital agriculture innovations. Threats include climate variability, environmental degradation, market volatility and continued pressure on land and natural resources. Together, these factors underline the importance of coordinated agroecology interventions to strengthen resilience, livelihoods and sustainable development in Murang'a County.

1.11 Gender Equality and Social Inclusion Considerations

Murang'a County recognizes that agroecology transformation will only succeed if it is inclusive, equitable, and accessible to all. Gender Equality and Social Inclusion (GESI) is therefore adopted in this Strategy as a cross-cutting implementation standard to ensure that women, youth, persons with disabilities, low-income households, marginalized communities, and other excluded groups are able to participate in, benefit from, and shape agroecology development. The County acknowledges that these groups often face structural barriers in access to land, finance, information, markets, leadership, technology, and public services. This Strategy therefore commits to reducing those barriers so that agroecology contributes not only to environmental sustainability and economic growth, but also to fairness, social justice, and shared prosperity across Murang'a County.

GESI will be applied across all pillars of the Strategy through inclusive planning, targeted service delivery, fair participation in markets and enterprises, accessible financing, and equitable representation in governance and decision-making structures. In practical terms, county programmes, cooperative systems, public

procurement, enterprise support, extension services, and digital platforms will be designed to expand opportunities for underserved groups and reduce exclusion.

The County will operationalize this commitment through five principles: equitable access, meaningful participation, inclusive economic opportunity, protection and dignity, and accountability. Responsibility for implementation will be shared across all county departments and partners, with coordination anchored in the county governance and planning system, while monitoring and evaluation processes will track participation and benefits using sex-, age-, and disability-disaggregated data where possible. In this way, GESI is embedded not as a stand-alone social issue, but as a countywide requirement for how agroecology is planned, financed, delivered, governed, and measured.

1.12 Institutional Landscape and Multi-Stakeholder Collaboration

Successful implementation of the Murang'a County Agroecology Strategic Plan will require coordinated action by a wide range of actors across the county's food system. Agroecology is inherently cross-sectoral, linking agriculture, environment, health, trade, education, water, and local economic development. The Strategy therefore adopts a multi-actor approach that brings together government institutions, farmers, cooperatives, civil society, research organizations, the private sector, and development partners to jointly drive the transition toward sustainable, resilient, and inclusive food systems.

Within county government, key roles will be played by the Departments of Devolution; Agriculture, Livestock and Fisheries; Environment and Climate Change; Health and Nutrition; Trade, Cooperatives and Industrialization; Water and Irrigation; and the County Treasury and Planning Department, working alongside ward and sub-county administrative structures to coordinate planning, delivery, and oversight.

Farmer organizations and cooperatives, including coffee cooperatives and horticulture producer groups, farmer field schools, agroecology networks, and SACCOS, will play an important role in practice adoption, aggregation, enterprise development, and local market participation. Farmer organizations and cooperatives will also include livestock-based institutions such as dairy cooperatives, poultry groups, fodder producer groups, and livestock marketing associations,

which will support practice adoption, aggregation, value addition, and enterprise development across integrated agroecology systems.

Civil society organizations will contribute through community mobilization, capacity building, and policy advocacy, while research and academic institutions such as Murang'a University of Technology, KALRO, the University of Nairobi, and ICIPE will provide technical knowledge, innovation, and evidence generation. The private sector will support value addition, market development, financing, and technology uptake, while development partners will contribute technical assistance, investment, and knowledge exchange. Coordination among these actors will be strengthened through the County Agroecology Multi-Stakeholder Platform and periodic partnership forums.

Chapter

02



Chapter 2:

▶ Regenerative Agroecology (Practice and Landscapes)

2.0 Introduction

Murang'a County is pursuing a regenerative agroecology pathway that restores ecological systems while strengthening agricultural productivity, livelihoods and food security. This approach recognizes that sustainable food systems depend on healthy soils, protected watersheds, resilient biodiversity and farming systems that can adapt to climate variability. Regenerative agroecology therefore combines improved farm practices with landscape restoration and resource stewardship across the county's agroecological zones.

In Murang'a, regenerative agroecology will explicitly integrate livestock into landscape restoration and farm productivity strategies. Livestock systems will support nutrient cycling, soil fertility restoration, mixed farming, and diversified livelihoods, while improved fodder, manure, water, and animal health management will strengthen resilience across the county's agroecological zones.

2.1 Problem Statement and Opportunity in Murang'a

Murang'a's agricultural potential is shaped by a strong highland-midland-lowland gradient, productive mixed farming systems and active farmer organizations. At the same time, the county faces growing pressures from climate variability, land degradation and market uncertainty. Droughts, floods and landslides increasingly disrupt production, damage infrastructure and undermine household resilience. Soil erosion, declining fertility, deforestation, riparian encroachment and unsustainable land use are weakening the ecological base on which agriculture depends.

Stakeholder consultations also highlighted additional environmental degradation drivers that need stronger recognition in the strategy. These include pollution, quarrying, sand harvesting and limited soil mapping at ward and sub-county level. Together, these factors reduce land productivity, degrade water sources and increase ecological risk.

Farmers are further constrained by rising input costs, limited access to affordable finance, weak aggregation in some value chains and continued dependence on input-intensive production systems.

Despite these constraints, Murang'a has strong enabling conditions for transformation. The county already has an Agroecology Policy, climate planning instruments, farmer organizations and growing demand for safe, nutritious and sustainably produced food. Public programmes such as school feeding can create stable demand for locally produced agroecological foods. Youth service delivery, digital systems, value addition, climate finance and nature-based solutions create additional opportunities to strengthen resilience, improve incomes and restore landscapes.

The county also faces livestock-related challenges that need stronger attention within agroecology planning, including feed and fodder constraints, manure management gaps, animal health risks, weak livestock value addition, and limited integration of livestock into regenerative land management and market systems. Addressing these challenges creates an opportunity to strengthen both ecological restoration and household incomes through integrated crop-livestock systems.

2.2 Organizing Logic for Regenerative Agroecology Transformation

This pillar advances the county's agroecology implementation framework by focusing on the transformation of food, land, water, climate, and energy systems, while also contributing to inclusive economic development and improved human well-being. Regenerative practices and landscape restoration are therefore designed not only to restore environmental health, but also to strengthen market opportunities, food safety, nutrition, household resilience, and the transition to cleaner and more efficient energy use in production and value chains. Livestock integration

is central to this organizing logic because it connects ecological restoration with productive agriculture through mixed farming, fodder development, manure use, and improved animal management. In the same way, energy transition is treated as a practical enabler of regenerative agroecology, with increased use of renewable and energy-efficient technologies such as solar-powered irrigation, clean water pumping, efficient drying, cold storage, and small-scale processing. Together, these systems can improve soil health, reduce waste, strengthen farm resilience, diversify incomes, and support safer and more reliable food systems.

Implementation follows a territorial approach in which priorities are organized according to landscape type and production context rather than uniform project models. Delivery is linked to extension services, ward planning systems, farmer organizations, public procurement programmes, and county monitoring frameworks, while also promoting inclusive access to clean energy, restoration opportunities, and climate-smart production pathways for women, youth, and other excluded groups. This approach ensures that ecological and energy improvements are institutionally supported, monitored, and sustained through county planning, budgeting, and investment systems.

2.3 Goal, Outcomes and Principles

Goal

To restore and enhance Murang'a's agroecosystems and landscapes through regenerative agroecology practices that improve soil health, protect watersheds, strengthen biodiversity, climate resilience, and clean energy use, while supporting productive, inclusive, and nutrition-sensitive food systems.

Expected Outcomes

- Improved soil health and reduced land degradation in priority landscapes
- Restored watersheds and protected riparian ecosystems
- Increased biodiversity and more diversified farming systems
- Reduced vulnerability to droughts, floods, landslides, and energy-related production disruptions
- Greater adoption of indigenous and climate-resilient crops
- Verified regenerative production systems

linked to markets and public procurement

- Increased adoption of integrated crop-livestock systems and improved fodder, manure, and animal health management
- Increased uptake of renewable and energy-efficient technologies, including solar-powered irrigation, water pumping, drying, cooling, and small-scale processing
- Lower post-harvest losses and more reliable aggregation and market access through clean-energy-enabled value chain infrastructure
- Improved inclusion of women, youth, and producer groups in climate-smart and energy-enabled agroecology systems

Guiding Principles

Implementation of this pillar will follow seven principles:

1. Territorial targeting based on agroecological zones and landscape conditions
2. Integration of ecosystem restoration, productive agriculture, and clean energy transition
3. Inclusion of women, youth, and marginalized communities
4. Evidence-based monitoring and verification of ecological, production, and energy-related outcomes
5. Climate risk reduction and resilience building
6. Market integrity through certification and traceability systems
7. Promotion of renewable and energy-efficient technologies that reduce costs, lower losses, and strengthen low-emission agroecological value chains

2.4 Murang'a Landscape Typology and Priority Targeting

For strategic targeting, Murang'a will organize regenerative agroecology delivery across three broad landscape types.

1. Upper catchments and steep slopes require watershed protection, slope stabilization, agroforestry, riparian restoration and soil erosion control.
2. Mid-altitude production belts are suited to soil fertility rebuilding, diversified cropping systems, integrated crop-livestock production and value chain strengthening.
3. Lower transitional and relatively drier zones require water harvesting, soil moisture conservation, drought-resilient cropping systems

and climate adaptation services.

Across all three landscape types, livestock planning will be integrated into territorial targeting through attention to fodder systems, grazing and stall-feeding practices, manure management, water access, and livestock-linked market opportunities. This will ensure that livestock contributes positively to both ecological restoration and household resilience

In addition, ward and sub-county prioritization will consider land degradation risk, watershed importance, production potential, vulnerability to climate shocks and opportunities for market linkages. Soil mapping and land health profiling will support better targeting of regenerative practices and restoration investments.

2.5 Strategic Objectives and Flagship Programmes

Strategic Objective 1: Restore Watersheds, Soils and Landscape Resilience

Murang'a will scale regenerative landscape and farm practices that improve soil health, water retention, biodiversity and climate resilience across its agroecological zones. The objective focuses on restoring ecological integrity while improving productivity and resilience of farming systems.

Illustrative interventions

- Soil conservation measures including terracing, contour farming and vegetative barriers on erosion-prone slopes
- Riparian and watershed restoration programmes to protect rivers, springs and water catchments
- Agroforestry expansion integrating trees with crops and livestock systems
- Soil organic matter restoration through composting, manure management and green manures
- Rainwater harvesting and water retention infrastructure for farms and community landscapes
- Integrated crop-livestock systems that enhance nutrient cycling and reduce waste
- Promotion of indigenous and climate-resilient crop varieties to improve adaptation
- Renewable energy solutions such as solar irrigation and renewable-powered farm processing

- Circular bioeconomy initiatives including productive use of agricultural residues and organic waste
- Improved fodder production systems linked to soil and water conservation
- Better manure management for soil fertility restoration and circular bioeconomy use
- Support for climate-resilient dairy, poultry, and small livestock systems within mixed farming landscapes

Strategic Objective 2: Institutionalize Soil Health and Biodiversity-Based Production Systems

Murang'a will promote production systems that strengthen ecological processes and biodiversity within farming landscapes, reducing dependence on external inputs and enhancing ecosystem services.

Illustrative interventions

- Promotion of diversified cropping systems and crop rotation practices
- Establishment of cover cropping and soil protection practices
- Integration of agroforestry species that support soil fertility and biodiversity
- Habitat management to support pollinators and beneficial insects
- Expansion of Farmer Field Schools and farmer learning networks on agroecology practices
- Support for seed diversity and community seed systems for local crops
- Strengthening extension services on soil health management and regenerative practices
- Promotion of mixed farming systems integrating crops, livestock and trees
- Livestock water access and housing improvements aligned to climate resilience and animal welfare
- Farmer training on integrated crop-livestock planning, feed systems, and animal health within agroecology models

Strategic Objective 3: Mainstream Integrated Pest and Ecosystem Health Management

Murang'a will institutionalize Integrated Pest Management (IPM) as the primary approach to

pest and disease control within agroecological systems.

Illustrative interventions

- Farmer training programmes on IPM through extension services and Farmer Field Schools
- Promotion of crop diversification and intercropping systems that reduce pest pressure
- Adoption of pest-resistant crop varieties and improved planting calendars
- Use of biological control agents and beneficial insects
- Promotion of botanical pesticides and locally produced bio-inputs
- Improved farm sanitation and crop residue management
- Establishment of pest surveillance and early warning systems at county level
- Digital reporting platforms for monitoring pest outbreaks and climate-related risks
- Gradual reduction in reliance on hazardous pesticides through farmer awareness and alternative inputs

Strategic Objective 4: Strengthen Certification, Traceability and Market Integrity.

Murang'a will develop credible certification and traceability systems to ensure regenerative agroecology products access markets and generate value for farmers.

Illustrative interventions

- Establishment of Participatory Guarantee Systems (PGS) for local organic and agroecology markets.
- Support for third-party organic or sustainability certification for export-oriented value chains.
- Development of traceability systems for regenerative value chains using digital platforms.
- Capacity building for farmer cooperatives on quality assurance and certification standards.
- Strengthening quality control and inspection systems within the county.
- Linking certified agroecological produce to institutional procurement programmes such as school feeding.

- Promotion of agroecology markets and branding of Murang'a regenerative products.

Strategic Objective 5: Link Ecosystem Restoration to Natural Capital and Incentive Mechanisms

Murang'a will explore mechanisms that reward farmers and communities for ecosystem restoration and sustainable land management practices.

Illustrative interventions

- Development of natural capital accounting approaches for county ecosystems.
- Pilot programmes for payment for ecosystem services linked to watershed protection.
- Incentive schemes supporting tree planting and landscape restoration.
- Climate finance mobilization for regenerative agriculture and ecosystem restoration.
- Partnerships with private sector actors interested in carbon and nature-based solutions.
- Community-based monitoring systems for ecosystem restoration outcomes.
- Integration of ecosystem restoration indicators within county monitoring and evaluation systems.

Strategic Objective 6: Integrate clean energy solutions into agroecological production and landscape restoration systems.

Murang'a will support the phased deployment of decentralized renewable energy systems that improve water access, reduce dependence on fossil-fuel or high-cost energy sources, and enhance the resilience of agroecological production systems.

- Solar-powered irrigation systems for priority production zones and climate-vulnerable wards
- Renewable-powered community water pumping linked to restoration and productive use
- Biogas systems for mixed crop-livestock farms and producer groups, with digestate use supporting soil fertility
- Energy-efficient drying, composting, and primary processing technologies for agroecological producers
- Integration of energy planning into ward

agroecology implementation packages.

2.6 Results Framework for the Regenerative Agroecology Pillar

Table 1: Result frameworks for regenerative Agroecology .

Strategic Objective	Key Results	Lead Institutions	Financing Route	Verification Focus
SO1: Establish interoperable county registries and planning systems	Improved targeting of agroecology interventions; stronger ward and sub-county planning; better coordination of extension, production, and markets	Department of ICT; Department of Agriculture; Department of Planning; Ward and Sub-County Administration	County budgets through CIDP, ADPs and MTEF; technical support from partners and research institutions	Operational farmer and producer registries; ward and sub-county planning profiles; soil mapping and land health data
SO2: Strengthen county monitoring, scorecards and evidence-based performance tracking	More reliable monitoring and reporting; improved transparency, accountability, and performance management across the strategy	Department of Planning; Department of ICT; relevant sector departments	County M&E systems; departmental budgets; partner support for dashboards and analytics	Pillar scorecards; quarterly and annual evidence packs; operational dashboards; verified M&E reports
SO3: Build traceability and procurement integrity for priority agroecology value chains	Improved supplier verification, product traceability, food safety compliance, and buyer confidence in Murang'a agroecology products	Department of Agriculture; Department of Trade and Cooperatives; County Procurement Office; Departments of Education and Health	County procurement and quality assurance budgets; cooperative and private sector systems; certification partnerships	Traceability records ; supplier compliance documents ; procurement and delivery verification records ; quality assurance reports
SO4: Improve digital support for extension, agronomy and service delivery	Stronger digital advisory services; improved agronomic recommendations; more efficient coordination of extension and service delivery	Department of Agriculture; Department of ICT; Extension Services; Youth Service Delivery Networks	County extension and ICT budgets; partnerships with research institutions, service providers and development partners	Field data capture systems; advisory service records; service delivery coverage reports; platform utilization rates
SO5: Establish a practical data governance and stewardship system	Improved data quality, accessibility, transparency, and long-term stewardship of agroecology digital systems	Department of ICT; Department of Planning; Department of Agriculture; County Legal and Oversight Institutions	County ICT and governance budgets; policy development and training; partner support on standards and governance	Data-sharing protocols; data quality rules; audit trails; access controls and data protection measures

Strategic Objective	Key Results	Lead Institutions	Financing Route	Verification Focus
SO6: Integrate reliable and clean energy systems to support agroecology digital infrastructure, traceability and market integrity	Improved reliability of digital systems, traceability nodes, and certification workflows; reduced service interruptions and data gaps; stronger market integrity through energy-enabled storage, labelling, and verification systems	Department of ICT; Department of Agriculture; Department of Trade and Cooperatives; relevant energy and environment institutions	County development and ICT budgets; climate and green energy finance; blended finance; cooperative and private sector investment	Percentage of digital and traceability nodes with reliable clean energy access; system uptime rates; number of renewable-powered traceability and data systems operational

2.7 Sequencing and Early Deliverables

Implementation will follow a phased approach. During the first phase, the county will identify priority landscapes, strengthen soil and land health mapping and align regenerative practice packages with extension services and county programmes.

The second phase will focus on scaling soil health restoration, integrated pest management and biodiversity-based farming practices in priority wards while piloting certification and traceability systems.

Over the medium term, Murang'a will expand regenerative practices across additional landscapes, strengthen early warning systems for pest and climate risks, and mobilize climate and blended finance to support ecosystem restoration, value addition and quality assurance within agroecological value chains.

Early deliverables will also include identification of priority livestock production zones, assessment of fodder and manure management opportunities, and pilot support for integrated crop-livestock demonstration systems in selected wards

Chapter

03



Chapter 3:

Digital Public Infrastructure For Agroecology

3.0 Introduction and purpose

Murang'a County will establish digital public infrastructure to support the implementation of the agroecology strategy through improved planning, monitoring, traceability and performance management. Digital systems will connect farms, farmer groups, markets, service providers and public programmes within one coordinated framework, enabling better targeting of interventions, stronger extension delivery and improved food safety and market transparency. These systems will also support reliable data for county planning, budgeting and partner coordination. The approach prioritizes practical tools that strengthen county service delivery, including soil mapping, performance scorecards, extension support systems and traceability for agroecology value chains.

3.1 Digital and information systems context in Murang'a

Murang'a County already has several foundations on which a digital public infrastructure for agroecology can be built. County planning and monitoring systems provide a basis for performance tracking, while ICT systems and e-procurement processes provide an institutional starting point for digital service delivery and accountability. These existing systems create an opportunity to integrate agroecology data within the county's normal planning, budgeting and reporting processes instead of creating a parallel project structure.

At the same time, current agricultural information systems remain fragmented. Farmer records, extension data, market information, soil and land data, procurement records and programme reporting are not yet fully connected. This limits the county's ability to answer practical questions on where support is most needed, which farmers are adopting regenerative practices, how agroecological products are moving through value chains, and whether public procurement is supporting local production and nutrition goals. This fragmentation also affects livestock systems,

where farmer records, animal production data, feed systems, disease information, manure use, and livestock marketing data are not yet well integrated into county planning and monitoring systems. Strengthening digital systems should therefore include livestock-related data as part of the county's wider agroecology information architecture.

