

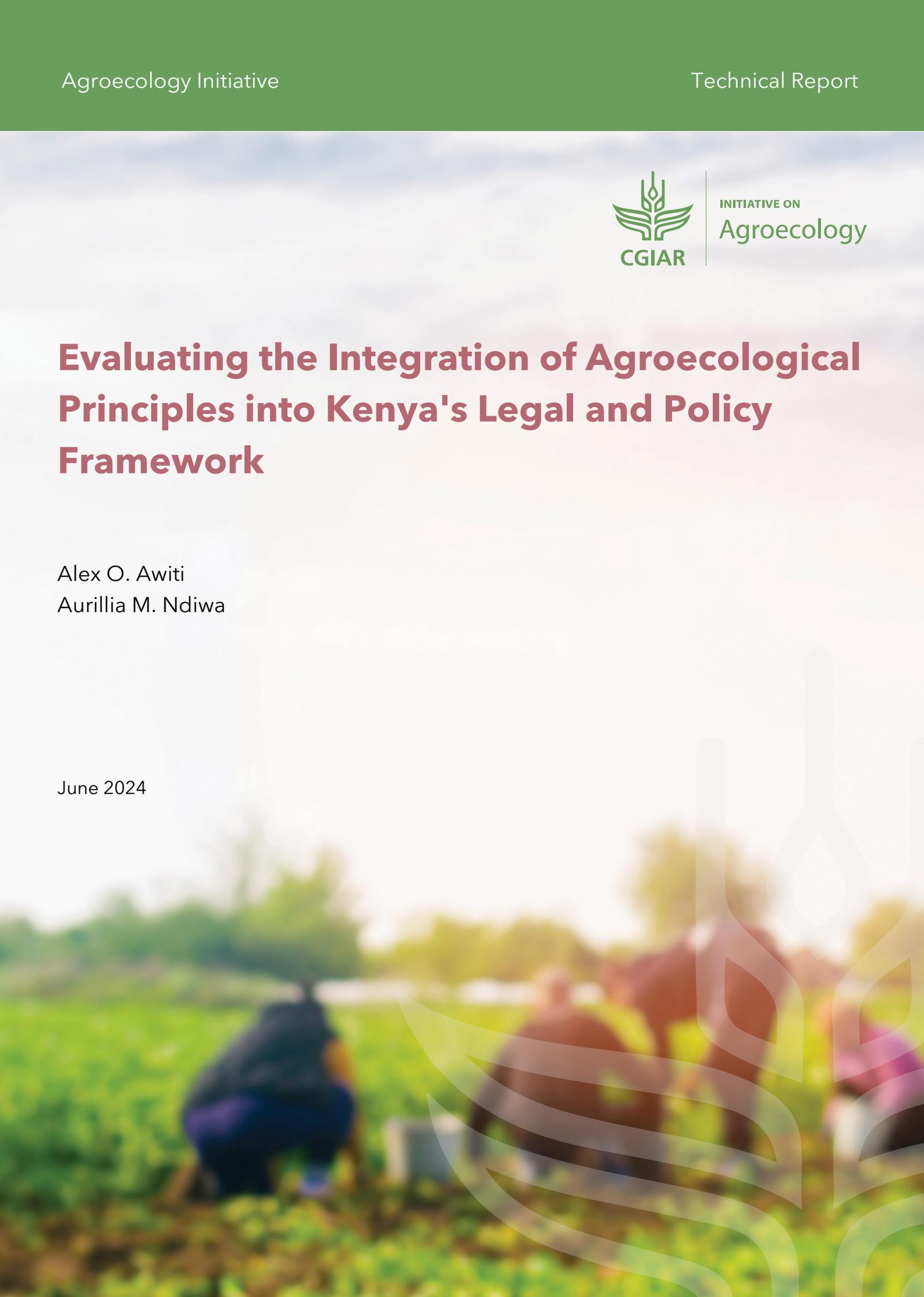


INITIATIVE ON  
Agroecology

# Evaluating the Integration of Agroecological Principles into Kenya's Legal and Policy Framework

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# Acronyms and abbreviations

AEP	Agroecological Principles
ASDS	Agriculture Sector Development Strategy
AfCFTA	Africa Continental Free Trade Area
ASTGS	Agricultural Sector Transformation and Growth Strategy
CAADP	Comprehensive African Agricultural Development Plan
CSA	Climate-Smart Agriculture
DAP	Discontinuing Diammonium Phosphate
GDP	Gross Domestic Product
FAO	Food and Agriculture Organization
FNSP	National Food and Nutrition Security Policy
ISFM	Integrated Soil Fertility Management
HLPE	High Level Panel of Experts
MoALFC	Ministry of Agriculture, Livestock, Fisheries and Cooperatives
NARS	National Agricultural Research Systems
NCDs	Non-communicable Diseases
NLUP	National Land Use Policy
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SRA	Strategy for Revitalizing Agriculture
NCCRS	National Climate Change Response Strategy
UNECD	United Nations Conference on Environment and Development

# Executive summary

This paper evaluates the integration of three high-level categories of the 13 principles of agroecology—resource efficiency, resilience, and social equity and responsibility—into Kenya's Constitution and 14 sectoral strategies, policies, and laws. Policy, legal, and strategy documents were analyzed to identify enabling and exemplary provisions and barriers to the agroecological transformation of Kenya's food system. Kenya has a raft of laws, policies, and strategies that integrate agroecological principles and support the agroecological transition of the food system. These include provision for: i) integrated soil and plant health; ii) re-design of farms and landscapes through integrated soil, water and management, and the integration of crops, trees and livestock to support farm diversification; iii) enhancing climate resilience; iv) strengthening co-creation of knowledge and ensuring equity through participation of local communities in the food system. The focus on achieving high cereal yields, bolstered by public subsidies for mineral fertilizers and hybrid seeds, limits the investment in agroecological approaches. Despite a raft of enabling and exemplary provisions, uneven distribution of resources and inconsistent implementation present veritable barriers to agroecological transition. More importantly, there is a need to strengthen institutional mechanisms for consultation and cooperation between the national and county governments to ensure the agroecological transformation of food systems nationally.

# 1. Introduction

Food systems influence animal and human health, livelihoods, household well-being, and overall economic, ecosystem, and planetary health outcome. The agricultural sector is the backbone of Kenya's economy, contributing 33% to the GDP, 65% of national exports, and employing over 40% of the total population and 70% of the rural population (FAO,2019). Smallholder farmers dominate the sector. For example, more than 95% of the fresh fruits and vegetables consumed are grown domestically, mainly by smallholders, and are supplied mostly by small and medium enterprises (SMEs) through informal supply chains (World Bank, 2013).

