

FOOD FLOW LANDSCAPE ASSESSMENT 2025

BMZ GROW ENRICH PROJECT





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EXECUTIVE SUMMARY

The BMZ Grow ENRICH Project, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by World Vision with ADS-NRR, PMWDO, and Kivulini, aims to tackle food insecurity and malnutrition in Kenya, Somalia, and Tanzania. This Food Flow Landscape Assessment explores food systems, supply chains, and value chains, identifying vulnerabilities and opportunities to support the AU's Common Position on Food Systems Transformation.

A mixed-methods, cross-sectional approach was used, combining surveys, key informant interviews, focus group discussions, and observations in Elgeyo Marakwet (Kenya), Nuugal (Somalia), and Shinyanga (Tanzania).

In Kenya, farmers face climate change, poor infrastructure, and limited inputs. Women are key to food production but lack access to resources. Technology and biofortified crops show promise, though market instability persists. In Somalia, food systems are fragile due to drought, weak governance, and limited infrastructure. Livestock is dominant, but fishing remains untapped. Women manage household food needs but face deep vulnerabilities. In Tanzania, smallholder, rain-fed agriculture is common. Erratic weather, pests, and livestock challenges persist. Women engage across the food chain, and climate-smart practices are gaining ground.

Biofortification of crops like vitamin A-rich sweet potatoes and iron beans improves nutrition, but adoption is low due to limited awareness and weak seed systems. Women play a vital role but face systemic barriers.

Cross-border trade offers market opportunities but is hindered by inconsistent regulations, high transport costs, and poor infrastructure.

Gender equity is critical. Women are central to food systems yet face unequal access to land, finance, and decision-making. Gender-responsive policies and inclusive practices are essential for sustainable transformation.

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 Photos Courtesy: World Vision Kenya

ACRONYMS & ABBREVIATIONS

ACFTA	African Continental Free Trade Area
ASALs	Arid and Semi-Arid Lands
ADS- NRR	Anglican Development Services- North Rift Region
AU	African Union
BMZ	German Federal Ministry for Economic Cooperation and Development
CAADP	Comprehensive Africa Agriculture Development Programme
ENRICH	Enhancing Nutrition Services to Improve Maternal and Child Health
EAC	East African Community
GDP	Gross Domestic Product
GESI	Gender Equality and Social Inclusion
FGD	Focus Group Discussion
FSRP	Food Systems Resilience Program
GAIN	Global Alliance for Improved Nutrition
KII	Key Informant Interviews
NGOs	Non- Governmental Organizations
PMWDO	Puntland Minority Women's Organization
PWDs	People With Disabilities
SMEs	Small and Medium-sized Enterprises
SPSS	Statistical Package for the Social Sciences
USD	United States Dollar
WFP	World Food Programme

INTRODUCTION

1.1. Background of the BMZ Grow ENRICH Project ■

The BMZ Grow ENRICH Project, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by World Vision in partnership with Anglican Development Services- North Rift Region(ADS- NRR) in Kenya, The Puntland Minority Women's Organisation (PMWDO) in Somalia and Kivulini Women's Rights Organisations in Tanzania addresses food insecurity and malnutrition in Kenya, Somalia, and Tanzania.

The project, which runs from September 2023 to August 2027, focuses on strengthening food systems, improving maternal and child health, and promoting gender-sensitive interventions. It targets key regions—Elgeyo Marakwet (Kenya), Nuugal Region (Somalia), and Shinyanga District (Tanzania)—with the goal of enhancing nutrition, resilience, and accessibility within food value chains.

The initiative supports over 506,000 direct beneficiaries, addressing systemic barriers to food security and sustainability. The food flow assessment analyzed production, supply chains, processing, and trade while identifying vulnerabilities and cross-border food flows.