Digital strengthening is therefore required in three areas. First, Murang'a needs a minimum set of interoperable registries covering farmers, groups, service providers, value chains and public programmes. Second, the county needs practical planning and monitoring tools that support ward and sub-county level decision-making, including soil mapping and land health profiling for data-driven agronomic recommendations. Third, the county needs traceability and quality assurance systems that improve market confidence, certification readiness and public procurement integrity.

3.2. Organizing Logic for Digital Public Infrastructure

This pillar provides the digital and evidence backbone for the county's agroecology strategy. Its role is to make the wider transformation measurable, accountable and investable by linking planning, service delivery, traceability, procurement and monitoring into one county framework. In practical terms, digital public infrastructure helps ensure that decisions are based on verified data rather than fragmented reports, and that implementation can be tracked across departments, programmes and wards. The pillar supports all four countywide transformation domains. It strengthens food-land-water-climate systems by improving spatial planning, soil and land health profiling and restoration tracking. It supports inclusive economic transformation by enabling market traceability, supplier verification and producer visibility.

It strengthens human wellbeing by improving food safety and the monitoring of nutrition-linked public

programmes. It also supports governance and partnerships by enabling consistent scorecards, evidence packs and reporting routines for county departments and partners. The organizing logic of this pillar is therefore simple: build only those digital systems that improve county planning, implementation quality, transparency and performance management.

The county's digital systems will be designed to support inclusion by improving access to information, registration, traceability, and service delivery for women, youth, persons with disabilities, and marginalized producers. Digital tools and data systems shall also support sex-, age-, and disability-disaggregated reporting where feasible, while protecting privacy, consent, and data rights under the FAIR, CARE, and TRUST principles.

3.3 Goal, outcomes and design principles

Goal

To establish a county digital public infrastructure that supports evidence-based planning, monitoring, traceability, procurement integrity and results reporting for agroecology transformation across farms, landscapes, markets and public programmes.

Expected outcomes.

1. Functioning county digital system with interoperable registries for farmers, producer groups, service providers and value chains
2. Improved targeting of agroecology interventions through better data on farms, landscapes and priority areas
3. Strengthened traceability and quality assurance systems for agroecology value chains and institutional procurement
4. Enhanced monitoring of agroecology indicators across farms, landscapes and programmes
5. Reliable evidence to inform county budgeting, planning and partner coordination
6. Strategy performance tracking through pillar scorecards and periodic evidence reviews.

Design principles.

1. County ownership: Digital systems will be embedded within county institutions and integrated into existing planning, monitoring and service delivery processes rather than operating as external stand-alone tools.
2. Minimum viable infrastructure: The county

will prioritize essential digital systems that address immediate planning, reporting and coordination needs, with gradual expansion over time.

3. Interoperability: Data systems and registries will be designed to connect across departments, programmes and functions to enable coordinated service delivery and reporting.
4. Trust and safeguards: Data management will protect privacy and rights, while promoting transparency, accountability and responsible use of information.
5. Service relevance: Digital investments will directly support extension services, market access, planning and procurement systems, ensuring that technology improves real service delivery outcomes.
6. Inclusivity: Digital systems will be designed to serve women, youth, persons with disabilities and marginalized communities through accessible and user-friendly service pathways.

3.4 County DPI architecture for agroecology delivery

Murang'a's digital public infrastructure for agroecology will be built around seven functional components.

1. County registries and identification systems. The county will develop and maintain a minimum set of interoperable registries for farmers, cooperatives and producer groups, service providers, enterprises, public programme suppliers and priority value chains. These registries will support service targeting, supplier verification, extension planning and inclusion monitoring.
2. Registries and planning systems will also capture key livestock-related data, including livestock producers, dairy and livestock cooperatives, service providers, fodder systems, and livestock-linked enterprises, so that county planning reflects the full agroecology system rather than crop production alone.
3. Spatial planning and agronomy intelligence. The county will strengthen spatial planning tools for agroecology, including soil mapping, ward and sub-county land health profiles, degradation hotspot mapping and climate-risk targeting. This will improve data-driven agronomic recommendations and help prioritize restoration and production support according to local conditions.
4. Monitoring, scorecards and evidence packs. The county will integrate agroecology indica-

tors into its monitoring and evaluation systems through pillar scorecards, programme dashboards and periodic evidence packs. These tools will support annual planning, budget reviews, accountability and adaptive management. Each strategic pillar should have a simple performance scorecard for 2026–2035 tracking.

5. Traceability, quality assurance and procurement systems. Digital systems will support product traceability, supplier verification, quality assurance, inspection records and procurement integrity. This will be particularly important for value chains supplying institutional programmes such as school feeding and other public food procurement arrangements.
6. Finance and reporting support systems. The county will progressively link digital data systems to finance and reporting functions, including climate finance tracking, partner co-financing, results verification and performance reporting. Over time, this will strengthen investor confidence and support resource mobilization.
7. Physical reliability of energy and connectivity infrastructure. The County will therefore promote decentralized renewable energy options, including solar-powered service points, FarmHub digital nodes, traceability devices, and rural connectivity equipment, especially in areas where grid reliability constrains routine service delivery and real-time data use.

3.5. Data Governance Framework

Murang'a will apply a practical data governance framework to ensure that agroecology data is reliable, usable and trusted. The purpose of this framework is to protect rights, improve data quality and provide clear rules for how information is collected, stored, shared and used across county systems. The framework should remain simple and implementation-focused, avoiding unnecessary technical complexity.

In practical terms, the county's data governance framework will ensure that information is collected for clear purposes, such as planning, service delivery, traceability, monitoring and reporting. Access to data will be guided by defined roles and responsibilities. Sensitive information will be protected through privacy and consent safeguards, while public-interest datasets such as aggregated performance indicators can be used for reporting and learning.

The county will also establish minimum standards

for data quality, interoperability and accountability. These will include shared definitions for key indicators, validation routines, clear custodianship of registries and records, and audit trails for traceability and procurement systems. The overall aim is to create digital trust without allowing data governance concerns to overshadow the strategic purpose of the chapter.

3.6. Standards, Traceability and Market Integrity

Murang'a will progressively use digital systems to strengthen standards compliance, product traceability, and market integrity across agroecology value chains. Traceability systems will link producers, cooperatives, markets, and public programmes through verifiable information on product origin, production practices, handling, quality assurance, and delivery. By improving transparency and reliability across supply chains, these systems will build confidence among buyers, regulators, and consumers while supporting safe and accountable food systems.

The County will establish practical traceability requirements for priority value chains, particularly those linked to institutional procurement, certification pathways, and value addition enterprises. These will include supplier identification, source documentation, delivery records, quality checks, and simple verification workflows managed by farmer groups, cooperatives, aggregators, and relevant county institutions. Digital traceability will also support certification and quality assurance by enabling farmer groups to maintain records required for participatory guarantee systems (PGS), local market assurance schemes, and other compliance pathways, thereby strengthening Murang'a's reputation for safe and sustainably produced agroecological products.

These systems will also support Traditional, Complementary and Integrative Medicine (TCIM) value chains, particularly medicinal plants cultivated through agroecological production systems. Digital registries and traceability tools will document production sites, cultivation practices, processing activities, and supply chains from farm to market, while also supporting practitioner and enterprise recognition. Data governance will follow the FAIR, CARE, and TRUST principles to protect indigenous knowledge, ensure community consent, and prevent unauthorized commercialization of medicinal biodiversity, while enabling responsible development of TCIM markets.

Reliable clean energy is also important for standards compliance and traceability integrity. Cold storage, digital labeling, aggregation records, quality assurance workflows, and certification-related data systems are more likely to function consistently when powered through stable and affordable energy systems. Murang'a will therefore consider energy reliability as part of the enabling environment for traceable and trusted agroecological markets.

3.7 Strategic Objectives and Flagship Programmes

Strategic Objective 1: Establish interoperable county registries and planning systems

Murang'a will establish a minimum set of interoperable registries and planning tools that connect farmers, producer groups, service providers, enterprises and public programmes within one county system. These systems will improve extension planning, inclusion tracking, market targeting and service coordination across wards and sub-counties.

Illustrative flagship actions

- Develop a county farmer and producer group registry linked to ward and sub-county structures
- Establish service provider and enterprise registries covering extension actors, youth service providers and aggregators
- Introduce soil mapping and land health profiling at sub-county and ward levels
- Create digital planning layers for degradation hotspots, climate risk and restoration priorities
- Standardize a minimum data set for agroecology planning and reporting

Strategic Objective 2: Strengthen county monitoring, scorecards and evidence-based performance tracking

Murang'a will strengthen its monitoring and evaluation architecture so that agroecology progress is tracked consistently through scorecards, evidence packs and strategy-aligned indicators. This objective responds directly to stakeholder feedback that the pillar should support performance tracking more clearly and practically.

Illustrative flagship actions

- Develop pillar scorecards for 2026-2035

performance tracking.

- Integrate agroecology indicators into county monitoring and reporting systems.
- Produce quarterly and annual evidence packs to support planning and budget reviews.
- Establish routine verification processes for programme outputs and outcomes.
- Use digital dashboards to improve transparency and county-level accountability.

Strategic Objective 3: Build traceability and procurement integrity for priority agroecology value chains

Murang'a will strengthen traceability, quality assurance and procurement integrity for selected agroecology value chains, especially those linked to local markets, institutional buyers and school feeding. This objective will help ensure that the county's production, market and nutrition goals are connected through trusted systems.

Illustrative flagship actions

- Establish supplier verification workflows for agroecology value chains
- Pilot traceability systems for selected public procurement baskets
- Strengthen cooperative quality assurance and inspection records
- Link procurement records, delivery records and supplier compliance data
- Use traceability systems to support local sourcing, food safety and market confidence.

Strategic Objective 4: Improve digital support for extension, agronomy and service delivery.

Murang'a will use digital systems to improve the efficiency and reach of extension and service delivery. The focus will be on practical digital functions that support field advisory services, agronomic recommendations, monitoring and communication between county institutions, service providers and farmers.

Illustrative flagship actions

- Support digital extension tools for field data capture and farmer follow-up
- Link agronomy recommendations to soil mapping and local land health profiles
- Improve digital communication channels for extension and advisory services
- Use digital systems to strengthen

coordination between county officers, youth service providers and farmer groups

- Build capacity of extension and service actors to use digital tools effectively
- Integrate livestock producers, dairy groups, and livestock enterprises into county registries and planning tools.
- Include fodder, manure, and livestock health advisory functions in digital extension and monitoring systems

Strategic Objective 5: Establish a practical data governance and stewardship system for agroecology

Murang'a will establish a practical data governance and stewardship system that protects rights, supports transparency and ensures that digital investments remain useful, trusted and sustainable over time. This objective will ensure that data systems are managed responsibly and aligned to county priorities.

Illustrative flagship actions

- Define data custodianship roles across departments and institutions
- Develop simple consent, privacy and data-sharing protocols
- Establish shared indicator definitions and validation rules
- Introduce audit trails for supplier, traceability and procurement records

- Strengthen institutional capacity for data management, use and oversight.

Strategic Objective 6: Integrate reliable and clean energy systems to support agroecology digital infrastructure, traceability, and market integrity

To ensure that Murang'a's agroecology digital public infrastructure including registries, traceability systems, certification processes, and market platforms is supported by reliable, affordable, and clean energy systems that enable continuous operation, data integrity, and service delivery across rural and value chain nodes.

Illustrative flagship Interventions :

- Deploy solar-powered energy systems for FarmHubs, aggregation centres, and digital traceability nodes
- Integrate energy planning into DPI architecture design and rollout
- Support energy access for devices used in data collection, traceability, and extension services
- Promote youth-led enterprises for installation and maintenance of energy systems supporting DPI
- Align energy solutions with connectivity infrastructure for rural digital service delivery

3.8 Results Framework

Table 2: Result frameworks for Digital public infrastructure.

Strategic Objective	Key Results	Lead Institutions	Financing and Implementation Route	Verification Focus
SO1: Establish interoperable county registries and planning systems	Improved targeting of agroecology interventions; stronger ward and sub-county planning; better coordination of extension and markets	Department of ICT; Department of Agriculture; Department of Planning; Ward and Sub-County Administration	County budgets through CIDP, ADPs and MTEF; technical assistance from partners and research institutions	Operational farmer and producer registries; ward and sub-county planning profiles; soil mapping and land health data

Strategic Objective	Key Results	Lead Institutions	Financing and Implementation Route	Verification Focus
SO2: Strengthen county monitoring, scorecards and evidence-based performance tracking	Reliable monitoring and reporting systems; improved transparency and accountability through dashboards and scorecards	Department of Planning; Department of ICT; relevant sector departments	County M&E systems; departmental budgets; partner support for dashboards and reporting systems	Pillar scorecards; quarterly and annual evidence packs; operational dashboards; verified M&E reports
SO3: Build traceability and procurement integrity for priority agroecology value chains	Improved supplier verification and traceability; stronger food safety compliance; increased trust among buyers and institutions	Department of Agriculture; Department of Trade and Cooperatives; County Procurement Office; Departments of Education and Health	County procurement and quality assurance budgets; cooperative and private sector traceability systems; certification partnerships	Traceability records; supplier compliance documentation; procurement and delivery verification records; quality assurance reports
SO4: Improve digital support for extension, agronomy and service delivery	Strengthened digital advisory services; improved agronomic recommendations; more efficient service coordination	Department of Agriculture; Department of ICT; Extension Services; Youth Service Delivery Networks	County extension and ICT budgets; partnerships with research institutions, service providers and development partners	Field data capture systems; advisory service records; service delivery coverage reports; platform utilization rates
SO5: Establish a practical data governance and stewardship system	Increased trust in agroecology data; improved data quality and accessibility; stronger long-term digital stewardship	Department of ICT; Department of Planning; Department of Agriculture; County Legal and Oversight Institutions	County ICT and governance budgets; policy development and institutional training; partner support on data standards	Data-sharing protocols; data quality rules; audit trails; access control and data protection measures
SO6: Integrate reliable and clean energy systems to support agroecology digital infrastructure, traceability and market integrity	Improved reliability of digital systems, traceability nodes and certification workflows; reduced service interruptions and data gaps	Department of ICT; Department of Agriculture; Department of Trade and Cooperatives; relevant energy/ environment institutions	County ICT and development budgets; climate and green energy finance; blended finance and private sector investment	Percentage of digital nodes with reliable clean energy access; system uptime rates; number of renewable-powered traceability and data systems operational

3.9. Sequencing and minimum viable deliverables (first 24 months)

In the first 6 months, Murang'a will confirm institutional responsibilities for the digital pillar, define the minimum data set and scorecard structure, and begin designing interoperable registries and spatial planning layers. This stage will also include agreement on priority traceability use cases, especially where digital systems support planning, procurement and extension efficiency. Between 6 and 12 months, the county will launch basic registries in priority wards and sub-counties, begin soil mapping and land health profiling, and introduce the first pillar scorecards and evidence packs. It will also pilot simple digital workflows for extension data capture and supplier verification. Between 12 and 24 months, Murang'a will expand registries and traceability systems to additional value chains and geographies, strengthen procurement-linked data systems, institutionalize evidence-based reporting and refine digital governance arrangements based on practical learning. The emphasis throughout this period will remain on minimum viable systems that improve county delivery and accountability rather than overly complex technical platforms.

Chapter

04



Chapter 4:

Youth Innovation and Service Delivery

4.1 Introduction and purpose

Murang'a County recognizes that successful agroecology transformation requires a strong ecosystem of service delivery, innovation and enterprise development. This pillar focuses on strengthening the human capital, service platforms and innovation systems needed to provide practical support to farmers, cooperatives and enterprises. It places youth at the centre of agroecology delivery while ensuring that women, persons with disabilities and other marginalized groups are fully included in programmes and opportunities.

Agroecology requires a broad range of services including technical advisory support, soil and crop diagnostics, digital monitoring, quality assurance, aggregation, value addition and market linkages. The county therefore approaches service delivery as an integrated system that connects training, innovation, entrepreneurship and field-level implementation. Through this approach, Murang'a aims to strengthen extension systems, improve last-mile service delivery, create green jobs and expand access to agroecology services while supporting sustainable livelihoods and inclusive economic development.

4.2 County context and rationale

Murang'a's agroecology transition faces a major delivery challenge. The demand for technical support, coordination and value-chain services is growing, yet county extension systems and local service ecosystems remain constrained by limited staffing, fragmented support programmes and insufficient resources. At the same time, many young people remain underemployed or disengaged from agriculture because the sector is still widely perceived as low-return, labour-intensive and lacking attractive professional pathways.

These challenges also create a major opportunity. Murang'a already has a youth policy platform, training institutions, producer organizations and growing interest in agribusiness and

innovation. The county also has increasing need for agroecology-related services such as extension support, restoration services, soil health management, bio-input production, digital data collection, traceability support, aggregation, processing and climate services.

These service opportunities should also include livestock-related pathways such as animal health support, fodder production enterprises, manure-based bio-input businesses, dairy and poultry value addition, livestock data collection, and cold-chain or aggregation services. This expands youth engagement beyond land ownership and creates practical entry points into livestock-linked agroecology enterprises.

The rationale for this pillar is therefore twofold. First, it addresses the county's need for practical service delivery capacity across farms, landscapes, markets and public programmes. Second, it provides an economic pathway for youth and other excluded groups to participate meaningfully in a growing agroecology economy through paid work, enterprise development and innovation. This makes the pillar both a workforce strategy and a service delivery strategy.

4.3 The Organizing Logic for Youth Innovation and Service Delivery

This pillar contributes most directly to inclusive economic transformation by building a workforce and enterprise base that supports agroecology implementation, value addition and green jobs. It also supports food, land, water and climate outcomes by enabling youth-led restoration services, advisory support and landscape management functions. In addition, it contributes to human capital and social well-being by creating employment opportunities, strengthening service access for farmers and building more inclusive participation in county development processes.

Within Murang'a's agroecology strategy, the role of this pillar is to convert innovation and human potential into structured services that reach communities. It links county training systems,

youth development platforms, cooperatives, research institutions and private sector actors to generate practical services such as extension support, agro-processing, digital monitoring, traceability assistance, climate-smart advisory services and enterprise incubation. In this way, the pillar serves as the county's bridge between strategy design and last-mile implementation.

Its organizing logic is therefore not simply youth empowerment. It is the creation of an inclusive ecosystem of innovation and service delivery that strengthens local ownership of agroecology, improves responsiveness to community needs and ensures that the transition generates employment, skills and enterprise opportunities. Youth inclusion under this chapter will be pursued in a way that is gender-responsive and socially inclusive, recognizing that young women, young men, and youth from marginalized groups face different barriers and opportunities. Youth service delivery, enterprise incubation, and innovation pathways will therefore be designed to expand access beyond land ownership and support diverse roles across extension, digital systems, logistics, aggregation, and value addition.

4.4 Goal, Outcomes, and Design Principles

Goal

To develop an inclusive ecosystem of agroecology service providers and innovators that supports regenerative farming systems, strengthens value chains and creates employment and enterprise opportunities across Murang'a County.

Expected Outcomes

- Strengthened county service delivery ecosystem supporting agroecology implementation
- Increased number of trained and active service providers supporting farmers and local enterprises
- Greater youth participation in agroecology-related employment and entrepreneurship
- Improved inclusion of women, persons with disabilities and marginalized groups in service delivery systems
- Stronger innovation partnerships among government, research institutions, training centres and private sector actors
- Clearer pathways linking training, enterprise development and market participation
- Expanded field-level support for extension services, digital monitoring, value addition

and regenerative landscape management.

Design Principles

- Inclusion: Programmes will intentionally include women, youth, persons with disabilities and marginalized communities.
- Service relevance: Training and enterprise support will respond directly to county agroecology priorities and farmer needs.
- County ownership: Service delivery systems will be embedded within county institutions and local governance structures.
- Enterprise orientation: The pillar will promote viable livelihoods through market-linked business opportunities.
- Innovation partnerships: Universities, TVET institutions, cooperatives, private sector actors and innovators will collaborate to develop practical agroecology solutions.
- Progression pathways: Clear pathways will allow youth and service providers to move from training to service delivery, enterprise development and long-term employment.