Kenya's laws, policies and strategies on the environment and natural resources are informed by or written to align with the global commitment to sustainable development, such as the Sustainable Development Goals (SDGs) and its predecessor Millennium Development Goals, the Convention on Biological Diversity, the Convention on Wetlands, and the United Nations Convention on Combating Desertification. Similarly, Kenya's agricultural laws, policies and strategies have been influenced by the precepts of the Green Revolution from the dawn of the colonial era to the present time, with a strong emphasis on commodity crops, cereal monocultures and heavy reliance on chemical inputs. Like elsewhere, reference to sustainable agriculture is very recent and has primarily been shaped by the Agenda 21 action plan, which emerged from the 1994 United Nations Conference on Environment and Development (UNCED), which emphasized the need for sustainable agriculture practices to protect the environment, conserve natural resources and ensure food security.

Africa, through the African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032),<sup>1</sup> commits to ensuring Africa's commitment under the 2015 UNFCCC Paris Agreement<sup>2</sup>. It is guided by the existing national climate efforts and aspirations expressed through Nationally Determined Contribution (NDC). Africa's continental commitments under the four pillars of the Comprehensive African Agricultural Development Plan (CAADP) and African Union Climate Change and Resilient Development Strategy and Action Plan have been instrumental in shaping Kenya's agriculture sector growth and transformation strategy between 2010 and 2030. Kenya has put in place policies and strategies to build resilient food systems (crops, livestock and fisheries) through sustainable management of land, soil, water and other natural resources. Moreover, since the adoption of the Paris Agreement, the World Bank has significantly ramped up its engagement and investment in climate-smart agriculture

<sup>1</sup>African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032) <https://shorturl.at/pTj0i>

<sup>2</sup> Paris Agreement. <https://shorturl.at/j6VAH>

(CSA), with a focus on increased productivity through improved management of inputs, increased resilience and reduced emissions.

In 2004, the Kenyan government launched the Strategy for Revitalizing Agriculture (SRA), whose vision was to transform Kenya's agriculture into a profitable, commercially oriented, internationally and regionally competitive economic activity that provides high-quality, gainful employment to Kenyans. In 2010, the government launched a successor strategy, the Agriculture Sector Development Strategy (ASDS), with a vision of a prosperous food-secure nation. In 2019, the Agriculture Sector Growth and Transformation Strategy was launched with three objectives: increase producer income, increase agricultural output and value addition and build household food resilience. Remarkably, little progress has been made in two decades. The challenges of food security, transforming agriculture from subsistence to farming as a business-agribusiness, markets, efficient use of inputs and agricultural credit and rural poverty - persist. Moreover, Kenya's food system is defined by an incomplete transition to the agro-industrial model, as evidenced by low per capita fertilizer use, soil nutrient mining, low adoption of improved germplasm, low investments in irrigation and vulnerability to climate change.

Unsurprisingly, Kenya's progress towards ending hunger and ensuring food security and nutrition is slow. The proportion of people severely food-insecure increased from 15% to 38% between 2016 and 2022 (FAO et al., 2023). According to the Kenya Household Budget Survey, 32% of the population is below the food poverty line, with rural areas recording the highest incidence at 35.8%<sup>3</sup>. Climate change and land degradation threaten to aggravate an already dire situation that is further enfeebled by an agriculture sector that is constrained by poor access to appropriate and affordable financial services, especially for small and medium-scale producers, low levels of public investments in critical infrastructure like irrigation, rural roads, energy, research and extension services, weak intersectoral policy and investment coordination and enervating bureaucratic and political inertia.

Transforming agriculture and food systems in line with SDGs is an imperative that can no longer be ignored or postponed. In recent years, there has been increasing demand to produce more food and achieve agricultural production while enhancing nutrient use efficiency, improving soil health, conserving biodiversity, being resilient to climate change and being socially inclusive and economically fair. In facing this challenge, agroecological approaches (HLPE, 2019) play a pivotal role by connecting resource use efficiency, resilience and social equity of food systems from production to consumption. Increasingly, agroecological principles have become a framework for agricultural transformation in countries like

<sup>3</sup> Basic Report based on 2015/16 Kenya integrated household budget survey.

Uganda and Tanzania<sup>4</sup>, mainly in contexts where civil society organizations, through multi-stakeholder platforms, actively advocate for change.

This analysis evaluates how public policies, laws and strategies integrate agroecological principles and support or impede incentives for the agroecological transformation of Kenya's food system. Specifically, the analysis aims to identify i) enabling provisions, ii) exemplary provisions that go beyond the agroecological principles, and iii) gaps and limitations to effectively integrating agroecology principles into policies and strategies. This report will serve as basis for policy dialogue among the relevant stakeholders, including civil society, policymakers, farmers, farmer organizations, researchers, and development partners. Its aims are to: i) encourage the implementation of supportive and exemplary provisions that facilitate the agroecological transformation of food systems and ii) to motivate a review of policies to address current barriers and gaps hindering this transformation.

<sup>4</sup> Biovision Foundation (2024). National Agroecology Strategies in Eastern and Southern Africa: Lighthouses for food system transformation, <https://www.agroecology-pool.org/national-agroecology-strategies>

## 2. Methodology

Assessing agroecological integration in policy involves evaluating how well agricultural policies incorporate agroecological principles. The laws, policies, strategies and laws are assessed to determine the extent to which they align with High-Level Categories of the 13 Agroecological Principles, namely: i) resource efficiency, ii) resilience, and iii) social equity and responsibility (Table 1). We also analyzed the alignment and coherence of the Constitution and relevant sectoral laws, policies and strategies (e.g., agriculture, food and nutrition land use, environment, water, soils, climate) to determine whether they support or hinder agroecological transitions. It identifies enabling and exemplary provisions, barriers, and gaps that impede agroecological transition.