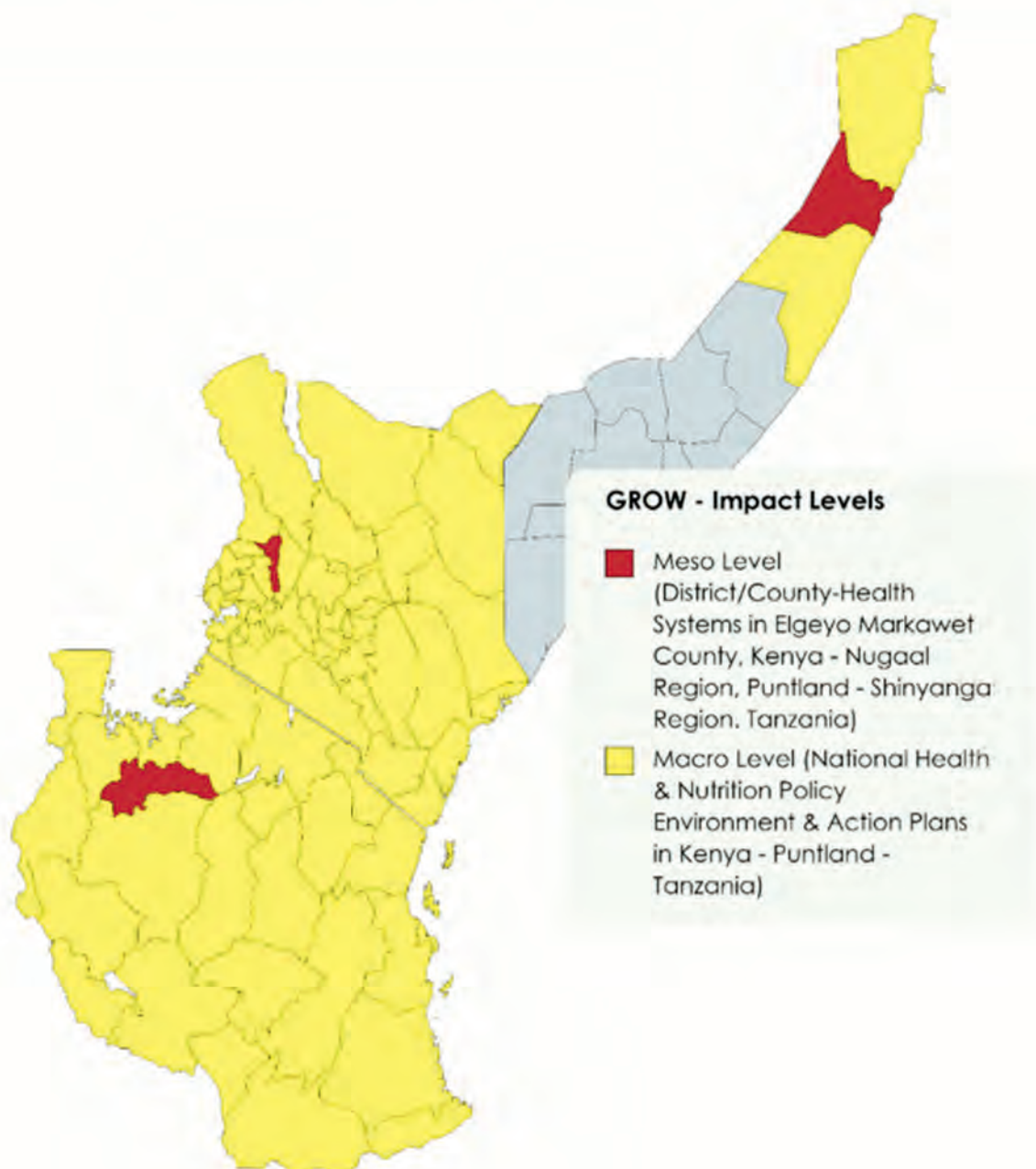


The project focuses on strengthening food systems, improving maternal and child health, and promoting gender- sensitive interventions

INTRODUCTION

1.2. Scope of the BMZ Grow ENRICH Project

The project takes a multi-level approach at micro, meso, and macro levels that engages local communities, regional stakeholders, and national governments to address the root causes of malnutrition and gender inequality.



INTRODUCTION

1.3. Context of Food Systems

Africa's food systems face complex challenges, including climate change, rapid population growth, socio-economic disparities, and weak governance. Regional frameworks such as the Comprehensive Africa Agriculture Development Programme (CAADP) and the African Union (AU) Common Position on Food Systems aim to promote sustainable and inclusive agricultural practices.

At the East African level, policies like the Agricultural Sector Development Strategy and the Food Systems Resilience Program (FSRP) guide interventions to improve market access, infrastructure, and climate-smart practices.

However, reliance on rain-fed agriculture, limited mechanization, and cross-border trade inefficiencies remain key barriers. In Kenya, agriculture contributes to 30% of Gross Domestic Product (GDP) and employs 70% of the rural population, but challenges such as high production costs and market inefficiencies persist. Somalia's food systems remain highly vulnerable due to conflict, weak governance and climate shocks, with reliance on livestock and small-scale farming. Tanzania, while a net exporter of staple foods, faces erratic rainfall, poor transport networks, and inadequate irrigation systems, limiting agricultural productivity.

INTRODUCTION

1.4. Objectives of the Assessment



1 Mapping Food Distribution by identifying and mapping the pathways through which food moves from production to consumption, including supply chains, transportation routes, and distribution networks.