4.5 Strategic Objectives and Flagship Programmes

Strategic Objective 1: Develop an inclusive ecosystem of agroecology service providers
Murang'a will establish an inclusive county service delivery ecosystem that connects farmers with practical agroecology support services. This ecosystem will include youth service providers, cooperatives, community organizations, private enterprises and county extension actors working together to strengthen last-mile implementation.

Illustrative flagship programmes

- Youth-led extension and advisory service models linked to county priorities
- Community-based service platforms for extension, soil testing, digital monitoring and landscape restoration
- Cooperative-based service hubs that support aggregation, quality assurance and business services
- Service delivery pathways that intentionally include women, persons with disabilities and marginalized groups
- Training and certification of agroecology service providers for field support roles

Strategic Objective 2: Strengthen innovation and enterprise development for agroecology.

Murang'a will promote innovation systems that support the development of agroecology technologies, business models and service enterprises that improve productivity, resilience and value addition. These systems will connect farmers, youth innovators, researchers and private sector actors to co-develop practical solutions.

Illustrative flagship programmes

- Innovation platforms for bio-input production, renewable energy use and digital agriculture services
- Enterprise incubation programmes for youth-led agroecology businesses
- Partnerships with universities, TVET institutions and innovation hubs for research and commercialization
- Competitive innovation challenges for agroecology products and services
- Support for circular bioeconomy enterprises that convert waste into productive value
- Youth-led livestock service enterprises in fodder, feed, manure processing, dairy hygiene, aggregation, and livestock marketing
- Innovation partnerships for livestock-related bio-inputs, waste-to-value solutions, and safe animal-source food value chains

Strategic Objective 3: Build inclusive service platforms that support regenerative agriculture at community level

Murang'a will develop service platforms that make agroecology support more accessible at ward and sub-county level. These platforms will help farmers access technical services, enterprise support, market coordination and digital tools in ways that are practical, locally grounded and inclusive.

Illustrative flagship programmes

- Ward-level service coordination platforms linked to county extension and cooperative structures
- Community-based delivery arrangements for restoration, extension and value-chain support
- Farmer-service interfaces for digital monitoring, traceability and local advisory systems
- Women- and youth-responsive service models tailored to local production systems

- Partnerships with civil society and local community organizations to expand outreach

Strategic Objective 4: Strengthen market and finance pathways for agroecology enterprises

Murang'a will support agroecology service providers and enterprises to access finance, working capital, procurement opportunities and market pathways that make service delivery and enterprise development economically viable.

Illustrative flagship programmes

- Linkages between youth enterprises and cooperative hubs
- Credit, guarantee and working-capital pathways for youth-led service enterprises
- Procurement-linked enterprise opportunities in school feeding and other institutional markets
- Business development support for agro-processing, logistics, digital services and climate services
- Contracting and market-linkage arrangements for verified service providers and small enterprises.

Strategic Objective 5: Institutionalize training, skills progression and workforce development for agroecology delivery.

Murang'a will build a structured human capital pipeline for agroecology delivery by linking training, practical field experience, enterprise incubation and employment pathways. This will ensure that service delivery capacity grows steadily over the life of the strategy.

Illustrative flagship programmes

- Structured training pathways through TVETs, practical field placements and county programmes
- Service catalogues and competencies for agroecology delivery roles
- Skills progression pathways from trainee to service provider to enterprise operator
- Mentorship and apprenticeship arrangements with cooperatives, enterprises and county programmes
- Monitoring systems that track jobs, skills development and service performance over time

Strategic Objective: Expand youth-led green energy service delivery within agroecology systems

Strategic Objective: Expand youth-led green energy service delivery within agroecology systems

To develop and deploy youth-led enterprises and service models that provide renewable energy solutions across agroecology value chains, strengthening production, aggregation, digital systems, and market access while creating sustainable employment and enterprise opportunities for young people.

Illustrative flagship programmes

- Build youth skills in clean energy for agroecology
- Support youth-led green energy enterprises
- Deploy renewable energy in key agroecology service points
- Link energy services to digital systems and traceability
- Strengthen market linkages for youth energy businesses
- Promote inclusion, mentorship, and access to finance

4.6 Results framework

Table 3: Result framework for youth innovation and services delivery

Strategic Objective	Key Results	Lead Institutions	Financing and Implementation Route	Verification Focus
Develop an inclusive ecosystem of agroecology service providers	Expanded pool of trained and certified service providers delivering agroecology advisory, technical and enterprise services; improved last-mile delivery capacity for farmers and community groups	Department of Youth Affairs; Department of Agriculture; Department of ICT; County Administration	County youth empowerment and extension budgets; partnerships with cooperatives, civil society and service providers; training and certification programmes	Operational service provider registry; training and certification records; service delivery logs; participation and inclusion indicators
Strengthen innovation and enterprise development for agroecology	Increased number of agroecology innovations developed, tested and commercialized; growth of youth-led agroecology enterprises and service businesses	Department of Youth Affairs / TVET; Department of Trade and Cooperatives; Department of Agriculture; Department of ICT	County innovation and enterprise development funds; incubation and accelerator programmes; blended finance and partner investment support	Innovation pipeline tracking; enterprise registry; partnership agreements; pilot results and commercialization records
Build inclusive service platforms at community level	Improved farmer access to extension, digital advisory services and community-based agroecology support platforms; stronger coordination between farmers, cooperatives and service providers	Department of Agriculture; County Administration; Cooperatives; Community Organizations	County programme budgets; ward-level implementation mechanisms; cooperative systems; partnerships with civil society and local organizations	Number of operational service platforms; service utilization records; ward and sub-county participation data; farmer satisfaction and outreach indicators

Strategic Objective	Key Results	Lead Institutions	Financing and Implementation Route	Verification Focus
Strengthen market and finance pathways for agroecology enterprises	Increased access to finance, procurement opportunities and markets for youth-led agroecology enterprises; stronger value chain participation and enterprise sustainability	Department of Trade and Cooperatives; County Treasury and Planning; Department of Education; Private Sector Partners	Enterprise finance facilities; credit guarantees; procurement-linked working capital; business development and investment readiness support	Enterprise revenue and growth records; financing uptake; contract and procurement participation; enterprise sustainability indicators
Institutionalize training, skills progression and workforce development	Stronger agroecology workforce with clear pathways from training to employment and enterprise development; increased job creation in agroecology value chains	Department of Youth Affairs; TVET Institutions; Department of Agriculture; Department of ICT	County youth and workforce development budgets; partnerships with training institutions; mentorship and apprenticeship programmes; enterprise incubation support	Training completion and certification records; workforce progression tracking; jobs created; enterprise and employment placement records
Expand youth-led green energy service delivery within agroecology systems	Increased number of youth-led enterprises and service models providing renewable energy solutions across agroecology value chains; improved energy access for production, aggregation, digital systems, and market services; stronger youth employment and enterprise opportunities in green energy	Department of Youth Affairs; Department of Agriculture; Department of ICT; Department of Trade and Cooperatives; TVET Institutions; Private Sector Partners	County youth and enterprise development budgets; climate and green energy finance; blended finance and youth enterprise support; partnerships with training institutions, cooperatives, and private sector actors	Number of youth trained in clean energy for agroecology; number of youth-led green energy enterprises supported; renewable energy systems deployed in agroecology service points; youth enterprise contracts and service records

4.7 Sequencing and minimum viable deliverables (first 24 months)

During the first 6 months, Murang'a will confirm institutional arrangements for this pillar, define the service roles and competencies needed for agroecology delivery, and establish the basis for a county service provider registry. At the same time, the county will map existing youth development, training and enterprise pathways that can support agroecology implementation.

Between 6 and 12 months, the county will begin deploying the first cohorts of agroecology service providers in priority wards, launch initial innovation and enterprise support platforms, and align service delivery functions to county priorities such as extension support, restoration and digital monitoring. Early service platforms should be tested in areas where farmer demand, cooperative organization and public programmes provide immediate opportunities.

Between 12 and 24 months, Murang'a will expand the service ecosystem by linking trained providers to enterprise, finance and market opportunities, including value chains and institutional procurement pathways. It will also strengthen monitoring of service delivery performance, enterprise growth, inclusion outcomes and jobs created, allowing the county to refine and scale what works. The overall emphasis will remain strategic: building a county-owned, inclusive and market-relevant ecosystem of innovation and service delivery rather than a short-term youth project.

Chapter

05



Chapter 5

Inclusive Financing For Agroecology

5.0 Introduction and financing logic

Murang'a County recognizes that agroecology transformation cannot be achieved through isolated projects alone. It requires a coordinated financing system that mobilizes resources from county budgets, climate finance instruments, development partners, cooperatives and private markets to support farm-level transitions, value chain development, service delivery systems and public programmes such as school feeding and nutrition-sensitive procurement. This chapter therefore outlines the county's inclusive and blended finance architecture, designed to translate the strategy from policy commitment into investable and scalable implementation.

The financing framework positions finance as a county-led system that integrates planning and budgeting processes, climate finance, inclusive financial services and partner investments within a coherent structure. It aims to fund critical public goods, reduce risks for private and cooperative investment, and support farmers and small enterprises in adopting regenerative practices. The approach also strengthens long-term financing continuity by introducing practical grassroots finance products, clarifying risk allocation and assurance mechanisms, and linking certification and traceability systems more clearly to market access and financing opportunities.

5.1 Murang'a financing context and constraints

Murang'a's agroecology transition faces a typical missing-middle problem. Smallholders, farmer groups and cooperatives need affordable working capital, transition support and risk reduction to adopt regenerative practices. At the same time, processors, aggregators, service providers and youth enterprises require patient growth capital and risk-sharing mechanisms to invest in traceable, food-safe and climate-resilient value chains.

The financing gap also affects livestock systems,

where farmers and cooperatives require investment for fodder development, animal housing, water systems, manure management, cold-chain infrastructure, livestock aggregation, and value addition. Without appropriate finance and risk-sharing, livestock cannot contribute fully to the county's agroecology transition.

The county also needs predictable finance for public goods such as soil and watershed restoration, extension services, monitoring systems, certification support, and procurement-linked systems that create stable demand for local agroecological production. Financing remains fragmented across sectors and institutions, which reduces effectiveness and makes it harder to package agroecology as a coherent investment opportunity.

Additional constraints include limited de-risking for lending to smallholders, insufficient aggregation and traceability systems to reduce market risk, high climate volatility affecting production and cash flow, and weak coordination between public, cooperative and private financing channels. These constraints make it difficult for agroecology to scale unless finance is deliberately organized around county priorities, verified outcomes and inclusive delivery mechanisms.

At the same time, Murang'a has important financing opportunities. Growing interest in regenerative agriculture, climate-smart production, green enterprise, school feeding, traceable value chains and nature-based solutions provides a basis for mobilizing public, private and climate finance. Stronger county coordination, clearer investable packages and better verification systems can help unlock these opportunities.

5.2 Organizing logic for inclusive and blended finance

This pillar mobilizes and coordinates capital for transition and scale through a blended architecture that reaches farmers, cooperatives, small and medium enterprises, youth-led enterprises and county delivery systems. It supports inclusive

economic transformation by linking investment to production, aggregation, value addition, market access and enterprise development. It also supports food, land, water and climate outcomes by financing restoration, resilient production and low-emission infrastructure, while strengthening governance through clearer budgeting, verification and accountability.

The organizing logic of this pillar is to align all major financing channels around a single county pathway. County public finance provides the foundation; climate finance supports restoration and resilience; inclusive financial services help farmers and enterprises adopt and grow; and blended finance partnerships de-risk investment and crowd in larger flows of capital. Financing is therefore treated as an integrated county system rather than a stand-alone programme.

The county's agroecology finance architecture shall include inclusive financing pathways that improve access for women, youth, persons with disabilities, cooperatives, and underserved enterprises that are often excluded from mainstream finance. Financing instruments, eligibility criteria, and de-risking mechanisms will be designed to reduce structural barriers and support equitable participation in production, enterprise, and market opportunities.

5.3 Financing principles

1. County ownership and budget integration: Agroecology financing will be anchored in county planning and budgeting systems rather than short-term external projects.
2. Inclusivity: Financing mechanisms will intentionally reach smallholders, cooperatives, women, youth enterprises and underserved communities.
3. Locally led adaptation: Climate-related investments will prioritize local priorities, ward-level risk realities and community participation.
4. Blended and catalytic finance: Public and partner resources will be used strategically to reduce risk and attract larger public and private investment.
5. Verification and accountability: Financing decisions and incentives will be linked to credible data, traceability and measurable results.
6. Demand-linked finance: Finance will support systems that respond to verified market demand, including school feeding and institutional procurement.
7. Sustainability and continuity: Financing mechanisms will strengthen long-term county capa-

bility and reduce dependence on temporary grant cycles.

5.4 Murang'a Agroecology Finance Architecture

Murang'a will implement a three-tier agroecology finance architecture that aligns county budgeting, climate finance, and blended finance partnerships within one coordinated system. The architecture is intended to finance both public goods and productive investments, ensuring that resources reach farms, communities, enterprises, and public programmes in a coherent and scalable way. In doing so, it shifts agroecology financing from fragmented projects to an integrated investment approach linked to county planning, delivery, and long-term sustainability.

The architecture is structured around three tiers:

- **Tier 1:** County public finance and budget integration – mainstream agroecology investments within the CIDP, ADPs, MTEF, and departmental programme-based budgets, with priority given to multi-sector packages linking agriculture, water, environment, health, education, trade, and youth development.
- **Tier 2:** Climate finance mobilization and county climate finance mechanisms – ring-fence, track, and mobilize climate-relevant investments, including adaptation expenditures, restoration investments, matching grants, and performance-based financing for resilience, regenerative production, and low-emission infrastructure.
- **Tier 3:** Blended finance partnerships and risk-sharing – establish or adapt instruments for community capital pooling, guarantees, procurement-linked working capital, and catalytic investments in regenerative value chains, agro-processing, digital systems, and climate-smart infrastructure.

Within this architecture, livestock-related investments will be treated as eligible agroecology priorities where they strengthen integrated crop-livestock systems, climate resilience, local value addition, nutrition, and circular bioeconomy outcomes. Clean energy investments will also be treated as a priority asset class because they improve productivity, reduce losses, stabilize supply, and strengthen the bankability of agroecological enterprises and institutional supply chains. Renewable-powered irrigation, cold storage, processing equipment, and FarmHub energy systems will therefore be integrated into

the county's agroecology financing approach as practical investments that support both economic viability and low-emission development.

5.5 Embedding systems-oriented investment for long-term capital

Murang'a will adopt a systems-oriented investment approach that treats agroecology as a long-term transition rather than a collection of isolated projects. Financing will be used strategically to support linked outcomes across production, markets, nutrition, governance, and local enterprise development, with county budgets and partner grants serving as catalytic capital to attract private investment and strengthen local financial intermediation. Investments will be packaged around integrated priorities such as production transition, market development, procurement demand, certification, digital systems, and enabling infrastructure, guided by principles of patient capital, inclusion, demand-linked financing, safeguards, verification, and public value alongside commercial sustainability.

5.6 Grassroots finance product suite

Murang'a will promote a practical grassroots finance product suite to help farmers, producer groups, youth enterprises, and cooperatives adopt and scale agroecology by combining transition support, working capital, enterprise finance, and asset-based products matched to the needs of production, aggregation, service delivery, and market participation. The suite will be designed to reach groups often excluded from formal finance, especially smallholders, women, youth, and community-based enterprises. It will also support energy transition as a core enabler of agroecology through instruments such as PAYG or lease-to-own solar irrigation for smallholders and producer groups, asset finance for renewable-powered cold rooms, dryers, and processing equipment, working capital linked to renewable-powered aggregation and school meals supply systems, cooperative and SACCO-backed loans for FarmHub energy systems, and results-based incentives or de-risking windows for climate-positive energy adoption in agroecological value chains.

Table 4: Grassroots finance products

Finance Product	Primary Target Group	Likely Delivery Partners	De-risking / Support Mechanisms	Verification Focus
Transition grants / incentives	Smallholders adopting regenerative practices	County programmes, partners, cooperatives	Targeted grant support linked to adoption milestones	Adoption records, group verification, field checks
Working capital loans	Farmer groups, aggregators, school feeding suppliers	SACCOs, banks, cooperatives	Guarantees, contract-backed repayment, procurement linkage	Loan performance, supply records, delivery logs
Group-based lending	Producer groups and women's groups	SACCOs, microfinance institutions, savings groups	Social collateral, group guarantees, coaching	Repayment records, participation and inclusion data
Enterprise finance	Youth-led SMEs, service providers, processors	Banks, impact investors, enterprise funds	Guarantees, first-loss support, incubation and mentorship	Revenue records, contracts, jobs created
Asset finance	Bio-input units, irrigation, processing, storage, logistics	Banks, leasing partners, cooperatives	Blended finance, partial guarantees, technical assistance	Asset use, business performance, service uptake

Finance Product	Primary Target Group	Likely Delivery Partners	De-risking / Support Mechanisms	Verification Focus
PAYG / lease-to-own clean energy finance	Smallholders, producer groups, youth enterprises	SACCOs, solar providers, cooperatives, leasing partners	Flexible repayment, supplier partnerships, partial guarantees	Number of systems financed, repayment performance, system use
Renewable energy asset finance	Aggregators, processors, FarmHubs, cooperatives	Banks, leasing firms, impact investors	Blended finance, technical assistance, first-loss support	Utilization of cold rooms, dryers, processing units, business performance
Energy-Linked working capital	Aggregators, school meals suppliers, cooperatives	SACCOs, banks, procurement-Linked financiers	Contract-backed lending, guarantees, receivables financing	Supply reliability, delivery records, working capital turnover
Cooperative / SACCO-backed loans for FarmHub energy systems	Cooperatives, FarmHubs, Producer Organizations	SACCOs, cooperatives, county-supported facilities	Group guarantees, concessional terms, technical support	Operational energy systems, service uptime, member usage
Results-based incentives for climate-positive energy adoption	Farmers, enterprises, cooperatives adopting clean energy	County programmes, climate finance facilities, partners	Performance-linked payments, de-risking windows, matching grants	Verified energy adoption, reduced losses, lower energy costs, emissions-related proxies

5.7 Risk allocation, assurance and investor confidence

To improve investor confidence and protect public value, Murang'a will strengthen the risk-sharing and assurance dimensions of the finance architecture. The county will clarify how climate, market, credit, operational and data risks are allocated across actors and instruments, and how these risks are managed through safeguards, guarantees, insurance, verification and grievance mechanisms.