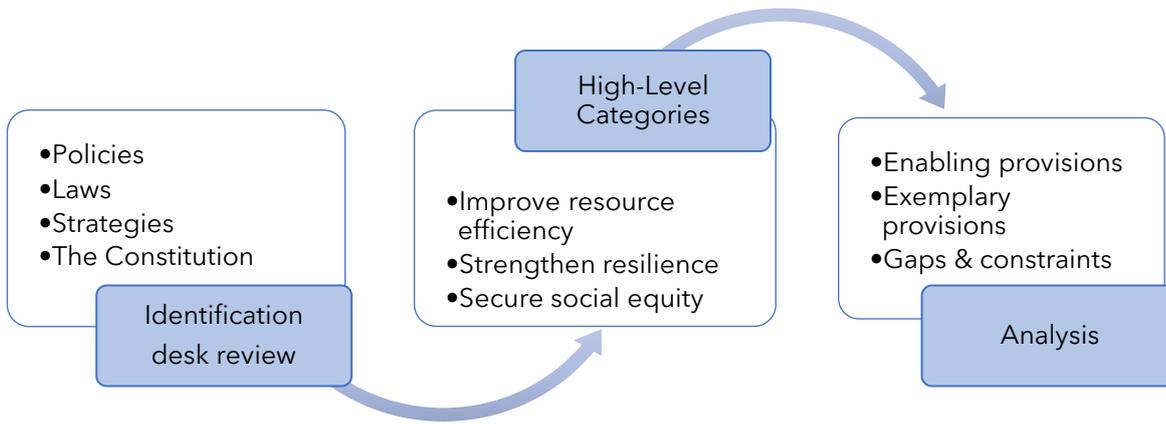
**Table 1: Categories of the agroecological principles**

<b>High-Level Categories</b>	<b>Agroecological principles (AEP)</b>
<b>Improve resource efficiency</b>	Recycling Input reduction
<b>Strengthen resilience</b>	Soil health Animal Health Biodiversity Economic diversification Synergy
<b>Secure social equity/ Responsibility</b>	Co-creation of knowledge Participation Fairness Connectivity Land and resource governance, Social values and diets

Adapted from HLPE (2019)

The analysis comprised the following steps (See Figure 1):

- a. Identify laws, policies, and strategies for agriculture, the environment, natural resources, climate change, trade, and related sectors. The documents were accessed through government websites or official publications.
- b. Criteria for document inclusion. This included explicitly mentioning one or more of the 13 agroecology principles, sustainable agriculture, agroforestry, and land use management.



**Figure 1: Conceptual framework of the analysis**

- c. Document analysis. This entailed systematic analysis of the selected laws, policies and strategies to assess how they incorporate agroecology principles. The study was based on examining the extent to which policy or strategy objectives and policy or legal instruments (incentives, regulations) support impede high-level categories of the 13 Agroecological Principles, namely: i) improved resource efficiency; ii) strengthened resilience; iii) secured social equity, enhanced political participation and advanced well-being outcomes (Table 1). A key objective of the analysis was to identify i) enabling provisions, ii) exemplary provisions that go beyond the agroecological principles, and iii) gaps and limitations to effectively integrating agroecology principles into policies and strategies.

# 3. Document Analysis

Fifteen documents drawn from the agriculture, environment, lands, water and livestock sector and the Constitution were analyzed. These documents were written between 2010 and 2024 and predate the concerted discourse among governments and other stakeholders about agroecology as an approach to the transformation of food systems.

Document	Sector	Year of Publication
1. Agriculture Policy	Agriculture	2021
2. Agricultural Sector Growth and Transformation Strategy	Agriculture	2019
3. National Agricultural Research Systems Policy	Agriculture	2021
4. Agriculture and Food Authority Act	Agriculture	2013
5. National Food and Nutrition Security Policy	Agriculture	2013
6. Kenya National Agroforestry Strategy	Environment	2021
7. National Agricultural Soil Management Policy	Agriculture	2020
8. National Climate Change Response Strategy	Environment	2010
9. National Agroecology for Food Systems Transformation Strategy	Agriculture	2024
10. Kenya Climate Smart Agriculture Strategy	Agriculture	2017
11. National Land Use Policy	Land	2017
12. Water Policy	Water	2021
13. The Livestock Policy	Agriculture	2020
14. National Environment Policy	Environment	2013
15. The Constitution	Framework Law	2010

## 3.1. The Constitution of Kenya

Article 27(3) guarantees equality and freedom from discrimination and grants women and men equal treatment, including equal political, cultural and social opportunities. Article 69(1) obligates the State to ensure sustainable exploitation, utilization management and conservation of the environment and natural resources and ensure equitable sharing of the accruing benefits (1a); work to achieve and maintain a tree cover of at least 10% of the land area of Kenya (1b); protect and enhance intellectual property in, and

indigenous knowledge of biodiversity and genetic resources of the communities (1c); encourage public participation in the management protection and conservation of the environment (1d); protect genetic resources and biodiversity (1e).

### **3.2. Agriculture Policy 2021**

The Agricultural Policy 2021, launched by the Ministry of Agriculture, Livestock, Fisheries and Cooperatives, aims to transform Kenya's agricultural sector by addressing key challenges and promoting sustainable growth. The main objective of the policy is to improve food and nutrition security and maximize incomes. Specifically, the policy aims to protect and conserve biodiversity and promote wise use of natural resources that support sustainable agriculture.

Concerning improving resource efficiency, it touches on integrated soil management practices to improve soil fertility, including using farmyard manure, thus recycling and reducing dependence on external inputs. In terms of strengthening resilience, the policy recognizes aspects like integrated soil fertility management, use of farmyard manure, water harvesting and conservation, crop diversification, management of farm-level biodiversity conservation, functional diversity, including farm forestry, economic diversification and pasture management.

In securing social equity and responsibility, the policy emphasizes the involvement of youth in agricultural value chains through the promotion and participation of youth in agribusiness, value addition, and related activities. The policy also addresses resource governance through the conservation of water catchment areas and riparian areas. However, there are critical gaps in the co-creation of knowledge and the re-embedding of food systems in local economies. Moreover, current policy provisions are oriented toward top-down extension services even though the policy recognizes the utilization of both scientific and indigenous knowledge. Moreover, there is a focus on international and regional markets, consistent with the commodity crop export focus.

In recognition of projected climate change effects on rainfall and soil moisture regimes, the policy makes explicit provisions for mechanisms for investing in irrigation and irrigation infrastructure, including water harvesting and conservation to increase water productivity, including the development of strategies to provide incentives for efficient water use including recycling for crops, livestock and fisheries. In this regard, the policy provisions are exemplary and go beyond the agroecology principles.

### **3.3. Agricultural Sector Growth and Transformation Strategy (2019-2029)**

The Agricultural Sector Transformation and Growth Strategy (ASTGS) was launched in Kenya in 2019. The Strategy has three objectives or anchors: i) increase producer incomes; ii) increase agricultural output and value addition; iii) build household food resilience. Over the next five years, the Strategy seeks to increase small-scale incomes by 35%, increase agricultural output and value add by 6% and boost household food resilience. The approach promotes strengthening resilience through crop diversification, cultivating nutritious traditional crops, and climate-smart natural resource management practices, including soil health and catchment protection measures. The provisions of fodder, feed management, index-based insurance, and animal health are exemplary regarding the animal health principle.