2 Evaluating Accessibility by assessing how accessible food is to different populations, including underserved communities, and identifying barriers to access such as distance, cost, and availability.



3 Assessing Sustainability by evaluating the environmental impact of food flows, including energy use, waste generation, and carbon footprint, to recommend more sustainable practices.



4 Identifying Inefficiencies or bottlenecks in the food flow system that may lead to waste or increased costs and suggest improvements.



5 Enhancing Resilience by analyzing vulnerabilities and proposing strategies for better preparedness for improved resilience of the food system to disruptions, such as supply chain interruptions or natural disasters.



6 Supporting Policy Development by providing data and insights to inform policy decisions and strategic planning aimed at improving food systems at local, regional, or national levels.

INTRODUCTION

1.5. Methodology

The assessment adopted a mixed methods approach, combining quantitative and qualitative data collection techniques. Data was gathered through desk reviews, survey questionnaires, key informant interviews (KIIs), focus group discussions (FGDs), and observation checklists. The desk review analyzed existing literature, policies and reports.

The questionnaires were administered to 1,290 respondents across Kenya, Somalia and Tanzania. 115 key informant interviews (KIIs) were conducted with key stakeholders, including policymakers, traders and community leaders. 57 focus group discussions (FGDs) were held to capture localized experiences of key stakeholders within the food value chains.

On-site observations of food systems, infrastructure, and market dynamics. Data collection was carried out between October and November 2024. The methodology adhered to ethical standards, ensuring Gender Equality and Social Inclusion (GESI) by incorporating diverse participants, including women, youth and persons with disabilities (PWDs).

Data was analyzed using Statistical Package for the Social Sciences Program (SPSS) for quantitative insights and thematic coding for qualitative narratives.



**The questionnaires were administered to
1,290 respondents across Kenya,
Somalia and Tanzania.**



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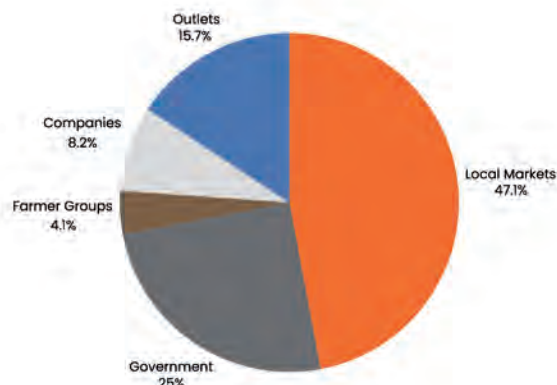
FOOD FLOW ASSESSMENT FINDINGS

2.1. KENYA: Elgeyo Marakwet County

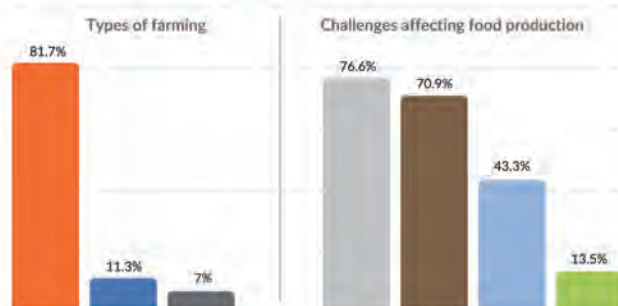


INPUT SUPPLY

Most farmers in Elgeyo Marakwet source inputs from local markets (65.9%), followed by the government (34.8%), outlets (15.7%), companies (8.2%), and farmer groups (4.1%). However, 94.4% of farmers face high costs of fertilizers, seeds, and seedlings, making them unaffordable. Long distances to supply centers further increase transportation costs and delays.



● Crop farming
 ● Subsistence
 ● Livestock farming
 ● Climate change
 ● Pests
 ● Land shortages
 ● Soil degradation



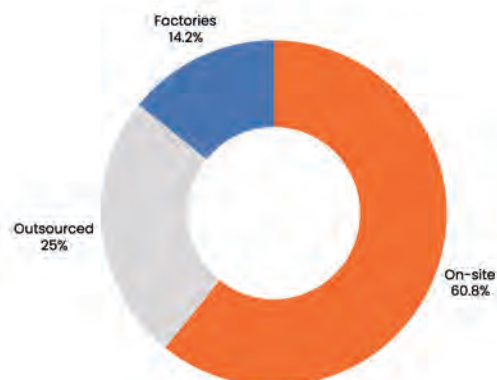
FOOD PRODUCTION

Crop farming is dominant (81.7%), followed by subsistence (11.3%) and livestock farming (7%). Farmers grow fruits, vegetables, and cereals, but climate change (76.6%) and pests (70.9%) significantly impact production. Land shortages (43.3%) and soil degradation (13.5%) also contribute to declining yields.