A practical risk allocation and assurance framework will include: a financing risk matrix for major investment types; use of guarantees, first-loss capital, insurance and results-based finance where appropriate; pipeline governance and review arrangements; independent verification and grievance pathways; and regular reporting

products for financiers, including quarterly evidence packs and audited outcome summaries. This framework will also support transparent oversight of procurement-linked finance, climate finance flows, cooperative delivery arrangements and partner contributions. Clear assurance arrangements are essential if Murang'a is to present itself as an investment-ready county rather than a grant-dependent programme. The County will also explore how clean energy integration can reduce risk in agroecology value chains by lowering operational cost volatility, improving reliability of storage and delivery systems, and strengthening confidence in structured supply arrangements. Renewable-powered infrastructure may be prioritized in value chains where school meals, institutional buyers, or quality-sensitive markets require dependable aggregation, storage, and delivery performance

5.8 Strategic objectives and delivery requirements

Table 5: Result framework for Blended Financing

Strategic Objective	Key Results	Lead Institutions	Financing and Implementation Route	Verification Focus
SO1: Mainstream agroecology into county public finance	Agroecology priorities integrated into the CIDP, ADPs, MTEF, and departmental budgets	County Treasury and Planning; Department of Agriculture; Department of Environment and Climate Change; Department of Health; Department of Trade and Cooperatives	County public finance systems, programme-based budgeting, annual planning cycles, and interdepartmental budget coordination	Budget lines and programme allocations; approved CIDP and ADP priorities; expenditure tracking reports
SO2: Mobilize climate finance for restoration and resilience	Increased climate financing for watershed restoration, soil regeneration, climate-resilient farming systems, and low-emission agriculture	Department of Environment and Climate Change; County Treasury and Planning; Department of Agriculture	County climate finance mechanisms, climate budget tagging, national and international climate funds, and partner support	Climate-tagged investments; restoration programme records; adaptation and resilience outputs
SO3: Expand inclusive finance for farmers and enterprises	Greater access to working capital, transition finance, and enterprise investment for farmers, cooperatives, and agroecology businesses	Department of Trade and Cooperatives; County Treasury; Department of Agriculture; financial institutions	SACCOs, banks, cooperative finance systems, credit guarantees, blended finance facilities, and procurement-linked financing	Loan uptake and repayment records; enterprise performance; inclusion indicators for youth, women, and farmer groups
SO4: Link certification and traceability to finance and markets	Certified and traceable agroecology value chains gain stronger market access, food safety assurance, and eligibility for finance and procurement opportunities	Department of Agriculture; Department of Trade and Cooperatives; Department of ICT; certification and quality assurance partners	Certification support programmes, PGS, quality assurance mechanisms, and digital traceability platforms	PGS and certification records; traceability data; supplier compliance and procurement records

Strategic Objective	Key Results	Lead Institutions	Financing and Implementation Route	Verification Focus
SO5: Strengthen sustainability and continuity of agroecology finance	Long-term county ownership of agroecology financing with more diversified funding and stronger coordination across public, cooperative, and partner finance	County Treasury and Planning; Department of Agriculture; county sector departments; cooperatives	County budgeting cycles, climate finance, cooperative investment mechanisms, impact investment, and strategic partnerships	Budget continuity; total investment mobilized; coordination records; programme sustainability indicators
SO6: Integrate energy transition financing into the agroecology investment architecture	Increased financing for renewable-powered irrigation, cold storage, processing, and FarmHub energy systems that improve productivity, reduce losses, and strengthen agroecology enterprises	County Treasury and Planning; Department of Agriculture; Department of Environment and Climate Change; Department of Trade and Cooperatives; financial institutions; cooperatives; private sector partners	Climate and green finance, blended finance, SACCO and cooperative lending, asset finance, PAYG and lease-to-own models	Number and value of clean energy investments financed; uptake of renewable-powered systems; reduction in energy-related losses and costs

5.9 Implementation notes for Murang'a (first 24 months)

During the first six months, Murang'a County will focus on establishing the institutional and governance foundations for the financing pillar. This will include confirming finance governance arrangements, aligning agroecology priorities with the County Integrated Development Plan (CIDP), Annual Development Plans (ADPs) and departmental budgets, and defining minimum climate finance and expenditure-tracking categories. The county will also begin identifying the first set of investable programme packages that can support agroecology implementation. These actions will help establish clear institutional ownership and create a baseline county finance architecture to guide implementation.

Between six and twelve months, the county will move into the operational phase by launching priority budget integration measures and designing the grassroots finance product suite to support farmers, cooperatives and agroecology

enterprises. Murang'a will also identify key finance delivery partners, including SACCOs, financial institutions and development partners, and begin preparing investment pipeline concepts for priority areas such as landscape restoration, value chain development, school feeding supply systems and youth enterprise support. By the end of this phase, the county will have operational financing priorities and initial delivery partnerships in place. During the twelve to twenty-four-month period, Murang'a will pilot blended finance instruments and procurement-linked financing products that connect producers and enterprises to reliable markets. The county will also strengthen risk allocation and assurance arrangements, mobilize additional climate and partner financing, and produce early finance evidence packs and investment reporting products. These actions will help establish a functioning investment pipeline while improving investor confidence, strengthening county learning and enabling the scaling of successful financing mechanisms.

Chapter

06



Chapter 6

Governance and Institutional Coordination

6.0 Introduction and purpose

Murang'a County will implement agroecology through a coordinated governance system that links political leadership, county departments, ward and sub-county structures, farmer organizations, cooperatives, private sector actors, civil society and development partners. Governance is therefore treated as the institutional backbone of the strategy, ensuring that agroecology is implemented as a county-owned transformation agenda rather than as a collection of stand-alone projects.

The strategy defines how decisions will be made, how responsibilities will be shared among institutions, how implementation will be coordinated across sectors, and how accountability, safeguards and standards will be maintained throughout delivery. It also incorporates stakeholder feedback by strengthening Multi-Stakeholder engagement, clarifying delivery clusters, improving governance arrangements for certification and oversight, and establishing clearer mechanisms to support sustainability and continuity of implementation under county leadership.

6.1 Organizing Logic for Governance and institutional coordination

This pillar provides the governance and institutional framework through which the other pillars are coordinated, monitored and sustained. It ensures that regenerative agriculture, digital systems, innovation and service delivery, finance, learning and nutrition are not implemented in isolation, but through one countywide coordination system. Its organizing logic is based on whole-of-government alignment, Multi-Stakeholder participation, clear accountability and evidence-based performance management. Governance in this context is not limited to meetings and oversight; it includes the routines, platforms, rules, reporting systems and partnerships that keep the strategy functioning over time.

Governance structures established under this Strategy shall promote inclusive representation and meaningful participation of women, youth, persons with disabilities, and marginalized groups in decision-making, implementation oversight, and stakeholder coordination. County departments, cooperatives, and Multi-Stakeholder platforms will be expected to demonstrate how GESI is reflected in leadership, participation, and accountability arrangements.

6.2 County delivery operating system and coordination

Murang'a's agroecology delivery operating system will connect county-level planning and decision-making to ward-level implementation, feedback, and adaptive learning. Political and executive leadership will provide strategic direction and policy alignment, while sector departments will coordinate delivery through annual workplans, shared scorecards, and periodic evidence reviews. Sub-county and ward structures will provide the local line of sight for implementation, citizen participation, and problem solving, ensuring that delivery is grounded in local realities while remaining aligned to county priorities.

Overall political leadership will rest with the County Executive, while a designated coordinating office will convene implementation across agriculture, environment, health, trade, education, water, finance, ICT, youth, and other relevant county functions. Governance arrangements will ensure that livestock is fully integrated into agroecology planning, implementation, and oversight through the participation of the Department of Agriculture, livestock-focused cooperatives, veterinary and extension actors, and relevant private sector partners.

The operating system will be guided by five principles: county ownership, cross-sector coordination, evidence-based decision-making, inclusion and participation, and accountability for results and will also promote coordination on energy transition across relevant sectors so

that clean energy is integrated into agroecology delivery as a practical enabler of resilient production, market efficiency, digital reliability, and low-emission county development.

6.3 Lead-Convener-Contributor model (per programme/c luster)

To improve clarity and reduce fragmentation, Murang'a will apply a Lead-Convener-Contributor model across agroecology programmes and delivery clusters. Under this approach, each major programme area will identify one lead institution

with primary accountability, one convener responsible for coordination where appropriate, and a group of contributors responsible for implementation support, technical inputs, financing or oversight. The model will help the county assign responsibilities more clearly across complex areas such as landscape restoration, digital monitoring, school feeding, certification, value-chain development, youth enterprise and climate finance. It will also support annual planning, budgeting and reporting by ensuring that every programme area has a clear institutional home.

Table 6: Lead conveners and contributors Model

Programme / Cluster	Lead Institution	Convener / Coordination Function	Key Contributors
Regenerative Agroecology and Landscape Restoration	Agriculture	Environment and Climate Change	Water, cooperatives, farmer groups, research institutions, civil society
Digital Public Infrastructure and Data Systems	ICT / Planning	County coordination office	Agriculture, Trade, Procurement, Education, Health, service providers
Inclusivity, Innovation and Service Delivery	Youth / TVET / Agriculture	County coordination office	Cooperatives, private sector, research institutions, community organizations
Inclusive and Blended Finance	Treasury and Planning	County coordination office	Agriculture, Trade, cooperatives, Financial institutions, partners
Learning, Nutrition and System Adaptation	Health / Education / Agriculture	County coordination office	Community health systems, schools, cooperatives, civil society, research institutions

6.4 Standards oversight, verification, and grievance mechanisms

Murang'a will establish governance arrangements that safeguard quality, trust, and accountability across agroecology programmes. Oversight will cover standards implementation, certification pathways, traceability systems, data governance, procurement compliance, and public safeguards. County departments responsible for agriculture, trade, health, ICT, procurement, and legal affairs will collaborate to ensure that agroecology-related standards and procedures are applied consistently, transparently, and fairly across value chains and programmes. Standards and verification systems should also cover livestock-related value chains, including milk, eggs, meat, manure-based products, and other livestock-linked outputs, in order to strengthen food safety, traceability, and market confidence

To strengthen accountability, the County will implement a practical grievance and redress mechanism through which farmers, enterprises, community groups, and other stakeholders can raise concerns related to programme participation, procurement processes, standards compliance, data use, benefit-sharing, or exclusion. The mechanism will be transparent, accessible, and time-bound, with clear procedures for review, escalation, and reporting to ensure that issues are addressed promptly and

fairly.

These governance arrangements will also cover Traditional, Complementary and Integrative Medicine (TCIM) value chains within the agroecology delivery system. Coordination between the Departments of Health, Agriculture, Trade, and Environment will support quality assurance for medicinal plant cultivation, processing, and marketing, while protecting indigenous knowledge and biodiversity resources. Governance frameworks will promote ethical practice, ensure community consent and benefit-sharing with knowledge holders, and address issues related to intellectual property, product safety, and market integrity within TCIM-related enterprises.

6.4.1 Multi-Stakeholder Engagement and Partnership Framework

Murang'a County will implement agroecology through a structured multi-stakeholder engagement framework that builds on existing county governance mechanisms and policy commitments. This approach recognizes that agroecology transformation requires coordinated participation by government institutions, farmer organizations, cooperatives, civil society, research institutions, private sector actors, and development partners, and treats stakeholder engagement as a continuous governance process supporting policy dialogue, joint planning, resource mobilization, accountability, and knowledge sharing throughout implementation.

The framework draws on institutional arrangements established under the Murang'a County Agroecology Act, the Murang'a County Agroecology Policy, and related county planning and coordination platforms, thereby providing a legal and institutional basis for inclusive participation. In this way, the Strategy strengthens and operationalizes existing mechanisms rather than creating parallel structures, ensuring that agroecology implementation remains embedded within county governance systems.

Stakeholder engagement will operate through four complementary mechanisms:

- County Agroecology Multi-Stakeholder Platform serving as the main coordination forum bringing together county departments, farmer organizations, cooperatives, civil society, private sector actors, research institutions and development partners.
- Delivery clusters aligned to the strategic pillars of the strategy to coordinate programme implementation and technical collaboration across sectors.
- Ward-level engagement mechanisms working through existing ward and sub-county administrative structures to ensure community participation in planning and monitoring agroecology programmes.
- An annual Agroecology Partnership Forum to review progress, share lessons and strengthen coordination among partners.

Inclusive participation will remain a core principle of this framework, ensuring meaningful involvement of women, youth, persons with disabilities and marginalized communities in programme design, decision-making and implementation.

6.4.2 Certification oversight and quality assurance governance.

Murang'a will institutionalize a governance framework for certification, quality assurance and market integrity. As agroecology value chains expand, certification and traceability systems will require clear oversight to maintain credibility, support market access and protect consumers. The county will therefore support a multi-pathway certification approach that may include Participatory Guarantee Systems, third-party certification and traceability-based compliance arrangements. A Certification Advisory and Oversight Board may be established within the agroecology governance architecture to provide strategic guidance, strengthen transparency and support coordination across producer organizations, cooperatives, county departments, certification bodies, civil society and market actors. Its functions may include :

- providing guidance on certification standards and pathways appropriate to local, institutional and higher-value markets;
- supporting transparency and accountability in community-based certification systems such as PGS;
- strengthening coordination between cooperatives, certification partners, traceability systems and procurement arrangements; and
- reviewing progress in certification uptake and quality assurance across priority value chains.

6.4.3 Sustainability and Continuity governance

Long-term sustainability of the strategy depends on embedding agroecology within the county's core governance systems rather than managing it as a temporary programme. Murang'a will therefore establish a Sustainability and Continuity

Framework that anchors agroecology within county institutions, strengthens local implementation capacity and supports financing continuity across planning cycles.

Priority governance measures will include:

- integrating agroecology priorities into the County Integrated Development Plan, Annual Development Plans, Medium-Term Expenditure Framework and departmental programme-based budgets;
- maintaining cross-sector coordination between agriculture, environment, health, trade, education, youth and finance functions to sustain policy coherence;
- strengthening institutional memory through standard reporting routines, annual evidence reviews, learning products and continuity mechanisms that survive staff or political transitions; and
- using stakeholder consultations and periodic reviews to manage implementation risks, strengthen ownership and maintain strategic direction beyond short-term grant funding.

6.5 Partnerships and South-South exchange interfaces for learning

Murang'a will use partnerships not only to mobilize resources, but also to strengthen learning, innovation, and replication across the agroecology transition. Partnerships with research institutions, civil society organizations, producer organizations, financial institutions, private enterprises, and technical partners will help improve implementation quality, strengthen technical problem-solving, support innovation, and expand the uptake of successful approaches across value chains and delivery systems. In this way, partnerships will function not simply as support arrangements, but as practical instruments for improving delivery, building institutional capability, and widening impact.

The county will also position itself as a learning and exchange county by participating in peer learning, inter-county exchanges, and wider agroecology knowledge networks. These partnerships will help Murang'a document lessons, refine delivery models, strengthen evidence-based adaptation, and attract investment by demonstrating credible implementation pathways and results. South-South exchange and peer learning will be used selectively and strategically where they add practical value to county implementation, including technology adaptation, market learning, institutional coordination, and governance

innovation.

6.6 Institutionalization of FarmHubs as County Delivery Platforms

Murang'a will institutionalize FarmHubs as practical county delivery platforms where multiple agroecology services and functions can be organized in one place. These hubs will support farmer training, aggregation, quality assurance, traceability, enterprise incubation, extension support, and linkages to finance and markets, thereby improving coordination and reducing fragmentation in service delivery. FarmHubs are intended to make agroecology more visible, accessible, and operational at local level by bringing together services that farmers, cooperatives, youth enterprises, and community groups need to participate effectively in the transition.

Rather than operating as stand-alone projects, FarmHubs will function as coordinated service nodes embedded, where appropriate, within existing county, cooperative, educational, or community structures. Their design and placement will respond to local production systems, market opportunities, and service gaps, while ensuring governance clarity, service relevance, and financial viability. Depending on local needs, FarmHubs may also host innovation functions, youth enterprise support, demonstration and learning activities, procurement-support services, and linkages to institutional markets such as school feeding and other public programmes.

To ensure consistency and long-term value, the county will define minimum governance, service, accountability, and infrastructure standards for FarmHubs as part of the wider county delivery and performance framework. These standards will guide issues such as management arrangements, service packages, reporting requirements, partnership models, and quality assurance. Where feasible, FarmHubs will also integrate renewable energy solutions to support digital onboarding, aggregation, cooling, drying, charging of field devices, small-scale processing, and other core functions, ensuring that they serve not only as agroecology platforms, but also as reliable and future-ready local delivery infrastructure.

6.7 Strategic objectives and governance deliverables

Table 7: Strategic objectives and governance deliverables

Strategic Objective	Key Results	Lead Institutions	Implementation Route	Verification Focus
SO1: Strengthen whole-of-county coordination for agroecology delivery	Clear coordination structures and improved alignment across departments and programmes	County Executive / Coordination Office; sector departments	County planning, annual workplans, interdepartmental coordination, scorecards, and review forums	Coordination structures, workplans, meeting records, scorecards
SO2: Institutionalize Multi-Stakeholder governance and inclusive participation	More structured participation of farmer organizations, private sector, civil society, research institutions, and communities	Coordination Office; Agriculture; County Administration; MSP structures	County Agroecology Multi-Stakeholder Platform, delivery clusters, ward consultations, and annual partnership forums	Participation records, cluster reports, ward consultation records, inclusion indicators
SO3: Strengthen oversight for standards, certification, verification, and grievance systems	Better quality assurance, clearer oversight of certification pathways, and stronger redress systems	Agriculture; Trade and Cooperatives; ICT; Legal / Oversight Functions	Certification governance arrangements, grievance systems, traceability oversight, and periodic reviews	Certification records, QA reports, grievance logs, compliance review
SO4: Institutionalize sustainability and continuity governance	Stronger county ownership, policy integration, and reduced dependence on project cycles	Treasury and Planning; Agriculture; sector departments	Integration into CIDP, ADPs, MTEF, departmental budgets, and annual evidence reviews	Budget continuity, policy integration, continuity plans, evidence packs
SO5: Use FarmHubs and county platforms as coordinated delivery nodes	More integrated local service delivery and stronger links between training, aggregation, traceability, and enterprise support	Agriculture; Cooperatives; Education / TVET; County Administration	County-approved FarmHub standards, cooperative and ward-level implementation arrangements, and partner support	FarmHub records, service logs, enterprise linkage data, local delivery performance

Strategic Objective	Key Results	Lead Institutions	Implementation Route	Verification Focus
SO6: Integrate energy transition into agroecology governance, coordination, and delivery systems	Clear county guidance for decentralized clean energy integration and stronger cross-department coordination on energy-linked investments	Coordination Office; Agriculture; Environment and Climate Change; ICT; Trade and Cooperatives; Treasury and Planning; relevant infrastructure or energy functions	County guidance and standards for FarmHubs, aggregation centres, and institutional supply chains; cross-department planning and budgeting; inclusion of energy in delivery cluster plans and annual workplans	Energy integration guidelines; FarmHubs and aggregation points with renewable energy systems; inclusion of energy in cluster plans and workplans

6.8 Sequencing and minimum viable deliverables

Implementation will be phased over the first 24 months so that Murang'a County builds a strong governance foundation before moving to more mature systems. In the first three months, the County will confirm the coordination structure and secretariat, adopt the delivery cluster model, and establish basic reporting routines and templates so that a clear governance architecture is in place.

Between three and six months, attention will shift to strengthening accountability through delivery compacts across departments and partners, scorecards, grievance mechanisms, and minimum oversight arrangements. From six to twelve months, the County will operationalize the Multi-Stakeholder Platform and delivery clusters, roll out standards oversight and basic verification systems, and integrate governance reporting into annual planning and budgeting processes.

By twelve to twenty-four months, the focus will be on consolidation and institutional maturity through annual evidence reviews, sustainability governance routines, stronger partner forums, improved FarmHub governance standards, and auditable governance products that build investor and partner confidence. Over time, these steps will create a more mature, county-owned governance system capable of sustaining implementation, learning, accountability, and scale.

Chapter

07



Chapter 7

Nutrition, Food-As-Medicine and Institutional Markets

7.0 Introduction and purpose

Murang'a County positions nutrition as a central outcome of agroecology transformation and a visible pathway for delivering public value. Agroecology is expected not only to improve production and environmental sustainability but also to strengthen diet quality, food safety, child wellbeing and community health. Nutrition therefore serves both as a human development outcome and as a practical driver of agroecology adoption, value chain development and local market growth.

Murang'a's nutrition pathway will be anchored in institutional markets particularly the School Meals Programme and community-level FoodFarmacies that connect health services, nutrition needs and verified local agroecological supply. Through this approach, the county links diversified local food baskets, improved diet diversity, stronger food safety and youth-inclusive value chains within a coordinated food system.