The Strategy promotes participation and fairness through collective marketing and price negotiation. It prioritizes livelihood and income protection through cash transfer programs. It provides basic infrastructure (water, energy, roads, markets) and cold chain storage and marketing services as critical pathways to poverty reduction and rural development. The Strategy advocates for the use of e-vouchers for the purchase of animal feed and seed and the compulsory use of lime, in addition to inorganic fertilizer. However, there is a need to consider repurposing public subsidies for mineral fertilizer and hybrid seed to include complementary organic resources such as high-quality compost and manure, as well as agroforestry and legume germplasm.

### **3.4. National Agricultural Research Systems Policy (NARS) 2021**

Research in Kenya is conducted by both public and private institutions, with the National Agricultural Research Systems (NARS) serving as the legal and guiding framework. The overall objective of the policy is to develop a modern agricultural research system framework that will contribute to food and nutrition security and socioeconomic development. The policy promotes research on the sustainable use and conservation of natural resources, including land, forests, flora, and fauna, ensuring ecosystem preservation and utilization for societal benefit.

The Strategy is committed to knowledge co-creation and advocates for harnessing the best science, technology and indigenous knowledge. The policy recognizes the value of integrating the best scientific advancements, technological innovations, and indigenous knowledge to develop holistic solutions to complex challenges rooted in empirical and local knowledge. The policy recognizes the need to document and protect agrobiodiversity resources to ensure initial owners and managers share associated benefits. Furthermore, the policy's advanced integrated information and communication technology system and knowledge management strategy are crucial for facilitating the shift from a technology-intensive food system to an agroecological food system. This new system will be driven by integrated science, technology, place-based ecological knowledge, and adaptive innovation. The policy promotes

broad stakeholder participation through a comprehensive consultation, collaboration and partnership-building framework.

### **3.5. Agriculture and Food Authority Act 2013**

This Act was developed in 2013 and revised in 2022 to consolidate the laws regulating and promoting agriculture and establish the Agriculture and Food Authority. The Act provides guidelines for preventing soil erosion, protecting water catchment areas, maintaining soil health and conserving landscape-level biodiversity. This involves issuing national guidelines for controlling or eradicating noxious and invasive plants, ensuring responsible land management practices and equitable resource access. Under this Act, the national government may prescribe guidelines requiring, regulating or controlling the afforestation or re-afforestation of land and drainage, including the maintenance or repair of drains, gullies, contour banks and terraces. To ensure farmers' effective participation in the agricultural sector's governance, the Act requires close consultation with all registered stakeholder organizations to develop policies or regulations before making any major decision.

### **3.6. National Food and Nutrition Security Policy (FNSP) 2011**

The objectives of the FNSP are: (i) to achieve good nutrition for the optimum health of all Kenyans, (ii) to increase the quantity and quality of food available, accessible, and affordable to all Kenyans always, and (iii) to protect vulnerable populations using innovative and cost-effective safety nets linked to long-term development. The objectives of the policy are deliberately framed in broad terms to provide room for advocating higher priority interventions and developing operational and management strategies to support, for example, nutrition-dense production systems, incorporating high levels of farm biodiversity, increasing land productivity and integrating approaches an institutional and governance models that expand social inclusion and equity. The policy recognizes soil fertility decline, high input prices, pests and diseases, climate change, and inappropriate land use. These concerns speak to both input efficiency and strengthening resilience.

In response to the challenges identified, the policy promotes sustainable food production systems with a focus on increasing soil fertility, agro-biodiversity, organic methods and proper range and livestock management practices; the production of nutrient-rich foods -crops, livestock, fisheries - through diversification of production systems; support for efficient and sustainable irrigation management systems; agroforestry, afforestation and re-afforestation to enhance livelihood systems and environmental resources; rainwater harvesting, water reuse and investment groundwater and irrigation; investment in the development of wholesale and retail markets, including infrastructure to enable food move efficiently

between, local and regional of production and demand, and; the integration of climate change adaption, including access to quality weather and advisory in agricultural development.

Regarding social equity, the policy promotes inclusive input and output markets and affordable financial products, especially for pastoralists and fisherfolk. Furthermore, the policy encourages the adoption of effective nutrition interventions, creating awareness to ensure all Kenyans have equitable access to nutritious diets and promoting healthy lifestyles throughout the life cycle, including developing and disseminating national food and dietary guidelines and lifestyle education. In an exemplary provision, the policy advocates for an Agricultural Development Fund and advocates for a 10% allocation of the national budget to the food and agriculture sector.

### **3.7. Kenya National Agroforestry Strategy 2021-2030**

The goal of this Strategy is to restore productive capacity and build resilience in the agricultural resource base while contributing to climate change adaptation and mitigation through enhanced agroforestry practices. The Strategy seeks: i) to promote agroforestry for soil and water management in combination with practices such as soil restoration structures, no-till farming, cover crops, nutrient management, manuring and sludge application, improved grazing, and efficient irrigation; ii) promote the application of indigenous agroforestry knowledge and practices, innovation and technologies which correspond to the diversity of indigenous peoples and their different contexts; iii) promote agroforestry for sustainable intensification (multipurpose trees) of production of critical staple foods with environmental resilience; iv) create an agroforestry fund (revolving fund) for the value addition opportunities that can provide seeds and incentives for women, youth, and other vulnerable groups to start and scale up agribusiness.

### **3.8. National Agricultural Soil Management Policy 2020**

The National Agricultural Soil Management Policy 2020 provides an essential framework for promoting sustainable soil health management. The policy recognizes the need for organic carbon recapitalization, encourages the use of organic fertilizers and advocates for a legal regulatory framework for biofertilizers. Moreover, the policy recommends discontinuing Diammonium Phosphate (DAP) basal compound fertilizer, whose application accelerates secondary acidification in iron and aluminium-rich tropical soils. The policy promotes integrated soil fertility management (ISFM) practices, such as using organic resources, proper management of manure, creating a regulatory framework for organic fertilizers, and establishing standards and guidelines for organic fertilizers. Furthermore, the policy emphasizes capacity-building initiatives aimed at building capacity on biofertilizers, establishing culture preservation centers

to serve as reference banks for biological material and educating farmers on using bio-fertilizers for soil management and producing organic farm inputs.

The policy envisages farm-level re-design, promotes farm planning community-based soil and water conservation efforts, and encourages the adoption of agroforestry through increased access to high-quality agroforestry planting materials. Moreover, the policy supports identifying and mapping all degraded soils and enables long-term investment in land rehabilitation by integrating land rehabilitation into national programmes and projects. The policy also advocates strengthening the Public Complaints Committee for environmental degradation-related issues. It also calls for integrative approaches to natural resources management (NRM), including more sustainable land use for agricultural production.

### **3.9. National Climate Change Response Strategy (NCCRS) 2010**

The NCCRS was realised in 2010 through a collaborative initiative of government agencies, civil society, and the private sector. The Strategy advocates for enhanced financial and technical support for crop diversification through the Orphan Crops Programme so that indigenous and more drought-tolerant food crops like cassava, millet, sorghum, and sweet potatoes can be re-introduced into the farming systems. The Strategy promotes mulching, manure, and crop residues to enhance soil carbon storage and reduce GHG emissions.

The Strategy also promotes agroforestry, the application of conservation agriculture principles of minimal soil disturbance, permanent soil cover and crop rotations, thus addressing land degradation by building soil and stone bunds, creating grass strips and contour levelling, and incorporating trees or hedgerows. Such measures aim to increase rainwater infiltration and reduce run-off during floods and soil erosion. The Strategy promotes inventorying indigenous knowledge that has conventionally been used by local communities to cope with erratic climate and to manage livestock diseases in pastoral systems.

### **3.10. Kenya Climate Smart Agriculture Strategy 2017-2026**

The Kenya Climate Smart Agriculture Strategy aims to build the resilience of agricultural systems, minimize emissions, enhance food and nutritional security and improve livelihoods. The Strategy recognizes that poor soil health (low pH, low organic matter, low water retention, land degradation, low fertility and low productivity) undermines resilience and contributes to the food system's vulnerability to climate change. The Strategy proposes integrated soil and water management to enhance resource efficiency, including water storage and conservation. The strategy proposes measures such as protecting

riparian reserves and wildlife corridors and managing invasive species to strengthen resilience at the broader landscape level.

The Strategy recognizes the limited capacity of women, youth, and vulnerable groups to participate in and adopt climate-smart agriculture practices. The Strategy notes that the productive assets of these groups are also exceptionally vulnerable to the impacts of climate change. The establishment and management of conflict, especially in arid and semi-arid lands, is proposed as a mechanism to ensure women and vulnerable groups are protected from resource conflict-induced dispossession of production assets and destitution. Other measures to strengthen resilience while securing social equity include early warning, preparedness and response to extreme weather events and using index-based insurance to protect productive assets.

### **3.11. National Land Use Policy (NLUP) 2017**

The National Land Use Policy offers a framework for recommendations and principles designed to ensure the maintenance of land for land use planning, environmental management and sustainable production in the utilization of land resources, mainstreaming of gender and special interest groups in land use planning and management and equitable utilization of land resources to meet governance, social, economic and cultural obligations for the people of Kenya. The principles and values of the National Land Use Policy relevant to agroecological transformation include efficient and sustainable land use management, ecological sustainability, food security, technology adoption in land use management, equity and transparent decision-making, and effective public participation.

More importantly, the policy recognizes that "land has an important spiritual value, for it is not merely a factor of production; it is first and foremost the medium which defines and binds together social and spiritual relations within and across generations." In this regard, agroecology and the policy share a commitment to ethical responsibility towards the land and past, present and future generations; hence, both agroecology and the land policy recognize the need to foster ecological balance and resilience and embrace the notion of humans as stewards/caretakers, not masters of the land and nature.

### **3.12. Water Policy 2021**

The Water Policy recognizes that Kenya is a water-scarce country with low annual renewable freshwater availability, which is declining. The policy further notes weaknesses in water resources and limitations in water harvesting and storage against the sector targets and expectations. The policy provides a framework for sustainable management, financing, harvesting, and storage and equitable, efficient, and universal access to water supply for domestic, economic use and ecosystem sustenance.

Key policy directions relevant to agroecology include i) the mapping, protection, conservation and management of wetlands and riparian catchment areas; ii) the implementation of sustainable water resource management interventions into land use, physical planning and development control systems; iii) participation of the private sector, civil society, and citizen engagement in water resource management, development, and the monitoring of water abstraction; iv) the integration of implementation of catchment and ecosystem management activities into irrigation projects and other water storage investments; v) mechanisms and resources to enhance gender consideration and equity in water sector planning, decision making and implementation; vi) resources for the management of conflicts in all water sub-sectors and implement measures to encourage and enhance the use of alternative dispute resolution methods including negotiations, conciliation or mediation.

### **3.13. The Livestock Policy 2020**

The overarching objective of the policy is to utilize livestock resources for food, nutrition security and improved livelihood while protecting the environment. The Policy aims to address the diminishing availability of rangeland resources by proposing measures to address overgrazing, diversification of feed resources, animal health, invasive plant species, pests, and declining soil health. The policy seeks to i) provide for a gene bank for the conservation of germplasm from locally adapted and indigenous breeds; ii) identify a broader range of forage types that facilitate optimum productivity per unit area of land in various agroecological zones; iii) promote appropriate grazing management strategies, including irrigated forage production and put measures to mitigate the effects of pests and diseases and manage invasive plant species; vi) institutionalize the involvement of the communities in planning and development and use of rangeland resources.

### **3.14. National Environment Policy 2013**

The overarching goal of the policy is to enable a better quality of life for the present and future generations through sustainable management and use of the environment and natural resources. The policy seeks to achieve this goal by providing a framework for an integrated approach to planning and sustainable management of Kenya's environment and natural resources.

Under the policy, the government will: i) develop and implement a national strategy for the rehabilitation and restoration of degraded forest ecosystems and water catchment areas with active community involvement/participation; ii) promote sustainable use of freshwater and wetland resources and the conservation of river and lake ecosystems through development and implementation of river basin management plans; iii) promote efficient adaptation measures for productive and sustainable resource

management in Arid and semi-arid lands; iv) promote and support ecological and organic farming to maintain soil fertility; v) develop and implement an environment-friendly livestock production policy that takes account of livestock mobility and communal management of natural resources; vi) strengthen community participation in fisheries resources management, including the protection fish breeding grounds and implementation of closed seasons regulations where necessary; vii) document and value natural capital, promote incentives for payment of ecosystem services and development a monitoring and reporting framework of the use of natural capital; viii) develop mechanisms to ensure the benefits from genetic resources, including intellectual property rights, technology, and traditional knowledge, are shared equitably with local communities residing in regions where the genetic material originated.

### **3.15. National Agroecology for Food Systems Transformation Strategy, 2024-2035**

The National Agroecology for Food System Transformation Strategy draws upon and shall be complimented by several other guiding national and sectoral policies and strategies reviewed in this report. The strategy is an attempt to consolidate various sectoral pieces policies and strategies into one comprehensive document by systematically integrating and harmonizing disparate provisions and frameworks into a unified, coherent strategy to promote the agroecological transformation of Kenya's food systems. This consolidation ultimately fosters streamlined and effective governance framework, promoting clarity and coherence in the regulatory environment.