7.1 The Organizing logic for Nutrition, Food -as- Medicine

This pillar primarily advances Human Capital and Social Well-being by anchoring nutrition, food safety, learning and adaptive management as core outcomes of the county's agroecology transition. It treats healthy, diverse and safe food as a public good that improves wellbeing, supports learning outcomes and reduces nutrition vulnerability across households and institutions.

The pillar also strengthens Food-Land-Water-Climate systems by using nutrition demand to shape what is produced, how it is produced and how supply systems are organized. At the same time, it contributes to Inclusive Economic Transformation by creating stable demand for local agroecological produce through school meals, FoodFarmacies and local procurement systems. Nutrition is therefore not treated as a stand-alone health intervention; it is a cross-sector delivery function linking agriculture, health, education, trade, finance and digital systems.

Its organizing logic is simple: use nutrition as both an outcome and a market driver. By linking verified local supply to school feeding, FoodFarmacies and public nutrition programmes, Murang'a can improve health and nutrition outcomes while also creating reliable demand for agroecological products, stronger local value chains and more resilient livelihoods.

7.2 Nutrition context and rationale

Murang'a's agroecology transition is explicitly designed to improve human wellbeing, not only farm production. The county therefore adopts a Food-As-Medicine approach in which healthy, diverse and safe foods are treated as a foundational public health asset that reduces nutrition vulnerabilities and supports life-course wellbeing. This ensures that the strategy delivers measurable outcomes in diet quality, child nutrition, household resilience and reduced exposure to food safety risks, while also creating reliable demand for local agroecological produce. Nutrition is a strategic entry point because it produces visible benefits that citizens, schools, communities and county institutions can immediately recognize.

Diversified local food baskets, improved meal quality, safer food handling and better access to nutritious foods can strengthen public confidence in agroecology while reinforcing county commitments to school feeding, health promotion and inclusive local economic development. Livestock and animal-source foods should be more explicitly recognized within this chapter because safe milk, eggs, meat, and other livestock products can make an important contribution to diet diversity, child nutrition, maternal nutrition, and community health when produced and handled within safe and sustainable agroecology systems.

Murang'a also recognizes that nutrition outcomes will not improve through awareness alone. Households and institutions need practical access pathways to safe, affordable and culturally appropriate nutritious foods. That is why the county will integrate community health, school feeding,

FoodFarmacies, cooperative supply systems, local sourcing pathways and digital traceability within one coordinated nutrition delivery model.

7.3 Nutrition innovation and institutional markets

Murang'a's regenerative school meals approach integrates nutrition, local sourcing, food systems transformation, and energy reliability within one delivery model. By linking agroecological production to institutional procurement, the county will promote diversified local food baskets, reduce post-harvest losses, strengthen youth-inclusive value chains, and improve diet diversity, food safety, and child wellbeing.

The School Meals Programme will therefore function not only as a social programme, but also as a strategic procurement platform and institutional market that drives demand for safe and nutritious foods through clearly defined local sourcing pathways, supplier qualification requirements, traceability systems, quality assurance routines, and procurement arrangements that support cooperative aggregation and reliable supply.

Beyond schools, nutrition innovation will also be integrated into public health and community programmes through collaboration between health and agriculture teams to promote dietary diversity, safe food handling, and stronger food safety monitoring. Because nutritious foods are often perishable and depend on reliable handling, cooling, processing, and timely distribution, renewable-powered storage, aggregation, and related energy systems will be treated as important enablers of nutrition-sensitive food systems, helping to improve the availability and affordability of diverse foods for schools, communities, and institutional buyers while reducing waste and stabilizing supply.

7.4 Linking agroecology to nutrition, Food-As-Medicine and community health

Murang'a will integrate FoodFarmacies as the operational bridge between agroecology, nutrition, the Food-As-Medicine approach, and community health services, functioning as community-level service and referral points that connect agroecological production and verified local supply chains with household nutrition needs, institutional feeding programmes, and routine health services.

This linkage will include livestock-derived

foods and livestock-linked nutrition pathways, especially where dairy, poultry, and small livestock systems improve access to nutrient-dense foods, strengthen household incomes, and reinforce the connection between agroecological production and preventive health. Within the county delivery model, FoodFarmacies will operate as a nutrition and health module within ward-level delivery platforms, working alongside FarmHubs and cooperative aggregation nodes on the supply side and linking to schools, institutional procurement systems, and community health services on the demand side. Through this integrated structure, they will support nutrition screening, dietary counselling, follow-up services, and stronger links between nutrition outcomes, planning, procurement, and programme learning.

Traditional, Complementary and Integrative Medicine (TCIM) will also form part of this framework by linking medicinal plants cultivated through agroecological systems with preventive health practices, community health promotion, herbal nutrition products, and culturally recognized nutrition knowledge, supported by collaboration with community health promoters, traditional practitioners, and research institutions to document safe practices, promote evidence-based use, and integrate TCIM into public health education and community nutrition programmes.

7.4.1 Minimum functional package for FoodFarmacies

Each FoodFarmacy will deliver a minimum functional package that can be implemented through existing community health structures and partner platforms:

- Nutrition screening, counselling and referral using simple risk screening and counselling protocols for pregnant and lactating women, children, elderly persons and people with diet-related risks.
- Curated nutritious food bundles and guidance based on locally appropriate, culturally acceptable and affordable food baskets, with preparation guidance and seasonal substitution options.
- Linkage to verified agroecological supply through FarmHubs, cooperatives and aggregation nodes, ensuring food safety and traceability where feasible.
- Behaviour change and food literacy support, including cooking demonstrations, household diet diversity messaging and school-linked nutrition learning.

- Vulnerability targeting and inclusion pathways that support access for vulnerable households through transparent criteria and links to county support programmes where applicable.
- Feedback loops to production and procurement by generating demand signals on food types, volumes, affordability and seasonality to inform extension advice, school food baskets and investment priorities.

7.4.2 Delivery Interfaces

FoodFarmacies will function through defined interfaces that strengthen county systems rather than fragment them:

- Community health services: Community Health Promoters and facility teams identify nutrition risks, provide counselling and follow-up, and use FoodFarmacies as the practical pathway for referral and access.
- FarmHubs and cooperatives: These ensure supply readiness, aggregation, quality management and fulfilment of FoodFarmacy baskets using local producer groups.
- School feeding and institutional procurement: FoodFarmacy food baskets inform nutrition-aligned procurement specifications and reinforce the demand anchor for local agroecological produce.
- Digital systems and traceability: Digital systems support supplier verification, basket fulfilment tracking, referrals where appropriate and reporting of nutrition and food safety indicators.
- Finance and affordability: Social support mechanisms and blended finance options can reduce start-up costs, expand local supply capacity and improve affordability for vulnerable households.

7.4.3 Institutional arrangements

FoodFarmacies will be coordinated through a joint arrangement led by the Department of Health and Nutrition, with defined contributions from Education and School Feeding, Agriculture and Livestock, Trade and Cooperatives, Youth and ICT, and Finance and Planning. At ward level, delivery will be convened through ward platforms and implemented through Community Health Promoters and designated service points, with supply fulfilment coordinated through FarmHubs and cooperatives.

Performance will be reviewed through sub-county progress clinics and quarterly steering reviews using evidence packs. This ensures that FoodFarmacies remain embedded within county

systems and contribute to measurable public outcomes.

7.5 Food-As-Medicine and nutrition outcomes

Murang'a's agroecology transition is designed to improve nutrition and public health through a practical Food-As-Medicine pathway. This pathway links health needs to food supply and measurable outcomes through a simple sequence:

1. Identify nutrition risks and priority groups through Community Health Promoters and facility teams.
2. Prescribe and support access to nutritious food bundles through FoodFarmacies.
3. Fulfil those bundles through verified local supply chains supported by FarmHubs and cooperatives.
4. Reinforce nutrition through school meals that provide a consistent baseline of quality and dietary diversity.
5. Follow up and learn through routine reviews, counselling and data-based adjustments to baskets, menus, targeting and supply planning.

FoodFarmacies will serve as the community health interface that makes nutrition counselling actionable by connecting households to safe, diverse, culturally appropriate foods through verified local supply and by generating structured demand for agroecological produce, thereby reducing the gap between nutrition advice and actual household access. Within this Food-As-Medicine pathway, school meals will function as the county's child nutrition engine by improving diet quality, strengthening learning readiness, and creating reliable demand for the same food groups promoted through community nutrition systems. Together, FoodFarmacies and school meals will provide both a wellbeing pathway and a market pathway, ensuring that nutrition outcomes and local agroecological demand reinforce each other. Murang'a will therefore treat nutrition outcomes as core strategy performance indicators, tracking referrals and follow-ups, food basket fulfilment, affordability constraints, school meal quality, local sourcing shares, selected food safety checks, and practical nutrition proxies such as diet diversity and school meal compliance. The county will also explore how clean-energy-enabled storage, processing, and distribution can strengthen Food-Is-Medicine pathways by improving access to safe, diverse, and nutrition-sensitive foods, especially where community-level supply systems, FoodFarmacy models, and local producer

networks depend on timely delivery and reduced spoilage of high-value nutritious produce.

7.6 School meals as guaranteed offtake for agroecological value chains

Murang'a will operationalize the School Meals Programme as a core county delivery instrument serving three functions at once: a guaranteed offtake mechanism for verified agroecological produce, a direct nutrition driver for children, and a stabilizer for local agroecological markets. By treating school meals as an institutional demand anchor, the county will use predictable public spending to de-risk transition for farmers, cooperatives, and youth enterprises while improving diet quality and enabling investment in aggregation, storage, quality assurance, and logistics.

To strengthen this role, the county will also support renewable-powered aggregation, storage, and distribution systems as part of the enabling infrastructure for local procurement, helping to reduce post-harvest losses, improve quality assurance, stabilize supply, and expand access to more diverse and nutritious food baskets sourced from local agroecological producers.

7.6.1 School meals as a guaranteed offtake mechanism

The county will design school meals procurement to provide predictable, structured demand that helps suppliers plan, invest and comply. Key design features will include :

- Structured contracts or seasonal supply agreements with cooperatives, producer groups and aggregators.
- Local sourcing pathways through cooperative nodes and FarmHubs to retain value within Murang'a.
- Transparent procurement and payment workflows that reduce delays and strengthen supplier confidence.
- Food safety and quality assurance requirements covering handling, storage and delivery.
- Traceability and supplier verification systems that protect market integrity and reduce fraud.

Where feasible and aligned with nutrition, food safety, and procurement standards, school feeding and other public food programmes may also create demand for selected livestock-derived

foods such as milk, eggs, or other safe and locally appropriate animal-source products. This should be pursued within a diversified procurement strategy and not as a single dominant market pathway.

7.6.2 School meals as a nutrition driver

School meals will be designed explicitly as a nutrition intervention rather than only a feeding activity. The programme will :

- Use menus aligned to agreed nutrition benchmarks, including diet diversity and micronutrient considerations.
- Promote local, seasonal and safe foods.
- Support food literacy and school gardens or learning farms where feasible.
- Reinforce household nutrition messages and improve learning readiness.
- Coordinate with community health and FoodFarmacy pathways to support vulnerable households.

7.6.3 School meals as a market stabilizer

School meals will stabilize agroecological markets by creating a reliable baseline of demand that reduces volatility and improves planning. Specifically, the programme will :

- Smooth seasonal demand and reduce market shocks.
- Support business cases for aggregation, storage, transport coordination and processing.
- Improve access to finance by using structured contracts and delivery records as part of risk reduction.
- Reward verified production, food safety and standards compliance, thereby strengthening consumer and buyer confidence in Murang'a produce.

7.6.4 Institutional arrangements and Minimum evidence

The School Meals Programme will be jointly governed by Education and School Feeding as programme lead, with Health and Nutrition, Trade and Cooperatives, Agriculture, Finance and Planning, and Youth and ICT contributing according to their mandates. Ward and sub-county structures will support implementation and troubleshooting.

Minimum evidence will include supplier registry and verification status, menu compliance,

local sourcing volumes, delivery and payment timeliness, food safety checks and inclusion metrics such as participation of women, youth groups and smallholders. These data will feed quarterly reviews and annual learning cycles.

7.7. Strengthening Clinical Nutrition Outcomes within Agroecology Systems

Murang'a will strengthen the link between agroecology, nutrition, and measurable health outcomes by integrating clinical nutrition indicators into the Food-As-Medicine delivery pathway. While agroecology improves food availability, diversity, and safety, the Strategy recognizes the need to track how these gains translate into measurable outcomes for children, women, and other vulnerable groups. The county will therefore prioritize a focused set of clinical indicators aligned with national health systems and reporting platforms, including reductions in child stunting, wasting, underweight prevalence, and anemia among children and women of reproductive age, as well as improvements in maternal and child nutrition indicators where feasible.

These will be tracked through existing systems such as DHIS2, community health records, and school health programmes, alongside intermediate indicators including dietary diversity, FoodFarmacy basket fulfilment, school meal compliance, and access to diverse and safe foods through local procurement. Data will be reviewed through county learning and performance processes so that findings can be used to improve targeting, refine procurement baskets, strengthen value chains, and adjust programme delivery, ensuring that agroecology contributes not only to better food systems but also to measurable and sustained improvements in public health outcomes.

7.8 Adaptive management, annual evidence reviews and scaling rules

Murang'a will institutionalize adaptive management through quarterly evidence packs and an annual evidence review. Evidence packs will combine delivery outputs, nutrition-related outcome proxies, food safety and market integrity indicators, finance execution and emerging risks. These will be reviewed through county and sub-county forums to identify bottlenecks, validate data quality and agree on corrective actions.

Annual evidence reviews will be used to refine nutrition packages, school food baskets, procurement rules, referral pathways, financing instruments and supplier support systems. This ensures that county resources flow toward what is working and that weak or inequitable interventions are redesigned quickly.

Scaling decisions will be guided by clear rules:

- Scale only what is verified and shown to improve outcomes.
- Redesign quickly where uptake is low, costs are too high or equity harms are detected.
- Apply equity guardrails so that women, youth and vulnerable households are not excluded.
- Expand procurement-linked supply only where quality, safety and reliability are verified.
- Apply climate and seasonal filters so that nutrition and sourcing packages remain feasible across agroecological zones.

7.9 Learning, adaptation and nutrition knowledge exchange

Murang'a will treat nutrition as a learning system as well as a delivery system. The county will use quarterly performance clinics, after-action reviews, market integrity audits, learning sites, school feeding reviews and community health feedback loops to strengthen implementation over time.

Priority learning questions will include:

- Which food baskets and local sourcing pathways deliver the strongest nutrition outcomes at reasonable cost?
- Which FoodFarmacy models best reach vulnerable households and improve diet quality?
- How do school meals influence local markets, supplier behaviour and farmer incentives?
- What data and verification systems provide enough integrity for nutrition programming without creating excessive reporting burdens?

Murang'a will also participate in peer learning and exchange with other counties and institutions on school feeding, Food-As-Medicine models, local procurement, nutrition-sensitive agriculture and traceability systems. Learning products will include practical playbooks, templates and implementation guides that can be updated as the system matures.

7.10 Strategic objectives and nutrition system deliverables

Strategic Objective 7.9.1: Operationalize nutrition innovation and school meals as a traceable local procurement platform

Murang'a will use school meals as a local procurement platform that links nutrition goals to verified agroecological supply, supplier development and local value chain strengthening.

Priority interventions

- Define school meal standards and menu-linked food baskets
- Implement local sourcing pathways through cooperatives and FarmHubs
- Introduce supplier qualification, delivery schedules and traceability requirements
- Pilot nutrition innovation packages including school gardens, indigenous foods and food safety education
- Publish supplier performance dashboards where feasible

Strategic Objective 7.9.2: Institutionalize FoodFarmacies as the community health interface for Food-As-Medicine

Murang'a will use FoodFarmacies to connect health screening, counselling and referrals to locally sourced nutritious food bundles and verified agroecological supply chains.

Priority interventions

- Establish FoodFarmacy protocols and training pathways
- Introduce curated nutritious food bundles and referral systems
- Link FoodFarmacies to CHPs, FarmHubs, cooperatives and community support systems
- Use FoodFarmacies to improve household access, food literacy and feedback to production and procurement systems
- Strengthen supplier verification and food safety assurance

Strategic Objective 7.9.3: Institutionalize adaptive learning and nutrition evidence review systems

Murang'a will use evidence, performance review and adaptation routines to improve nutrition programming, refine procurement systems and scale what works.

Priority interventions

- Produce quarterly nutrition-related evidence packs
- Conduct annual reviews of menus, baskets, supply systems and affordability
- Update procurement rules and delivery packages based on performance evidence
- Strengthen data quality and grievance-based improvement systems
- Publish annual learning summaries and implementation playbooks

Strategic Objective 7.9.4: Strengthen the agroecology-health nexus in public service delivery

Murang'a will embed food, nutrition and health linkages across school feeding, community health and local agroecological supply systems so that nutrition outcomes become a visible county development result.

Priority interventions

- Integrate nutrition and food safety messages into agriculture and health programming
- Strengthen links between community health, school feeding and verified local supply
- Use local procurement and nutrition pathways to support vulnerable households
- Promote food literacy, dietary diversity and safe food handling across public platforms
- Monitor how nutrition outcomes inform planning, budgeting and service adjustments

Strategic Objective 7.9.5: Traditional, Complementary and Integrative Medicine (TCIM)

Promote sustainable Traditional, Complementary and Integrative Medicine (TCIM) systems by supporting agroecological cultivation of medicinal plants, protecting indigenous knowledge, and developing safe, traceable value chains that contribute to community health, biodiversity conservation, and local economic development.

Illustrative Interventions

- Medicinal Plant Production: Promote agroecological cultivation of priority medicinal plants through farmer groups, agroforestry systems, and community nurseries.
- TCIM Value Chain Development: Support cooperatives and enterprises to process, market, and add value to herbal and nutraceutical products.
- Knowledge Protection and Research:

Document traditional medicinal knowledge and strengthen research partnerships to validate safe practices and protect intellectual property.

- Digital Traceability and Standards: Integrate TCIM value chains into digital traceability, practitioner registries, and quality assurance systems.
- Community Health Integration: Link medicinal plant production with FoodFarmacies and community health services to promote preventive health and nutrition education.

Strategic Objective: Integrate clean energy into nutrition-sensitive value chains and institutional food systems

To strengthen the reliability, quality, and inclusivity of nutrition-sensitive agroecology value chains by integrating renewable energy solutions into aggregation, storage, processing, and distribution systems that support school meals and other institutional procurement programmes.

Illustrative interventions

- Install renewable-powered storage and aggregation systems for school meals and institutional supply chains
- Strengthen cooperative-led local sourcing and distribution of nutritious foods
- Reduce post-harvest losses in perishable nutrition-sensitive value chains
- Improve availability of diverse perishable foods in institutional procurement

- Build partnerships for energy-enabled food handling, storage, and logistics

Strategic Objective: Improve clinical nutrition and preventive health outcomes through integrated agroecology and Food-As-Medicine systems

To contribute to measurable improvements in nutrition and preventive health outcomes by linking agroecological production, FoodFarmacies, school meals, and community health systems with clinical nutrition monitoring, referral, and follow-up services.