The Strategy aims to promote a sustainable transformation of Kenya's food system to ensure food and nutrition security, climate-resilient livelihoods and social inclusion for all. The Strategy is anchored on five objectives, which include fostering an agroecological transition to resilient and sustainable agriculture and food systems; promoting sustainable consumption of healthy and sustainable diets; enabling environment and incentives for transition and scaling of agroecological practices; strengthening research, innovation and training to foster co-creation and co-learning, and; enhancing social equity, inclusion and participatory governance in the food system.

The Strategy seeks to i) Foster the transition to a resilient and sustainable food system through agroecological approaches; ii) promote sustainable consumption and a transition to diverse and healthy diets; iii) create an enabling environment and incentives for scaling agroecological approaches; iv) strengthen research, innovation and training to foster co-creation and co-learning to support agroecological transition; v) enhance social equity, inclusion and participatory governance in the food system.

<sup>5</sup> At the time of the publication of this report, the Strategy was in the final stages of national stakeholder consultation and validation, pending final approval

The Strategy advocates bolstering local production and incorporating organic inputs such as manure and compost into current nutrient delivery systems to enhance farm resource efficiency—similarly, the strategy advocates for water use efficiency and enhanced investments in water storage and harvesting. The Strategy advocates for incentives for local research, quality control and standards for biological and organic inputs. The strategy promotes on-farm diversification through integrating, where appropriate, crops, livestock, trees and fisheries to strengthen the resilience of food systems. Furthermore, the Strategy supports collective action and landscape planning to balance food production and livelihood objectives with ecosystem service and biodiversity conservation imperatives at the landscape level.

Regarding social equity and responsibility, the Strategy is aligned with the provisions of the Constitution. It recognizes all citizens' socioeconomic and cultural rights, with particular attention to the needs of women, youth, persons living with disability, and minority or marginalized communities. The Strategy seeks to facilitate access and control of productive resources by strengthening mechanisms that secure access to productive resources, including conserving indigenous/locally managed seeds and livestock breeds.

# 4. Assessment of the integration of agroecological principles

This paper evaluated the integration of three high-level categories of the 13 principles of agroecology—resource efficiency, resilience, and social equity and responsibility—into Kenya’s Constitution and 14 sectoral strategies, policies and laws (Table 1). More specifically, the documents were analyzed to identify enabling provisions, exemplary provisions and barriers to the agroecological transformation of Kenya’s food system. The enabling provision refers to policy, strategy or legal statements or commitments explicitly or implicitly aligned with one or more of the 13 principles under the high-level categories. We define exemplary provisions as statements or commitments that go beyond or exceed what is contemplated or envisioned in the 13 principles. Barriers and gaps are cited to illustrate potential areas of improvement to align policies and actions to support agroecological transition.

## 4.1. Enabling provisions

### **Resource efficiency**

Enabling provisions for agroecological transition identified under resource efficiency include the integration of organic and inorganic resources for soil fertility management that would simultaneously enhance agronomic nitrogen use efficiency (Vanlauwe et al., 2010) and improve plant productivity, soil health and associated ecosystem benefits such as water quality and climate change mitigation and adaptation co-benefits (Agriculture Policy; National Agricultural Soil Management Policy; National Environment Policy; National Agroecology for Food Systems Transformation Strategy; National Food and Nutrition Security Policy). Similarly, the Water policy, the Agriculture Sector Transformation and Growth Strategy, the Land Use Policy, and the National Environment Management Policy contain provisions for conservation, sustainable harvesting and efficient use of water for livestock and crop production, mainly because about 80% of Kenya’s land is arid and semi-arid and is vulnerable to erratic rainfall.

### **Strengthening resilience**

Provisions that strengthen resilience fall under measures to enhance soil and animal health, biodiversity, synergy among agroecosystem elements (crops, livestock, trees and fisheries) and economic diversification. Measures supporting the use of ecological and organic farming practices to enhance biological activity in the soil, such as the management and incorporation of manure, are included in the Agriculture Policy, National Agricultural Soil Management Policy, National Environment Policy, National Agroecology for Food Systems Transformation Strategy and the National Food and Nutrition Security Policy.

More specifically, the National Agricultural Soil Management Policy promotes integrated soil fertility management and recommends discontinuing the use of DAP basal compound fertilizer, the application of which accelerates secondary acidification. Furthermore, the policy advocates for capacity-building on biofertilizers, establishing culture preservation centres to serve as reference banks for biological material and educating farmers on using bio-fertilizers for soil management and a legal regulatory framework for biofertilizers. The National Climate Change and Response Strategy advocates for tree-based intercropping using agroforestry and enhanced financial and technical support for crop diversification through the Orphan Crops Programme to promote the re-introduction of indigenous and more drought-tolerant food crops like cassava, millet, sorghum sweet potatoes into the farming systems. Moreover, the policy also supports minimum soil disturbance, permanent soil cover and crop rotation. Under the National Agricultural Soil Management Policy, the government commits to coordinate the linkage of watershed management to restore the health and fertility of the soils to respond to climate change.

### ***Securing social equity and responsibility***

The Constitution of Kenya guarantees equality and freedom from discrimination. It grants women and men equal treatment and opportunities in political, cultural, and social spheres. The Constitution further obligates the State to protect and enhance intellectual property and indigenous knowledge of communities' biodiversity and genetic resources and encourage public participation in environmental management, protection and conservation. Similarly, the National Agricultural Research System Policy provides an enforceable incentive framework to facilitate equitable sharing of intellectual property rights benefits among researchers, institutions, communities and industry.

The Agriculture Sector Transformation and Growth Strategy promotes participation and fairness through support for collective marketing and price negotiation and prioritizes livelihood and income protection through cash transfer programs. Under the National Climate Change Response Strategy, the government is committed to effectively managing conflict, especially in semi-arid lands, to ensure women and vulnerable groups are protected from resource conflict-induced dispossession of production assets and destitution. The National Food and Nutrition Security Policy supports measures that improve security and access to land and water resources, especially for women, older persons, pastoralists, and child-headed households, to have access to land, water and associated benefits.

The National Agroecology Strategy for Food System Transformation promotes the consumption of diverse, safe, and healthy diets in communities. It supports the documentation and information sharing on traditional foods and associated cultures. Furthermore, the National Food and Nutrition Security Policy promotes the adoption of effective nutrition interventions, creating awareness to ensure all Kenyans have

equitable access to nutritious diets for healthy lifestyles throughout the life cycle, and supports the development and dissemination of national food and dietary guidelines and lifestyle education packages regularly with revisions at least every five years.

## **4.2. Exemplary provisions**

### ***Resource efficiency***

In an exemplary provision, the National Agroecology for Food Systems Transformation Strategy advocates for incentives for local research on inputs and practices, regulation for organic inputs (quality control and certification), credit for MSMEs investing in the production of organic inputs, and the repurposing of current subsidies to promote adoption and use of organic inputs and agroecological practices by farmers. The National Agricultural Soil Management Policy provides for developing a regulatory framework for organic inputs, including certification, quality standards, and traceability. Furthermore, the National Climate Change Response Strategy promotes scaling research in inoculants to improve nitrogen and phosphorous availability in acid soils and enhance soil biological resources.

### ***Strengthening resilience***

To enhance soil health, the National Climate Change Response Strategy advocates using inoculants to improve soil nitrogen and phosphorous availability and enhance soil biological resources. The National Agricultural Management Policy supports the maintenance of a comprehensive inventory of soil biota, capacity building, and soil biodiversity training.

Regarding animal health, the Livestock Policy promotes strengthening national disease contingency plans to address transboundary animal diseases and coordinate the implementation of surveillance and control programs for local, national, regional and global disease challenges. The policy also advocates for the conservation of germplasm from locally adapted and indigenous breeds, enhancement of fodder or animal feed management through the cultivation of diverse forage crops, and better grazing management strategies like rotational grazing systems.

The National Agricultural Soil Management Policy provisions recognize trees as an integral part of diversified farm production, providing diversified income options while contributing to carbon sequestration, soil fertility improvement and soil and water conservation. Hence, the government will support agroforestry extension and improve farmers' access to quality agroforestry planting materials. Moreover, the National Agroforestry Strategy provides an agroforestry fund (revolving fund) for value addition opportunities, which can provide seeds and incentives for women, youth, and other vulnerable groups to start and scale up agribusiness.

For landscape-level biodiversity, the provisions in the Water Policy for mapping, protection, conservation and management of wetlands and riparian catchment areas, the implementation of sustainable water resource management interventions into land use, the institutionalization of the involvement of the communities in planning, and development of and use of rangeland resources under the Livestock Policy, river basin-level planning under the National Environment Policy are exemplary and complementary of the provisions of the National Agricultural Soil Management Policy, which focus of on overall landscape processes, beyond the farm and field levels. Under the National Land Policy, areas of public land identified as having a high public value (such as watershed protection, critical botanic or wildlife habitat and or landscape values, cultural significance, road reserves for potential future highways, etc.) will not be allocated for other use. The government also commits to map and document all environmentally fragile and marginal land and outlaw encroachment, tilling and keeping livestock on marginal lands.

### ***Securing social equity and responsibility***

The Land Use Policy recognizes that "land has an important spiritual value, and is first and foremost the medium which defines and binds together social and spiritual relations within and across generations." In this regard, agroecology and the policy share a commitment to ethical responsibility towards the land and past, present and future generations; hence, both agroecology and the land policy recognize the need to foster ecological balance and resilience and embrace the notion of humans as stewards/caretakers, not masters of the land and nature. On genetic resources, the National Agroecology Strategy promotes mapping and documentation of indigenous seed varieties to enable local and indigenous communities to sustain and revitalize their seed and food cultures for the sustainability of their cultures.

Regarding natural resource governance, the National Land Use Policy advocates for mainstreaming GIS-based integrated land use planning through participatory and multi-sectoral approaches and assessing land resources, including primary soil surveys and soil degradation surveys. Both the Land Use Policy and the National Environment Policy promote the development of a framework for the valuation of natural capital and the use of instruments such as payment for ecosystem services to incentivize conservation and collective action for the wise use of natural resources. Article 11(3b) of the Constitution mandates parliament to enact legislation to recognize and protect the ownership of indigenous seeds and plant varieties, their genetics, diversity and use by the communities. Moreover, the National Environment Policy promotes the development of mechanisms to ensure the benefits from genetic resources, including intellectual property rights, technology, and traditional knowledge, are shared equitably with local communities residing in regions where the genetic material originated.

### 4.3. Devolution and policymaking

Kenya has two levels of government: national and county governments. The functions and powers of the national and county governments, respectively, are set out in Articles 185(2), 186(1) and 187(1) of the Constitution and detailed in the Fourth Schedule. The national government is responsible for agriculture policy, protecting the environment and natural resources, including water and biodiversity, research and coordinating land planning. The functions of the county are crop and animal husbandry, fisheries and animal and plant disease control, markets, trade and cooperative societies and the implementation of specific national policies on national resources and environmental conservation, including soil and water conservation and forestry.

The framing of the roles and responsibilities for agriculture, soil, water and forestry suggest that the county governments are the implementing arm of the national government whose function is policy formulation. Article 185(2) of the Constitution grants a county assembly the authority to make any laws necessary for, or incidental to, adequately performing its functions under the Fourth Schedule. The Intergovernmental Relations Act 2012 (3a) and 3(c) provide a framework for consultation and cooperation between the national and county governments and establish constitutional structures and mechanisms for intergovernmental relations, respectively. Section 11(1) of the Act establishes the Intergovernmental Relations Technical Committee. The Technical Committee is responsible for the day-to-day administration of the National and County Government Coordinating Summit and the Council. The Technical Committee may establish sectoral working groups or committees to implement its functions effectively. For example, the Sector Working Agriculture Group (SWAG) provides a forum for coordinating the national and county governments' policies, legislation and functions in the agriculture sector.

Kenya's devolved government system offers potential benefits such as policy responsiveness, relevance, and more robust citizen engagement and participation, but it presents significant challenges for consistency and coherence. For example, the counties of Muranga, working with partners, have written and passed an agroecology policy and acted even before the national government launched an agroecology strategy. Other counties like Kiambu and Vihiga are at an advanced stage in developing agroecology policies and laws. It is important to note that county initiatives to formulate agroecology policies and bills are not coordinated. There is no national framework to support county-level policy processes.

A review of the Muranga and Kiambu Agroecology Development Acts reveals striking differences. For example, each county has its definition, which differs from the definition of agroecology in HLPE (2019). The Muranga Act encourages the uptake of organic farming and organic products. In contrast, the Kiambu Act focuses on promoting the uptake of agroecological farming practices, inputs and agroecological

products in the county. The Muranga Act establishes an Agroecology Board accountable to the county governor and assembly. The critical function of the board's broad powers includes advising the county government on agroecology, regulating the agroecology sub-sector, and marketing and promoting agroecology. In contrast, the Kiambu Act established a Desk Office-Agroecology whose roles included advising the director of crops and providing secretarial and liaison services to the Kiambu agroecology multi-stakeholder platform.