Illustrative Interventions

- Strengthen FoodFarmacies for nutrition referral and follow-up
- Align school meals with nutrition standards
- Promote dietary diversity through agroecological production
- Link community health promoters to agroecology platforms
- Track diet diversity, food basket fulfilment, and school meal compliance
- Use DHIS2 and existing health systems for monitoring
- Integrate TCIM into preventive health and nutrition programmes

7.10 Results Framework

Table 8: Nutrition Result framework

Strategic Objective	Accountable Institutions	Financing and Implementation Route	Minimum Verification Data
SO1: Operationalize nutrition innovation and school meals as a traceable local procurement platform	Department of Education and School Feeding (lead); Health and Nutrition; Agriculture; Trade and Cooperatives; ICT; County Treasury	School feeding budgets, county programme allocations, and partner support will strengthen local sourcing, supplier qualification, aggregation, traceability, and procurement-linked finance for cooperatives and suppliers	Procurement datasets; approved menus; nutrition compliance records; supplier registries; traceability logs; food safety reports; meal diversity indicators

Strategic Objective	Accountable Institutions	Financing and Implementation Route	Minimum Verification Data
SO2: Institutionalize FoodFarmacies as the community health interface for Food-As-Medicine and TCIM	Health and Nutrition (lead); Agriculture; Education; Trade and Cooperatives; Youth and ICT; ward platforms; community health structures	County nutrition and community health programmes will be linked to extension, medicinal plant systems, and local food initiatives, with support from cooperatives, TCIM practitioners, and community organizations	Referral and counselling records; food basket fulfilment data; supplier verification records; food safety checks; affordability and access indicators; follow-up reports
SO3: Institutionalize adaptive learning and nutrition evidence review systems, including TCIM knowledge integration	Agroecology Steering Committee; Planning and M&E; ICT and Digital Systems; County Treasury; Health and Agriculture Departments	Activities will be embedded in county monitoring, learning, and evaluation systems through evidence reviews, strategy learning forums, and routine programme budgets, with aligned partner support where needed	Quarterly evidence packs; programme scorecards; decision registers; data quality audits; grievance records; TCIM knowledge reviews; learning reports
SO4: Strengthen the agroecology-health nexus in public service delivery, including safe TCIM practices	Health and Nutrition; Education; Agriculture; Planning and M&E; Environment	Delivery will be embedded in health promotion, school feeding, agroecology, and medicinal plant programmes through interdepartmental coordination and partner collaboration	Diet diversity indicators; school meal quality reports; programme participation data; food safety inspection records; medicinal plant production records; improvement actions
SO5: Integrate clean energy into nutrition-sensitive value chains and institutional food systems	Agriculture; Education; Health; Trade and Cooperatives; Environment and Climate Change; County	Renewable-powered storage, aggregation, and distribution systems will be integrated into school meals and other institutional supply chains through county investment, cooperative models, procurement systems, and partner support	Number of school-meal or institutional supply nodes supported by renewable-powered storage or aggregation; reduction in post-harvest losses in nutrition-sensitive value chains;

Strategic Objective	Accountable Institutions	Financing and Implementation Route	Minimum Verification Data
SO6: Improve clinical nutrition and preventive health outcomes through integrated agroecology systems	Health and Nutrition (lead); Agriculture; Education; Planning and M&E; ICT; County Administration; community health systems	Implementation through integration of FoodFarmacies, school meals, community health services, and agroecology value chains; supported by county health and nutrition budgets, school feeding programmes, and aligned partner support	Child stunting, wasting, and underweight prevalence (DHIS2 / surveys); anemia prevalence (children and women); maternal and child nutrition indicators; dietary diversity indicators (household and child); school meal nutrition compliance

7.11 Sequencing and minimum viable deliverables (first 24 months)

During the first 0-6 months, Murang'a County will establish the institutional and operational foundations for the nutrition pillar. This will include confirming coordination arrangements among key departments, defining school meal procurement standards and nutrition benchmarks, and developing FoodFarmacy protocols and training materials. Priority wards will also be identified based on supply readiness and existing school feeding and cooperative structures.

Between 6-12 months, the county will begin piloting implementation in selected wards. Local sourcing supply chains for school meals will be tested with cooperatives and verified suppliers, while initial FoodFarmacy demonstration sites will be launched with Community Health Promoters, FarmHubs and cooperative networks. Supplier verification, basic traceability and quality assurance systems will also be introduced, supported by the first quarterly learning and review processes.

From 12-18 months, Murang'a will expand implementation to additional wards based on lessons from the pilots. Procurement and supplier performance data will be linked to working capital and other support mechanisms to strengthen local value chains. The county will also conduct its first annual nutrition evidence review to refine food baskets, menus and supply arrangements.

During 18-24 months, the focus will shift to consolidation and scaling. Successful school meal sourcing models and FoodFarmacy interventions will be expanded, while annual nutrition learning forums and stronger data review systems will support continuous improvement. Effective delivery models will then be integrated more fully into the county's routine planning and budgeting processes.

08



Chapter 8

Market and Enterprise Development

8.0 Introduction and purpose

Murang'a County recognizes that agroecology can only become a sustainable and transformative development pathway when supported by strong, inclusive, and demand-driven market systems that reward quality, value addition, traceability, and sustainability. Market and Enterprise Development is therefore positioned in this Strategy as a central pillar of agroecology transformation, linking regenerative production to livelihoods, enterprise growth, employment creation, and broader local economic development. This chapter provides the framework for strengthening value chains, cooperative market organization, local value addition, institutional markets, standards, traceability, market intelligence, and private sector participation so that farmers, cooperatives, youth enterprises, women-led businesses, processors, and other actors can access reliable market opportunities. In doing so, it defines how agroecological products, services, and enterprises will move from production into functioning local, institutional, regional, and premium markets, while advancing the County's wider goal of inclusive economic transformation.

8.1 Organizing logic for Market and Enterprise Development

This chapter is guided by the understanding that agroecology markets do not emerge automatically from increased production, but must be intentionally be built through coordinated county action in production planning, aggregation, enterprise support, standards, procurement, logistics, digital systems, and risk management. Murang'a County therefore treats Market and Enterprise Development as a countywide system function that advances inclusive economic transformation while also supporting regenerative production, jobs and livelihoods, and stronger governance. The chapter promotes demand-driven and inclusive market growth through cooperatives, FarmHubs, enterprises, local value addition, trusted standards, traceability, and diverse market channels, ensuring that market

development is embedded in agroecology from the beginning rather than added at the end. Market and enterprise development interventions shall intentionally support women-led, youth-led, and socially excluded producers and enterprises through inclusive aggregation systems, procurement opportunities, market information, business development support, and fair access to standards and certification pathways. Public procurement and enterprise support measures will be used to expand participation in value addition, logistics, and market access for groups that are often underrepresented in formal markets.

8.2 County Market and Enterprise Context and Rationale

Murang'a County has strong agricultural potential, active farmer organizations, established cooperative traditions, and a growing commitment to food systems transformation, yet many farmers still face significant barriers to effective market participation, including fragmented landholdings, weak aggregation, inconsistent quality, high transaction costs, limited local value addition, and inadequate access to standards and reliable buyers.

These challenges are even greater for agroecological producers, who often need stronger coordination, certification support, consumer awareness, and clearer market incentives. The County's task, therefore, is not only to improve market access, but to build a stronger and more inclusive market system that supports aggregation, verification, branding, processing, financing, and better linkages between production and demand, while also creating enterprise opportunities beyond farming itself in areas such as bio-input production, storage, quality assurance, traceability, logistics, packaging, processing, and market facilitation. At the same time, Murang'a has important strengths to support this transition, including active cooperatives and SACCOs, a functioning Multi-Stakeholder platform, emerging digital systems, growing interest in local procurement and school

feeding, increasing partner support, and rising demand for safer and sustainably produced food.

8.3 Murang'a market systems architecture for agroecology

Murang'a County will organize agroecology market development through an integrated market systems architecture that links production planning, aggregation, enterprise development, standards, market access, and governance. The County will align production with real market opportunities using demand signals, seasonal intelligence, and climate information; strengthen aggregation through cooperatives, producer groups, and FarmHubs to improve quality, record keeping, and contract fulfilment; and diversify market channels across household, institutional, private commercial, and premium markets. At the same time, enterprise development and value addition will be promoted through businesses in logistics, processing, packaging, branding, digital services, bio-inputs, and traceability, while market confidence will be reinforced through standards, certification, food safety systems, supplier verification, PGS, Kilimo Hai pathways, and digital traceability. This architecture will be sustained through strong county coordination, Multi-Stakeholder engagement, routine evidence reviews, and adaptive learning so that agroecology markets remain inclusive, trusted, and responsive to emerging opportunities.

8.4 Enterprise development, value addition and private sector participation

Murang'a County will position enterprise development, value addition, and private sector participation as central drivers of agroecology by building a practical ecosystem of businesses, cooperatives, and service providers that make agroecology commercially viable, job-creating, and scalable. The County will support enterprises across input supply, aggregation and logistics, processing and packaging, digital and quality assurance services, extension and advisory support, branding, and market access, while prioritizing local value addition to retain more economic benefits within Murang'a. Cooperatives will be strengthened as key enterprise institutions for aggregation, contract negotiation, quality assurance, value addition, market information, and financial intermediation, with deliberate support for youth- and women-led enterprises through pathways in logistics, digital services, bio-inputs, traceability, agro-processing, and branded products. At the same time, Murang'a will

promote structured engagement with processors, traders, retailers, logistics providers, certifiers, digital firms, and other private sector actors, not by controlling markets, but by improving the enabling environment, reducing coordination barriers, supporting credible local supply systems, and creating opportunities for partnership, co-investment, and inclusive market growth.

8.5 Institutional Markets and Local Procurement Pathways

Murang'a County will treat institutional markets as strategic demand anchors within a broader agroecology market system. These markets can provide predictable demand, strengthen enterprise confidence, support aggregation and quality assurance, and expand opportunities for local sourcing. However, institutional procurement will not be treated as the only market route, but as one important pathway within a diversified market strategy.

Key institutional market pathways will include:

- School feeding, as a major entry point for linking nutrition outcomes with predictable local demand, using verified suppliers, appropriate contracting, reasonable payment timelines, quality assurance, traceability, and diversified local food baskets where feasible.
- Other public institutions, including hospitals, health and nutrition programmes, vocational institutions, community feeding systems, and county-supported facilities, to broaden demand and reduce overreliance on a single buyer.
- Procurement-linked enterprise support, by enabling cooperatives and aggregators to plan and invest, improving incentives for storage, logistics, and value addition, rewarding compliance with food safety and traceability standards, and generating performance records that improve market credibility and access to finance.

Murang'a will therefore align procurement reform, supplier development, and enterprise support so that institutional markets strengthen local agroecology enterprises while contributing to a more stable, inclusive, and diversified market system.

8.6 Standards, Traceability, Certification and Market Confidence

Murang'a County recognizes that agroecology markets can only grow where there is trust. Farmers and enterprises need systems that turn good practice into verifiable market value, while buyers need confidence in product origin, production methods, quality, and safety. The County will therefore treat standards, certification, and traceability as essential market infrastructure for strengthening buyer confidence, supporting differentiated products, and linking verified producers to institutional and private markets.

Priority actions will include :

- Strengthening accessible certification pathways, including PGS, Kilimo Hai, and related standards;
- Improving cooperative quality assurance, inspection, and supplier verification systems;
- Integrating digital traceability into cooperative, FarmHub, and procurement workflows;
- Linking certification and compliance to market access, branding, and enterprise incentives; and
- Protecting producer rights and data through the wider FAIR, CARE, and TRUST governance framework.

Over time, these systems will help position Murang'a as a source of safe, traceable, and sustainably produced agroecological products, while supporting stronger local branding and access to premium markets.

8.7 Strategic objectives and market system deliverables

Strategic Objective 1: Strengthen inclusive market linkages and diversified market channels for agroecological producers

Murang'a will develop stronger, more reliable market channels that connect agroecological producers to household, institutional, private, and differentiated markets. The county will prioritize practical linkage models that reduce market uncertainty, improve coordination, and expand the number of viable buyers.

Illustrative flagship programmes

- County-supported market linkage platforms for priority agroecology value chains
- Local market development initiatives for

fresh produce, staples, and nutritious food baskets

- Public-private buyer engagement forums and supplier development platforms
- Regional and inter-county market exploration for selected products
- Enterprise-linked distribution models for verified agroecological products

Strategic Objective 2: Strengthen aggregation, cooperative market organization, and fulfilment capacity

Murang'a will strengthen cooperative and hub-based systems that improve bulking, grading, storage coordination, quality assurance, delivery planning, and contract fulfilment.

Illustrative flagship programmes

- Cooperative aggregation Strengthening programmes
- FarmHub-linked bulking, sorting, and supplier coordination services
- Market fulfilment support for institutional contracts and private buyer agreements
- Post-harvest handling and basic infrastructure support for priority value chains
- Cooperative business and governance strengthening linked to enterprise performance

Strategic Objective 3: Promote enterprise development and local value addition in agroecology value chains

Murang'a will support enterprise growth in processing, logistics, bio-inputs, digital services, climate services, branding, and market coordination so that agroecology creates wider local economic benefits and jobs.

Illustrative flagship programmes

- Youth- and women-led agroecology enterprise incubation programmes
- County-supported value addition and product development initiatives
- Circular bioeconomy enterprise support linked to agroecology systems
- Enterprise mentorship, business planning, and commercialization partnerships
- Cooperative and SME upgrading for packaging, processing, and branded products

Strategic Objective 4: Institutionalize standards, traceability, and market confidence systems

Murang'a will strengthen standards, PGS, Kilimo Hai and related compliance systems, supplier verification, traceability, and food safety confidence for priority value chains.

Illustrative flagship programmes

- PGS and Kilimo Hai support for producer groups and cooperatives
- Supplier verification and compliance workflows for public and private buyers
- Digital traceability pilots for priority local and institutional value chains
- Market integrity partnerships with certifiers, regulators, and cooperative QA structures
- County branding and trust-building initiatives for verified agroecological products

Strategic Objective 5: Align institutional procurement and public demand with local market development.

Murang'a will use school feeding and other institutional markets as strategic demand anchors while avoiding overdependence on any single programme.

Illustrative flagship programmes

- Local sourcing models for school feeding and other public institutions

- Procurement-linked supplier development and working-capital facilitation
- Structured contract and lotting models for cooperatives and aggregators
- Local food basket design and menu-linked sourcing pathways where relevant
- Public procurement learning models for broader agroecology market development

Strategic Objective 6: Strengthen market intelligence, governance, and adaptive learning

Murang'a will improve market data, buyer-supplier information flows, performance review, and MSP coordination so that market development becomes evidence-based and adaptive.

Illustrative flagship programmes

- Market intelligence and seasonal planning tools for priority value chains
- Quarterly market evidence packs and performance reviews
- MSP and private sector coordination forums on market systems development
- County market dashboard modules linked to DPI and traceability systems
- Learning and replication products on successful market linkage models

8.8 Results Framework

Table 9: Result framework for Market and Enterprise Development

Strategic Objective	Expected Outcome	Lead Institutions	Delivery Instruments	Verification / Evidence
SO1: Strengthen inclusive market linkages and diversified market channels	Increased number and diversity of market channels for agroecological products; improved producer access to buyers; reduced market concentration risk	Trade, Cooperatives and Industrialization; Agriculture; County Administration; Private Sector Partners	Market linkage platforms; buyer-seller forums; cooperative market plans; enterprise partnerships; local market promotion	Buyer agreements; sales records; number of market channels accessed; producer participation data; local market turnover estimates

Strategic Objective	Expected Outcome	Lead Institutions	Delivery Instruments	Verification / Evidence
SO2: Strengthen aggregation, cooperative market organization, and fulfilment capacity	Stronger cooperative and FarmHub-based aggregation systems; improved quality consistency and delivery reliability; reduced transaction costs	Trade and Cooperatives; Agriculture; FarmHubs; Cooperatives; Ward and Sub-County Structures	Cooperative strengthening; bulking and sorting systems; QA routines; aggregation infrastructure; fulfilment planning tools	Aggregation volumes; delivery records; rejection rates; cooperative performance records; supplier compliance logs
SO3: Promote enterprise development and local value addition	Increased number and performance of agroecology-related enterprises; stronger local value retention; more jobs for youth and women	Trade and Cooperatives; Youth Affairs; ICT; Agriculture; Private Sector and Training Partners	Incubation support; enterprise mentoring; value addition initiatives; commercialization partnerships; business development services	Enterprise registry; revenue and contract records; jobs created; enterprise survival rates; participation of youth and women
SO4: Institutionalize standards, traceability, and market confidence systems	Greater buyer confidence; improved food safety and traceability; increased participation in PGS, Kilimo Hai and related systems; stronger access to differentiated markets	Agriculture; Trade and Cooperatives; ICT; QA and Certification Partners	PGS support; supplier verification; traceability tools; cooperative QA systems; compliance support	PGS and certification records; traceability data; QA logs; supplier verification status; market participation records
SO5: Align institutional procurement and public demand with local market development	More structured local sourcing from verified suppliers; improved procurement confidence; stronger institutional market participation by cooperatives and enterprises	Education and School Feeding; Trade and Cooperatives; Agriculture; Health and Nutrition; Treasury and Planning	Local sourcing frameworks; contract and lotting models; procurement-linked supplier development; working-capital facilitation	Procurement records; supplier registry and compliance data; local sourcing shares; delivery records; payment performance records
SO6: Strengthen market intelligence, governance, and adaptive learning	Market system decisions informed by routine evidence; stronger partner coordination; improved ability to adjust strategies based on data	Trade and Cooperatives; Planning and M&E; ICT; MSP Structures; Private Sector Partners	Market evidence packs; dashboards; seasonal planning tools; coordination forums; annual reviews	Quarterly evidence packs; dashboard records; coordination meeting records; market review reports; decision registers

8.9 Sequencing and Minimum Viable Deliverables (First 24 Months)

Murang'a County will implement this chapter in phased steps to build a practical and scalable market system for agroecology. The first 24 months will focus on establishing the foundation, testing workable models, strengthening successful approaches, and preparing them for wider scale-up.

- **0-6 months:** establish county leadership and coordination arrangements; identify priority value chains and market channels; map cooperatives, aggregators, enterprises, and institutional buyers; define a minimum market data set linked to digital systems; and identify quick-win opportunities for local market linkage and enterprise support.
- **6-12 months:** pilot market system interventions in selected wards and value chains, including aggregation models, supplier verification, initial PGS and standards support, enterprise incubation, and at least one local sourcing model linked to school feeding or another institutional buyer.
- **12-18 months:** expand successful pilots by linking more cooperatives and enterprises to aggregation, procurement, private buyers, and traceability systems, while strengthening value addition and aligning enterprise pathways with financing and guarantee mechanisms.
- **18-24 months:** consolidate and institutionalize successful models through county planning, cooperative systems, and partner arrangements; strengthen private sector participation; refine standards and local sourcing systems; and prepare strong models for replication across more wards and value chains.

Over time, the goal is to make Market and Enterprise Development a stable county function that consistently links regenerative production to inclusive economic opportunity, trusted markets, and enterprise growth.

09



Chapter 9

Monitoring, Learning, and Adaptive Implementation Approach

9.0 Introduction and Purpose

Successful implementation of the Murang'a County Agroecology Strategic Plan requires more than a clear vision and strong thematic chapters; it requires a practical system for delivery, financing, monitoring, learning, and adaptation. This chapter therefore brings together the implementation roadmap, the monitoring and evaluation framework, the investment and resource mobilization approach, and the risk management system into one coherent county delivery framework. Its purpose is to show how the Strategy will be translated into coordinated programmes, measurable results, sustainable financing, and continuous institutional learning over the implementation period.

The chapter positions implementation, monitoring, and financing as mutually reinforcing functions rather than separate processes. Implementation will provide the delivery pathway for county programmes and investments; monitoring, evaluation, and learning will generate the evidence needed to track progress, strengthen accountability, and improve performance; financing and investment planning will mobilize the resources needed for scale; and adaptive implementation approach will ensure that the Strategy remains responsive to changing climatic, market, institutional, and social conditions. In this way, the chapter establishes a practical framework for managing agroecology transformation as a long-term county development agenda.

9.1 Integrated Implementation Approach

Murang'a County will implement the Strategy through a phased and coordinated approach that balances early action with long-term systems transformation. The implementation model will prioritize strengthening county systems before large-scale expansion, piloting integrated interventions in priority areas, scaling successful approaches through countywide programmes, and building sustainable market, financing, and

institutional systems. This approach allows the County to generate early results while laying the foundation for durable transformation.