Furthermore, there are capability challenges in county government finance management that have broad implications in policy formulation and implementation. Independent institutions such as the Office of the Auditor General and the Office of the Controller of Budget as well the National Treasury have cited gaps in the control and management of public resources across all 47 counties<sup>6</sup>. The challenges include weak linkage between planning and budget formulation, inability of county governments to adhere to public procurement procedures, non-adherence to principles of fiscal responsibility, pilferage of public resources, weaknesses in human resource management and weak oversight by County Assembly.

#### **4.4. Gaps and constraints**

Despite some of the provisions noted above, existing policies and implementation mechanisms are biased towards high-input agriculture. This bias is reinforced by Kenya's Vision 2030 and successive agricultural sector transformation strategies, including the current Agriculture Sector Transformation and Growth Strategy, whose objective is to transform agriculture into a commercially oriented and modern sector by increasing productivity through enhancing the access and availability of fertilizers and hybrid seeds. This bias is reinforced by a national policy commitment that exclusively promotes increased fertilizer access through bulk procurement, local manufacturing and blending, and establishing a fertilizer and seed fund.

Moreover, institutional and financial support for agro-industrial inputs is available through cooperatives, marketing boards, export promotion services, and credit for large-scale cereal, horticulture, coffee, tea, and dairy production. For example, the government established The Fertilizer and Seed Development Fund under the Public Financial Management (Fertilizer and Seed Development Fund) Regulations, 2014. The fund's purpose is to purchase hybrid maize seeds and chemical fertilizer. There are no policy

<sup>6</sup> <https://www.treasury.go.ke/wp-content/uploads/2024/02/2024-Budget-Policy-Statement.pdf>

incentives to promote innovation, research and investment in resource efficiency and recycling to strengthen the developing biological input markets.

Existing extension or advisory programs offered by the public sector, private or local NGOs, and community-based organizations provide advice on conventional yield-maximizing agronomic practices. Still, they lack diverse and integrated agroecological practices and environmental and natural resource management approaches. Moreover, current policies, consistent with the imperative to commercialize and modernize the agricultural sector, promote commodity exports leveraging the Africa Continental Free Trade Area (AfCFTA) to promote intra-Africa regional trade. However, there is little investment in market infrastructure, including retail and wholesale outlets, cold chains and aggregation to improve connectivity between consumers and producers and re-embed food systems in local economies.

The current extension models do not create an environment for co-creation and horizontal knowledge exchange. While the policies, for example, the Land Use Policy, the National Agricultural Research Policy, and the National Agricultural Soil Management Policy, advocate for participatory, farmer empowerment and decentralized approaches, they are still predominantly steeped in the linear farmer-knowledge-deficit model, where experts develop and disseminate knowledge or technology. Agroecology, a place-based, knowledge-intensive approach, requires the engagement of farmers as active, innovative and knowledgeable agents. What is needed is a paradigm shift, moving from an expert-knowledge-technology-adoption-diffusion model to a food systems-oriented approach which involves co-learning, co-design and co-innovation with extension workers, researchers, recognizing and valorising the experiences and knowledge possessed by farmers.

The National Food and Nutrition Security Policy notes that diet-related non-communicable diseases (NCDs) such as diabetes, obesity, heart diseases and some cancers are on the rise. In response, the government supports the promotion of healthy food, diet, and exercise. However, the policy does not provide any measures such as i) standards and labelling; ii) restrictions on marketing of unhealthy beverages; iii) support for farmers' markets urban agriculture; iv) school and workplace nutrition programs; v) subsidy and tax incentives to promote production and sale of fruits, vegetables and whole grain.

As is evident, horizontal integration is lacking across sectors and even between departments or divisions within the same industry. This often leads to fragmented decision-making, inconsistent actions, uneven distribution of resources, and lack of or diffuse accountability for results and outcomes. For example, provisions for landscape level management, including protection or riparian buffers, wetlands, hill slopes, water catchment, biodiversity and fragile rangelands, are contained in the Land Policy, the National Environment Policy, the Water Policy, Agriculture Policy, and the National Agricultural Soil Management

Policy. Moreover, the effectiveness of institutions responsible for policy implementation is shaped by political economy factors, including weak governance structures, the balance of power and the dynamics of political competition and interest among and between different sectors, departments and divisions, which often undermine the capacity of institutions to services, enforce regulations and address implementation challenges.

While the county-level efforts are laudable and should be supported, developing sub-national agroecology laws, policies and institutions without a national framework and coordinating mechanism pose significant risks. These risks can lead to inefficiencies and inconsistencies that hinder the effectiveness and equity of policy implementation, which can undermine a coordinated agroecological transformation of food systems on a national scale.

# 5. Conclusion

Kenya has a raft of relevant laws, policies, and strategies that integrate agroecological principles and support the agroecological transition of the food system. These include provisions: i) for integrated soil and plant health; ii) for complementary use of organic inputs; the re-design of farms and landscapes through integrated soil, water and management, and the integration of crops, trees and livestock to support farm diversification; iii) to enhance climate resilience; iv) that strengthen co-creation of knowledge and ensure equity through participation of local communities in the food system. Moreover, explicit constitutional mandates recognize and protect the ownership of indigenous seeds and plant varieties, their genetics, diversity and use by the communities, including mechanisms to ensure the benefits from genetic resources are shared equitably with local communities.

The analysis also identifies policy and regulatory barriers to agroecological transition. Successive agricultural sector transformation strategies, including the current Agriculture Sector Transformation and Growth Strategy, are focused on transforming agriculture into a commercially oriented and modern sector by enhancing the productivity of cereal monoculture cropping by increasing the availability and access to mineral fertilizers and hybrid seeds. This narrow mercantile productivity objective is reinforced by a national policy commitment that exclusively promotes increased fertilizer access through bulk procurement, local manufacturing and blending, and establishing a fertilizer and seed fund.

Despite a raft of enabling and exemplary provisions, a lack of horizontal integration across sectors, which often leads to fragmented decision-making and an uneven distribution of resources and inconsistent implementation present veritable barriers to agroecological transition. Moreover, weak policy and sectoral integration, exacerbated by weak governance structures, sectoral power asymmetry and political competition between and among sectors, further undermine the effective implementation of provisions that support agroecological transition. More importantly, there is a need to strengthen institutional mechanisms for consultation and cooperation between the national and county governments to ensure the agroecological transformation of food systems nationally.

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