Implementation will rely on coordinated action across county departments, farmer organizations, cooperatives, civil society organizations, research institutions, development partners, and private sector actors. Delivery will be guided by the governance and coordination arrangements outlined in previous chapters, including county coordination structures, sector collaboration mechanisms, the Multi-Stakeholder platform, and ward- and sub-county implementation systems. Monitoring, learning, and financing will be embedded within implementation from the outset so that programmes can be adjusted, strengthened, and scaled based on evidence.

Implementation of this Strategy shall include GESI-sensitive delivery, budgeting, and reporting arrangements to ensure that inclusion commitments are operational rather than symbolic. The monitoring and evaluation framework will track participation and benefits across target groups using sex-, age-, and disability-disaggregated indicators where feasible, and routine reviews will assess whether programmes are reducing exclusion and expanding equitable access to opportunities.

9.2 Objectives of the Implementation and MEAL Framework

The integrated implementation, monitoring, evaluation, accountability, and learning framework is designed to achieve the following objectives:

- Guide structured implementation of the Strategy across phases and institutions;
- Track progress across strategic pillars, programmes, and investments;
- Measure outcomes related to environmental restoration, agricultural productivity, livelihoods, nutrition, enterprise development, and governance;
- Provide evidence for county planning,

budgeting, policy review, and partner engagement;

- Strengthen transparency and accountability to citizens, farmers, cooperatives, partners, and investors;
- Support continuous learning, innovation, risk management, and adaptive programme improvement.

Through this framework, Murang'a will ensure that agroecology implementation is practical, measurable, accountable, and capable of generating evidence for long-term transformation.

9.3 Phases of Implementation

Murang'a County will implement the Strategy in three broad phases over the strategy period.

Phase 1: Institutional Strengthening and System Setup (Years 1–2)

The first phase will focus on establishing the institutional, operational, digital, and financing foundations required for implementation. Priority actions will include operationalizing county coordination structures and delivery clusters, aligning agroecology priorities within county planning and budgeting systems, establishing digital monitoring and data management systems, initiating service provider and enterprise support systems, launching pilot agroecology and restoration programmes in priority areas, developing certification and traceability support mechanisms, and designing inclusive financing instruments for farmers and enterprises.

This phase will build the minimum systems required to support implementation at scale, while also generating early lessons and proof of concept.

Phase 2: Programme Expansion and Market Development (Years 3–5)

The second phase will focus on expanding implementation across production systems, landscapes, value chains, markets, and institutions. Key actions will include scaling regenerative agroecology practices, expanding watershed and landscape restoration, strengthening cooperative systems and market infrastructure, supporting youth-led enterprises and service delivery models, expanding traceability and digital systems, strengthening procurement-linked demand through school feeding and other public institutions, and mobilizing climate finance and blended investment.

This phase will convert early pilots and institutional setups into wider county programmes capable of reaching more farmers, enterprises, and communities.

Phase 3: Consolidation, Scaling and System Transformation (Years 6–10)

The final phase will focus on consolidating successful models and embedding agroecology within Murang'a's long-term development systems. Priority actions will include strengthening agroecology value chains and regional market integration, expanding private sector participation and investment pipelines, mainstreaming agroecology within county agricultural, environmental, nutrition, and development systems, strengthening evidence-based policy development, and expanding county learning, replication, and inter-county exchange. This phase aims to ensure that agroecology becomes a sustained and integrated component of Murang'a's economic, environmental, and food systems development.

9.4 Results Framework and Strategic Outcome Areas

The Strategy's results framework links implementation actions to the long-term outcomes expected by 2035. It enables the County to track progress across ecological, economic, social, and institutional dimensions of agroecology transformation. Four broad outcome areas will guide performance assessment:

1. Environmental Restoration and Climate Resilience. This outcome area tracks progress in restoring soil health, protecting water systems, improving biodiversity, and strengthening resilience to climate variability. Indicators will focus on regenerative practice adoption, soil restoration, watershed protection, erosion reduction, and climate-resilient production systems.
2. Inclusive Agricultural Growth and Local Economic Development. This outcome area measures improvements in productivity, value addition, market participation, enterprise growth, and livelihoods. Indicators will cover farmer incomes, participation in agroecology value chains, local procurement, youth enterprise development, and market expansion.
3. Nutrition and Food System Transformation. This area focuses on improvements in dietary diversity, food safety, access to nutritious foods, and the integration of agroecology into nutrition-sensitive public programmes such as

school feeding and Food-As-Medicine pathways.

4. Governance, Participation and Institutional Strengthening. This outcome area tracks the strength of coordination systems, stakeholder participation, accountability mechanisms, and integration of agroecology into county planning, budgeting, monitoring, and policy systems.

9.5 Key Indicators and Measurement Areas

The monitoring system will focus on a manageable set of priority indicators that provide clear signals on Strategy performance. These indicators will cover :

- Adoption of agroecological farming practices
- Soil health, land restoration, and watershed protection
- Climate resilience, including reduced erosion, improved water retention, and stronger use of clean energy systems
- Farmer incomes and participation in agroecology value chains
- Youth employment and enterprise development, including in clean energy services linked to agroecology
- Dietary diversity and local food system performance
- TCIM-related indicators, including medicinal plant cultivation, enterprises, and linkages with Food Pharmacies and community health systems
- Participation of women, youth, and marginalized groups in programmes and enterprises
- Institutional coordination, programme delivery, and policy integration
- Renewable-powered irrigation and processing systems deployed within agroecology value chains
- Percentage of FarmHubs and agroecology delivery nodes with reliable clean energy access
- Reduction in post-harvest losses attributable to energy-enabled storage or handling
- • Number of youth jobs and enterprises created in agroecology-linked clean energy services
- Where possible, these indicators will be

aligned with county development indicators, national statistics systems, and sector monitoring frameworks.

9.6 Data Collection, Information Systems and Evidence Generation

Murang'a County will use a combination of administrative data, field monitoring, digital reporting tools, cooperative and group reporting, and periodic surveys and evaluations to generate implementation evidence. Data will be collected through extension services, farmer groups and cooperatives, digital registries and monitoring tools, county administrative systems, and programme evaluations. These systems will be progressively integrated into the County's wider digital and planning architecture to reduce duplication and improve timeliness and reliability. The County will establish data quality assurance procedures to ensure that information used for decision-making is reliable, consistent, and credible. Evidence generated through implementation will be used not only for reporting, but also for annual planning, budgeting, resource mobilization, policy refinement, partner coordination, and adaptive management.

9.7 Institutional Responsibilities

Implementation and monitoring responsibilities will be shared across county institutions, with overall coordination anchored in the County's planning and governance systems.

- County Treasury and Planning Department will coordinate the overall implementation monitoring framework and integrate agroecology indicators into county planning, budgeting, and reporting systems.
- Sector Departments responsible for agriculture, environment, health, trade, water, youth, education, ICT, and related functions will collect and report sector-specific data and lead implementation within their mandates.
- Ward and Sub-County Structures will support local implementation, data collection, and community engagement.
- Farmer Organizations and Cooperatives will contribute information on adoption, production, aggregation, and market participation.
- Research and Academic Institutions will support specialized studies, evaluations, and methodological strengthening.

- Multi-Stakeholder Platforms and Partners will contribute learning, coordination, technical support, and evidence sharing.

This shared approach ensures that implementation remains county-owned while drawing on the strengths of multiple actors.

9.8 Investment Pipeline and Resource Mobilization

Implementation of the Strategy will depend on a practical investment pipeline that combines county budgets, cooperative investments, development partner support, climate finance, and private sector participation. Priority areas will include regenerative production systems, landscape restoration, watershed and riparian protection, value chain and market infrastructure, agro-processing and value addition, digital systems and traceability, training and extension, youth enterprise support, local procurement systems, school feeding supply systems, and food safety and quality assurance. The pipeline will also explicitly cover climate-resilient crop and livestock systems, including fodder development, manure management, livestock water systems, livestock aggregation, cold-chain support, and livestock-related value addition.

Murang'a County will integrate these priorities into routine planning and budgeting processes and develop investable programme packages that can attract complementary financing and technical support. Resource mobilization will be guided by county priorities and coordinated through county governance systems so that agroecology investments remain embedded within mainstream development programming rather than treated as stand-alone projects. The County will also strengthen partnerships with national institutions, development agencies, research organizations, cooperatives, and private sector actors to expand opportunities for co-investment, innovation, and technical collaboration.

As part of this pipeline, Murang'a will include a Green Energy for Agroecology Transition package covering renewable-powered irrigation, FarmHub energy systems, cold storage, dryers, small-scale processing infrastructure, and youth enterprise support for clean-energy service delivery. Investment will be prioritized in locations and value chains where energy constraints limit resilience, traceability, aggregation, nutrition outcomes, or institutional procurement performance, ensuring that clean energy functions as a practical enabler of productive, reliable, and low-emission agroecology delivery.

9.9 Learning, Reporting, Accountability and Evaluation

Murang'a County will embed learning, reporting, and evaluation as core management functions of the Strategy. Agroecology transformation is a long-term process that requires continuous reflection, performance review, and adaptation. Learning will therefore be structured through annual strategy review forums, programme evaluations, stakeholder dialogues, documentation of lessons and case studies, and peer learning with other counties and institutions. These processes will help refine interventions, strengthen coordination, and scale effective approaches. Monitoring and evaluation should include livestock-sensitive indicators such as adoption of integrated crop-livestock systems, fodder establishment, manure use in soil restoration, livestock enterprise growth, dairy and poultry value addition, and contribution of animal-source foods to local nutrition pathways. Regular reporting will strengthen transparency and accountability. The County will produce annual agroecology implementation reports, programme performance reviews aligned with county planning and budgeting cycles, public progress updates through stakeholder forums, and evidence summaries to support partner coordination and resource mobilization. Beyond routine monitoring, Murang'a will undertake two major evaluation milestones: a mid-term review around 2030 to assess progress and recommend adjustments, and an end-of-strategy evaluation in 2035 to assess long-term impact on food systems transformation, environmental sustainability, livelihoods, and nutrition outcomes. Findings from these evaluations will inform future county plans, policies, and strategies.

9.10 Risk Management and Adaptive Implementation

Implementation of the Strategy will take place in a dynamic environment shaped by climate variability, financing constraints, market shifts, and institutional coordination challenges, making risk management an integral part of delivery. Murang'a County will therefore adopt a practical risk management approach grounded in diversified financing, strong institutional coordination, evidence-based monitoring, and continuous learning. Key risks will include climate and environmental shocks such as droughts, floods, pests, land degradation, feed shortages, and animal disease outbreaks; financial risks linked to delayed funding and narrow financing sources; institutional and coordination risks;

market and value chain risks such as weak aggregation, price volatility, and limited demand; and implementation risks including low adoption or weak delivery. These will be addressed through climate-resilient production systems, agroforestry, soil and watershed restoration, veterinary and extension support, stronger cooperative systems, traceability, value addition, institutional procurement pathways, and routine performance reviews that enable corrective action and adaptive programme adjustment.

Table 10: Risk Analysis and Mitigation Matrix

Risk Area	Main Risk	Mitigation Measures	Responsible Actors
Climate and environmental	Droughts, floods, pests, and land degradation	Promote climate-resilient production, agroforestry, soil and water conservation and climate-informed planning	Agriculture ; Environment ; Water
Financial and resource	Delayed funding and limited financing sources	Diversify funding through county budgets, climate finance, and private investment	Treasury and Planning; Sector Departments
Institutional and coordination	Weak coordination, duplication, and unclear roles	Strengthen governance structures, delivery clusters, joint planning, and Multi-Stakeholder coordination	County Executive; Planning; Lead Departments
Market and value chain	Market volatility, weak aggregation, and low demand	Strengthen cooperatives, value addition, traceability, local procurement, and diversified market channels	Trade and Cooperatives; Agriculture; Private Sector
Implementation performance	Low adoption, weak delivery, and slow rollout	Use routine monitoring, performance reviews, corrective action, and adaptive implementation	Planning and M&E; Sector Departments; Partners
Social inclusion	Exclusion of women, youth, persons with disabilities, and marginalized groups	Apply GESI standards, inclusive targeting, equitable participation, and disaggregated monitoring	All Departments ; MSP Structures
Data and monitoring	Weak data quality and fragmented reporting systems	Strengthen data systems, digital tools, verification, and regular evidence reviews	Planning ; ICT; Sector Departments

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Chapter 10

Conclusion And Strategic Outlook

10.0 Introduction

The Murang'a County Agroecology Strategic Plan provides a comprehensive framework for transforming the county's food systems, landscapes and rural economy over the period 2026–2035. It sets out a clear pathway through which agroecology can strengthen agricultural productivity, restore ecosystems, improve nutrition outcomes, create inclusive economic opportunities and enhance resilience to climate change. The strategy recognizes that agroecology is not only a set of farming practices, but a broader food systems transformation approach. It links agricultural production, environmental stewardship, local enterprise development, nutrition, governance and community participation within one integrated county development pathway. Through this strategy, Murang'a County commits to strengthening sustainable food systems that improve livelihoods while protecting natural resources for future generations.

10.1 Strategic Vision for 2035

By 2035, Murang'a County envisions a resilient and inclusive food system where regenerative agriculture supports healthy ecosystems, thriving rural economies and improved nutrition for all residents. In this vision

- Farmers widely adopt regenerative agroecological practices that restore soil fertility, conserve water and enhance biodiversity.
- Landscapes are better protected through watershed restoration, agroforestry and sustainable land management.
- Farmers and cooperatives participate in strong value chains that support value addition, market access and higher incomes.
- Youth and women actively participate in agroecology enterprises and service delivery systems.
- Public programmes such as school feeding increasingly source nutritious food from local

producers.

- County institutions effectively coordinate policies, investments and services that support agroecology transformation.

10.2 Transformational Impact of the Strategy

Successful implementation of the strategy is expected to generate multiple long-term benefits across the county.

1. Environmental Sustainability. Adoption of regenerative agroecology practices will contribute to improved soil health, enhanced biodiversity and restored watershed systems. Sustainable land management will reduce erosion and improve resilience to climate variability.
2. Economic Development. Strengthened value chains and agroecology enterprises will create new economic opportunities for farmers, cooperatives and youth-led businesses. Expanded value addition and market access will increase farm incomes and support rural economic growth.
3. Food Security and Nutrition. Diversified agricultural production systems will improve the availability of nutritious foods and strengthen local food supply systems. Integration of agroecology into public food programmes will support improved nutrition outcomes for communities.
4. Institutional Strengthening. The strategy will strengthen coordination across county institutions, improve evidence-based planning and support more effective service delivery systems that benefit farmers and communities.

10.3 Key Success Factors

Several factors will be critical for the successful implementation of the strategy.

1. Strong County Leadership. Sustained commitment from county leadership will be essential to ensure that agroecology priorities remain

integrated within planning, budgeting and programme implementation.

2. **Multi-Stakeholder Collaboration.** Effective collaboration among farmers, cooperatives, civil society organizations, research institutions, private sector actors and development partners will support innovation, resource mobilization and programme delivery.
3. **Adequate Financing.** Mobilizing sufficient financial resources from county budgets, climate finance, cooperative systems and private investment will be necessary to support implementation and scaling.
4. **Knowledge and Innovation.** Continuous learning, research partnerships and innovation will help the county refine agroecology approaches and adapt to emerging challenges.
5. **Effective Monitoring and Accountability.** Strong monitoring systems will allow the county to track progress, learn from experience and improve implementation over time.

10.4 Strategic Outlook

Looking ahead, Murang'a County has the opportunity to position itself as a national leader in agroecology and sustainable food systems. By integrating agroecology within county development planning, strengthening

partnerships and investing in innovation and inclusive enterprise development, the county can build a resilient agricultural economy that benefits farmers, consumers and the environment. The strategy also provides a foundation for future policy development, investment partnerships and inter-county learning initiatives. Lessons generated through implementation can inform broader efforts to promote sustainable agriculture and climate resilience across Kenya.

10.5 Final Commitment

The Murang'a County Agroecology Strategic Plan represents a collective commitment by the county government and its partners to build a more sustainable, inclusive and resilient food system. Through coordinated action, strategic investment and active participation by communities, Murang'a can successfully transition toward agroecological food systems that support environmental sustainability, economic opportunity and improved wellbeing for all residents. The success of this strategy will depend on sustained leadership, strong partnerships and the shared efforts of farmers, institutions and communities working together to achieve a common vision for the future of Murang'a County.

ANNEXES: IMPLEMENTATION FRAMEWORKS AND EVIDENCE SYSTEMS.

The annexes provide practical tools that support implementation of the Murang'a County Agroecology Strategy as an integrated food systems transformation programme. They translate the Strategy into operational instruments that county departments, partners and stakeholders can use to guide planning, coordination, financing and monitoring.

The annexes focus on five key areas:

- Policy and Institutional alignment
- Continental and global frameworks alignment
- Delivery architecture and governance arrangements
- Digital public infrastructure and data governance
- Financing instruments and investment pipeline tools

These tools will support coordination across farms, markets and public programmes such as school feeding, landscape restoration, youth enterprise development and nutrition systems. They may be refined during the first phase of implementation as baseline data and operational experience are generated.

Annex A: County Policy and Legal Alignment Matrix

Table 11: County Policy and legal Alignment Matrix

Policy / Instrument	Level	Key Priorities	Strategy Linkage	Accountable Institutions	Implementation Route	Minimum Verification Data
Murang'a County Integrated Development Plan (CIDP) 2023-2027	County	Food and nutrition security; climate resilience; livelihoods; youth employment; sector coordination	All strategy pillars and investment pipeline	County Executive; County Assembly; Planning and M&E; sector departments	Integration within CIDP, ADPs and programme-based budgets	ADP project registry; budget execution reports; M&E indicators
Murang'a County Agroecology Policy 2022-2032	County	Agroecology adoption pathways; extension services; markets and inclusion safeguards	Practice adoption, value chains, governance and certification systems	Agriculture; Trade and Cooperatives; Environment; Health; Education	County programmes, climate finance and partner support	Practice adoption records ; extension logs ; cooperative aggregation volumes
Murang'a County Climate Change Action Plan	County	Adaptation priorities; ecosystem restoration; climate governance	Landscape restoration, climate finance and risk management	Environment and Climate; Water; Agriculture; Planning	Climate finance windows; county climate funds; partner support	Climate expenditure tagging; restoration registry; MRV data-sets

Policy / Instrument	Level	Key Priorities	Strategy Linkage	Accountable Institutions	Implementation Route	Minimum Verification Data
Murang'a County School Feeding Policy	County	Institutional procurement ; nutrition improvement ; Food safety	Nutrition systems, procurement and value chain development	Education; Health; Agriculture; Treasury; Procurement Unit	School feeding budgets and local sourcing mechanisms	Procurement datasets; menu compliance; food safety inspections
Kenya Climate Change Act (2016)	National	Climate mainstreaming and MRV systems	Climate resilience and adaptation programmes	County Treasury ; Environment ; Planning	Climate budget tagging ; national climate finance programmes	Climate Reporting datasets
Public Finance Management Act (2012)	National	Budgeting, procurement and financial accountability	Financing architecture and accountability systems	Treasury; Procurement Unit; County Assembly	Programme-based budgeting and financial audits	Budget execution reports ; procurement records
National Agroecology Strategy for Food Systems Transformation (2024–2033)	National	National agroecology transition frameworks	Practice adoption, markets, governance and nutrition	Agriculture; Environment; Trade; Health; Education	County domestication through programmes and budgets	Adoption records ; extension reports ; landscape restoration registry

Annex B: Alignment with African Union and CAADP Commitments

Table 12: Alignment with African Union and CAADP Commitments

Framework	Key Commitments	Murang'a Strategic Response	Verification Mechanisms
CAADP (Malabo and Kampala Declarations)	Increase agricultural investment and strengthen resilience	Budget alignment toward regenerative agriculture and climate resilience	Agroecology expenditure tracking and programme-based budgeting
CAADP Nutrition and Food Systems Agenda	Reduce malnutrition and improve diet diversity	School meals procurement and Food-As-Medicine pathways	Procurement records; nutrition proxies; food safety monitoring
Nairobi Declaration on Soil Health (2023)	Restore soil fertility and reduce nutrient losses	Soil health improvement, agroforestry and integrated nutrient management	Soil monitoring systems; adoption logs
AU Climate Adaptation Commitments	Strengthen climate resilience and ecosystem restoration	Watershed restoration, agroforestry expansion and climate-aligned finance	Climate MRV datasets; restoration tracking
AU Youth Transformation Agenda	Expand youth employment in agriculture	Youth agroecology enterprises and service delivery programmes	Youth enterprise registries and job metrics

Framework	Key Commitments	Murang'a Strategic Response	Verification Mechanisms
Agenda 2063	Sustainable natural resource management and inclusive growth	Value chain development, post-harvest systems and cooperative strengthening	Aggregation volumes ; Enterprise growth metrics

Annex C: Alignment with FAO Agroecology Principles and TAPE Plus

Table 13: Alignment with FAO Agroecology principles and TAPE Plus

FAO Principle	Strategy Integration	Monitoring Approach
Recycling	Composting systems and crop-livestock integration	Soil nutrient monitoring
Input Reduction	Promotion of bio-inputs and integrated pest management	Input use records
Soil Health	Agroforestry and soil conservation practices	Soil monitoring indicators
Biodiversity	Crop diversification and habitat restoration	GIS mapping and biodiversity indicators
Synergies	Integrated landscape planning and watershed governance	Multi-sector Reporting
Economic Diversification	Cooperative hubs and agroecology enterprises	Enterprise revenue Tracking
Co-creation of Knowledge	Farmer field schools and youth innovation hubs	Learning platform records
Social Values and Diets	Nutrition-sensitive procurement and school feeding	Diet diversity indicators
Fairness	Inclusion of youth and women in value chains	Inclusion metrics
Connectivity	Institutional procurement and traceability systems	Supplier verification registry
Governance	Multi-stakeholder platforms and ward participation	Governance records

Annex D: County Delivery Architecture and Institutional Roles

Table 14: County Delivery Architecture and Institutional Role

Institution	Core Role	Decision Authority	Accountability
Governor and County Executive	Strategic leadership and resource alignment	Approve strategy and budgets	County Assembly and citizens
County Assembly	Legislative oversight and policy approval	Approve budgets and regulations	Public Accountability
Agroecology Steering Committee	Cross-department coordination	Approve implementation plans and evidence packs	County Executive
Multi-Stakeholder Platform	Stakeholder dialogue and coordination	Advisory recommendations	Participating members

Institution	Core Role	Decision Authority	Accountability
Technical Working Groups	Develop technical standards and tools	Propose Operational guidelines	Steering Committee
Sub-County Delivery Units	Coordinate implementation at sub-county level	Operational coordination	Sector départements
Ward Platforms	Community-level implementation and monitoring	Prioritize local activities	Sub-county units
FarmHubs and Cooperatives	Aggregation, training and service delivery	Operational decisions	Trade and Cooperative Department

Annex E: Digital Public Infrastructure and Data Governance

Table 15: Digital Public Infrastructure and Data governance

Component	Description
Farmer and cooperative registry	Digital registry for farmers, producer groups and cooperatives to support targeting, planning, supplier verification and service delivery.
Agroecology practice and service delivery registry	System for recording adoption of agroecological practices, extension support, training, youth service delivery and enterprise services.
Procurement and supplier verification systems	Digital tools for managing supplier qualification, procurement processes, delivery records and payment workflows.
Traceability modules linking farms to markets	Systems that connect producers, aggregators and buyers through batch-level or supplier-level traceability records to strengthen food safety and market integrity.
Monitoring and evaluation Dashboard	Dashboards for tracking implementation progress, strategy indicators, programme performance and evidence for decision-making.
Safeguards and grievance reporting tools	Digital tools for logging complaints, tracking grievance resolution, managing safeguards issues and supporting accountability.
FAIR Principles	Data will be managed in line with FAIR principles: Findable, Accessible, Interoperable and Reusable, to ensure that information can be consistently used across systems and institutions.
CARE Principles	Data governance will also follow CARE principles: Collective Benefit, Authority to Control, Responsibility and Ethics, to ensure that communities benefit from data and that rights are respected.
TRUST Principles	Data systems will be guided by TRUST principles: Transparency, Responsibility, User Focus, Sustainability and Technology, to ensure integrity, accountability and long-term usability.
Data governance outcome	Together, these principles will help Murang'a County maintain data integrity, protect privacy and promote equitable access to information across the agroecology programme.

Annex F: Financing Instruments and Investment Pipeline Template

Table 16: Financing Instruments and Investment Pipeline Template

Instrument	Purpose	Target Users	Implementation Route	Verification Data
County Programme Budgets	Fund public delivery services	County départements	Programme-based Budgeting	Budget execution reports
Climate Finance Windows	Support adaptation and restoration	Landscape and communities	Climate funds and partner support	Climate MRV indicators
Performance-Based Grants	Incentivize verified outcome	Delivery clusters and service providers	Results-based financing	Evidence packs
Matching Grants	Co-finance Community Investments	Producer groups and cooperatives	County and Community contributions	Co-financing records
Credit Guarantees	Reduce lending risk	SACCOs and financial institutions	Risk-sharing facilities	Loan portfolio performance
Procurement-Linked Finance	Provide working capital	Cooperatives and aggregators	Receivables financing linked to contracts	Delivery and payment records
Concessional Investment Capital	Support infrastructure Development	SMEs and value chain actors	Blended finance instruments	Asset utilization and enterprise growth

Annex G: Medicinal Plants and TCIM Knowledge Systems

Table 17: Medicinal Plants and TCIM Knowledge Systems

Medicinal Plant / Species	Agroecological Production System	Sustainable Cultivation & Harvesting	Enterprise Development Pathways	Knowledge Protection & Documentation
Artemisia (Artemisia annua)	Mixed cropping, agroforestry and herb gardens	Organic soil management; harvest leaves before flowering	Herbal teas, extracts, nutraceutical products	Farmer learning sites; research collaboration
African Basil (Ocimum gratissimum)	Kitchen gardens and agroforestry systems	Seed saving; selective leaf harvesting	Herbal teas, essential oils, herbal products	Community knowledge documentation
Neem (Azadirachta indica)	Agroforestry trees and boundary planting	Sustainable leaf and seed harvesting	Bio-pesticides, medicinal extracts	Local ecological knowledge with extension support
Moringa (Moringa oleifera)	Intercropping systems and school gardens	Regular pruning; organic soil management	Leaf powder, nutrition supplements, fortified foods	Community documentation of nutrition uses
African Wormwood (Artemisia afra)	Agroforestry systems and medicinal plant gardens	Controlled harvesting; protect wild stocks	Herbal remedies, community herbal products	Traditional healer and research documentation

Medicinal Plant / Species	Agroecological Production System	Sustainable Cultivation & Harvesting	Enterprise Development Pathways	Knowledge Protection & Documentation
Aloe (Aloe spp.)	Dryland agroforestry and home gardens	Harvest leaves sustainably; propagate by cuttings	Cosmetics, herbal medicine, nutraceuticals	Community knowledge protection protocols
Lemongrass (Cymbopogon citratus)	Hedgerows and herb gardens	Regular cutting; organic soil care	Essential oils, herbal teas, beverages	Training and learning centre documentation
African Nightshade (Solanum scabrum)	Regenerative vegetable systems	Maintain soil fertility; selective harvesting	Fresh vegetable markets, processed foods, school feeding	Indigenous food knowledge documentation

Annex H. Monitoring and evaluation plan

Code	Chapter / pillar	Monitoring question	Core indicator(s)	Means of verification	Frequency	Lead / supporting actors
RA-1	Ch.2 Regenerative Agroecology	Are regN Zenerative farm practice packages being adopted at scale?	Number of farmers trained; % adopting diversified regenerative packages	Extension logs, farmer registry, field verification	Quarterly / Annual	Agriculture
RA-2	Ch.2 Regenerative Agroecology	Are integrated crop-live-stock systems being mainstreamed?	Number of farms applying integrated crop-live-stock planning, fodder systems, and manure use	Extension records, live-stock service logs, farm audits	Quarterly / Annual	Agriculture ; Veterinary services
RA-3	Ch.2 Regenerative Agroecology	Is IPM replacing high-risk pest control approaches?	Number of farmers trained on IPM; % farms using IPM; reduction in hazardous pesticide reliance	Training records, farm inspections, pest surveillance reports	Quarterly / Annual	Agriculture
RA-4	Ch.2 Regenerative Agroecology	Are certification, traceability, and market integrity systems being applied?	Number of producer groups under PGS/certification pathway; verified supplier participation	PGS records, traceability data, QA logs, supplier verification records	Quarterly	Agriculture; Trade and Cooperatives; ICT

Code	Chapter / pillar	Monitoring question	Core indicator(s)	Means of verification	Frequency	Lead / supporting actors
RA-5	Ch.2 Regenerative Agroecology	Are restoration and natural capital incentives functioning?	Number of PES/natural capital pilots; hectares restored with incentive support	Restoration registry, climate finance records, community monitoring logs	Semi-annual / Annual	Environment and Climate; Planning
RA-6	Ch.2 Regenerative Agroecology	Is productive clean energy improving agroecological systems?	Number of solar, biogas, pumping, drying, and processing systems deployed	Asset records, installation logs, utilization data	Quarterly / Annual	Agriculture; ICT; Energy-related partners
DPI-1	Ch.3 Digital Public Infrastructure	Are core county registries functional and current?	Farmer/cooperative registry completeness; service provider and enterprise registry coverage	Registry database reports, update logs	Quarterly	ICT / Planning ; Agriculture
DPI-2	Ch.3 Digital Public Infrastructure	Is county performance evidence being generated routinely?	Number of quarterly evidence packs; number of dashboard updates; number of pillar scorecards active	Evidence packs, dashboards, meeting minutes	Quarterly	Treasury and Planning ; ICT
DPI-3	Ch.3 Digital Public Infrastructure	Are procurement and supplier verification systems working?	Number of verified suppliers onboarded; % institutional deliveries with verified supplier records	Supplier registry, procurement records, delivery logs	Quarterly	Procurement Unit ; ICT ; Education
DPI-4	Ch.3 Digital Public Infrastructure	Are traceability and QA systems functioning in priority value chains?	% traceable batches / supplier-level records in priority value chains	Traceability modules, QA logs, audit reports	Quarterly	ICT; Trade and Cooperatives; Agriculture

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DPI-5	Ch.3 Digital Public Infrastructure	Is data governance compliant with FAIR, CARE, and TRUST?	Data governance charter adopted; number of data-related grievances resolved; compliance checks completed	Governance audits, grievance logs, access-control records	Semi-annual / Annual	ICT ; Legal ; Planning
DPI-6	Ch.3 Digital Public Infrastructure	Are digital systems adequately powered and reliable?	System uptime; number of renewable-powered nodes supporting traceability/ dashboards	Uptime reports, energy system records, service logs	Quarterly	ICT ; Private sector partners
YISD-1	Ch.4 Youth Innovation and Service Delivery	Is the county building an inclusive agroecology service provider ecosystem?	Number of registered / certified service providers; % women and youth among providers	Service provider registry, certification records	Quarterly	Youth Affairs ; Agriculture ; TVETs
YISD-2	Ch.4 Youth Innovation and Service Delivery	Are youth-led enterprises being incubated and sustained?	Number of enterprises incubated; 12-month enterprise survival rate	Enterprise registry, incubation records, revenue data	Quarterly / Annual	Youth Affairs; Trade and Cooperatives
YISD-3	Ch.4 Youth Innovation and Service Delivery	Are ward and sub-county service platforms functioning?	Number of functional service platforms; coverage of priority wards	Ward platform reports, sub-county reports, meeting logs	Quarterly	Youth Affairs; County coordination office
YISD-4	Ch.4 Youth Innovation and Service Delivery	Are youth service providers linked to real market and finance opportunities?	Number/value of contracts accessed; number linked to finance and procurement opportunities	Contracts, supplier records, finance beneficiary records	Quarterly	Youth Affairs; Treasury; Trade and Cooperatives

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YISD-5	Ch.4 Youth Innovation and Service Delivery	Is there a functioning skills progression pathway from training to employment?	Number trained, placed, certified, mentored, and retained in service roles	TVET records, apprenticeship logs, placement records	Semi-annual / Annual	TVET institutions ; Youth Affairs
YISD-6	Ch.4 Youth Innovation and Service Delivery	Is youth-led green energy service delivery expanding?	Number of youth-led green energy enterprises; number of systems installed/ maintained; service uptime	Enterprise records, installation logs, service contracts	Quarterly / Annual	Youth Affairs; ICT; Trade and Cooperatives
FIN-1	Ch.5 Inclusive Financing	Is county financing for agroecology being allocated and executed?	Annual agroecology budget allocation and execution rate	Budget execution reports, programme budgets	Annual	Treasury and Planning
FIN-2	Ch.5 Inclusive Financing	Is the finance product suite reaching intended users?	Number/value of beneficiaries by finance product type	SACCO/ bank/cooperative reports, county finance tracking	Quarterly	Treasury ; financial partners
FIN-3	Ch.5 Inclusive Financing	Is blended, guaranteed, and procurement-linked finance being mobilized?	Value of guarantees, concessional capital, procurement-linked working capital, climate finance windows	Finance pipeline reports, guarantee records, contract-linked finance reports	Quarterly / Annual	Treasury and Planning
FIN-4	Ch.5 Inclusive Financing	Are agroecology finance products performing sustainably?	Repayment rate / PAR / default rate; percentage of finance reaching women, youth, cooperatives	Loan portfolio reports, inclusion reports	Quarterly	Financial institutions ; SACCOs ; Treasury

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FIN-5	Ch.5 Inclusive Financing	Is energy-linked finance supporting agroecology transition?	Number/ value of clean energy assets financed for irrigation, cold chain, dryers, processing, FarmHubs	Asset finance records, utilization logs	Quarterly / Annual	Treasury ; SACCOs ; banks ; cooperatives
GOV-1	Ch.6 Governance and Institutional Coordination	Are coordination structures operating as planned?	Number of Steering Committee meetings, cluster meetings, and TWG reviews held with action follow-up	Meeting minutes, action trackers	Quarterly	County Executive ; Planning
GOV-2	Ch.6 Governance and Institutional Coordination	Are sub-county units, ward platforms, and FarmHubs functional?	Number of functional sub-county delivery units, ward platforms, and FarmHubs meeting minimum standards	Supervision reports, FarmHub audits, platform logs	Quarterly / Semi-annual	Planning; Agriculture; Trade and Cooperatives
GOV-3	Ch.6 Governance and Institutional Coordination	Are standards oversight and verification systems working?	Number of QA/standards audits, inspections, and verification actions completed	Audit reports, QA logs, inspection reports	Quarterly	Agriculture; Trade; Health; ICT; Procurement
GOV-4	Ch.6 Governance and Institutional Coordination	Is the grievance mechanism functioning and trusted?	Number of grievances received, resolved, and resolved within service standard	Grievance system records, resolution logs	Quarterly	County coordination office; Legal; ICT
GOV-5	Ch.6 Governance and Institutional Coordination	Are partnerships and learning exchanges producing results?	Number of active MoUs, learning exchanges, South-South engagements, and replication products	MoUs, exchange reports, learning briefs	Annual	County coordination office ; MSP

Code	Chapter / pillar	Monitoring question	Core indicator(s)	Means of verification	Frequency	Lead / supporting actors
NUT-1	Ch.7 Nutrition, Food-As-Medicine and Institutional Markets	Are Food-as-Medicine / Food-Farmacy pathways operational?	Number of operational FoodFarmacy or nutrition referral sites	Facility records, programme logs, referral records	Quarterly	Health
NUT-2	Ch.7 Nutrition, Food-As-Medicine and Institutional Markets	Are community and clinical nutrition pathways linked to agroecology supply?	Number of clients screened, counselled, and linked to local food/ nutrition pathways	Facility registers, CHP reports, referral logs	Quarterly	Health ; Community Health systems
NUT-3	Ch.7 Nutrition, Food-As-Medicine and Institutional Markets	Are school meals functioning as a nutrition and market anchor?	% schools meeting menu and sourcing standards; number of verified local suppliers serving schools	Procurement records, menu compliance, delivery logs, inspections	Quarterly / Termly	Education ; Agriculture ; Health
NUT-4	Ch.7 Nutrition, Food-As-Medicine and Institutional Markets	Are institutional procurement payment and supplier systems supporting local value chains?	Supplier performance ; payment timeliness ; repeat supplier retention	Payment records, supplier registry, delivery records	Quarterly	Treasury ; Procurement Unit ; Education
NUT-5	Ch.7 Nutrition, Food-As-Medicine and Institutional Markets	Are nutrition review and adaptation loops functioning?	Number of annual nutrition evidence reviews and adaptation actions	Review reports, action registers, learning forum minutes	Annual	Health ; Education ; Planning
MED-1	Ch.8 Market and Enterprise Development	Are priority value chains organized around aggregation and structured market channels?	Number of value chains with functional aggregation, buyer linkage, and cooperative coordination	Cooperative records, market linkage reports, contracts	Quarterly	Trade and Cooperatives ; Agriculture

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MED-2	Ch.8 Market and Enterprise Development	Is value addition and enterprise development expanding?	Number of active agroecology-related value addition enterprises; jobs created; enterprise revenue trends	Enterprise registry, revenue and contract records	Quarterly / Annual	Trade and Cooperatives; ICT; Youth Affairs
MED-3	Ch.8 Market and Enterprise Development	Are standards, traceability, and market confidence improving?	Number of suppliers under PGS / Kilimo Hai / QA support; buyer confidence indicators where feasible	Certification records, QA logs, buyer surveys, traceability data	Quarterly / Annual	Agriculture ; Trade and Cooperatives
MED-4	Ch.8 Market and Enterprise Development	Is institutional procurement aligned with local market development?	Local sourcing share; number of cooperatives participating in county demand channels	Procurement records, supplier participation records	Quarterly	Education ; Treasury ; Agriculture
MED-5	Ch.8 Market and Enterprise Development	Is market intelligence informing decision-making?	Number of quarterly market evidence packs, annual market reviews, and resulting decisions implemented	Evidence packs, market review reports, decision registers	Quarterly / Annual	Trade and Cooperatives; Planning and M&E; ICT
MEAL-1	Ch.9 Monitoring, Learning and Adaptive Implementation	Has the county completed the required evaluation cycle?	Baseline completed; mid-term review completed; end-strategy evaluation completed	Evaluation reports, validation minutes	Baseline / Mid-term / End-term	Treasury and Planning; research partners

Code	Chapter / pillar	Monitoring question	Core indicator(s)	Means of verification	Frequency	Lead / supporting actors
MEAL-2	Ch.9 Monitoring, Learning and Adaptive Implementation	Are routine reporting products being generated?	Annual implementation reports; programme performance reviews; public progress updates issued	Annual reports, public forum materials, evidence summaries	Quarterly / Annual	Treasury and Planning; sector departments
MEAL-3	Ch.9 Monitoring, Learning and Adaptive Implementation	Are review findings leading to corrective action?	% agreed corrective actions implemented within review cycle	Action trackers, follow-up minutes	Quarterly / Annual	Planning and M&E; sector leads
MEAL-4	Ch.9 Monitoring, Learning and Adaptive Implementation	Is risk management embedded in delivery?	Number of risk reviews completed; mitigation actions tracked against climate, finance, coordination, market, inclusion, and data risks	Risk register, mitigation tracker, review minutes	Quarterly / Annual	Planning and M&E; sector departments

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