FOOD PROCESSING

Food is mainly processed on-site (39.4%), outsourced (16.2%), or at factories (9.2%). Processing adds value, increases shelf life, and improves marketability, but high energy, labor, and packaging costs reduce profitability.



● Local markets
 ● Home
 ● Roadside



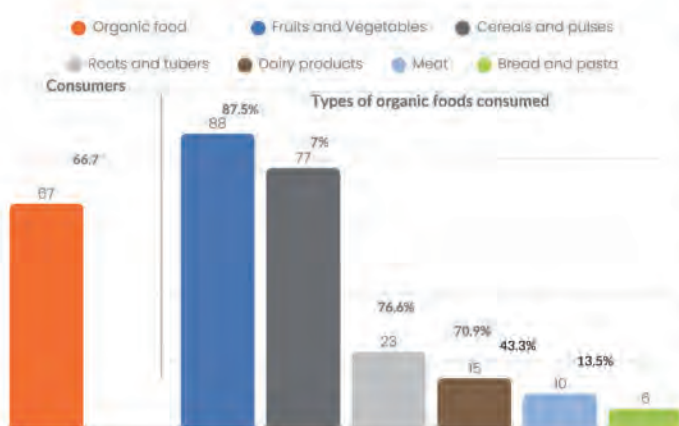
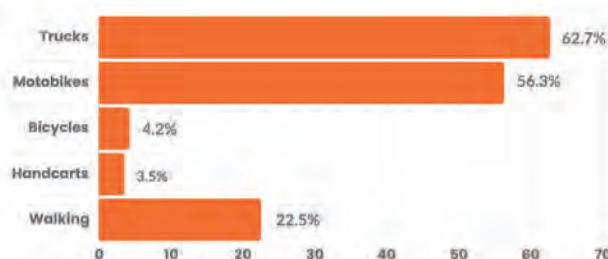
FOOD MARKETING

Most farmers sell at local markets (72.6%), from home (54.1%), or by the roadside (19%). Challenges include poor pricing regulations, high taxes, and exploitation by middlemen, leading to unfair pricing and unstable income for producers.



FOOD TRANSPORTATION

Trucks (62.7%) and motorbikes (56.3%) are the main modes of food transport in Elgeyo Marakwet, followed by bicycles (4.2%) and handcarts (3.5%), while 22.5% of farmers walk their goods to market. Although 69.2% are satisfied, poor roads and rising fuel prices delay delivery and reduce profit margins. However, the sector is impacted by infrastructure challenges, such as poor road conditions and fuel costs, which can cause delays or increase transportation expenses.



FOOD CONSUMPTION

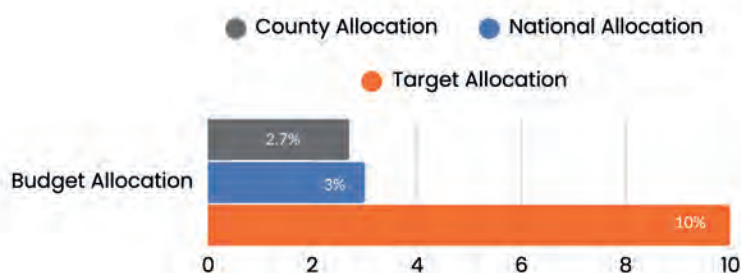
At the consumption level, 66.7% of the consumers reported that they were consuming organic food in their households. The majority of the consumers were consuming organic fruits and vegetables (87.5%) followed by organic cereals and pulses (77.3%), organic roots and tubers (22.7%), organic dairy products (14.8%), organic meat (10.2%) and organic bread and pasta (5.7%). Inflation and the rising cost of living have made nutritious foods like meat and dairy products less accessible to local communities, especially in rural areas.



FOOD WASTE & DISPOSAL

On food waste, food waste often starts even before food reaches consumers. A large amount of food is lost due to poor post-harvest handling, inadequate storage facilities, and lack of proper infrastructure. Smallholder farmers, who form a significant part of the food production and agriculture sector, suffer from these losses as they lack access to modern farming techniques and preservation methods.

"On average, I estimate that about 5% to 10% of our produce go to waste each month, particularly highly perishable items like mangoes and watermelons, if they don't sell within a few days."- Processor, Mango Processing Plant in Kerio Valley.



POLICY IN SUPPLY CHAINS

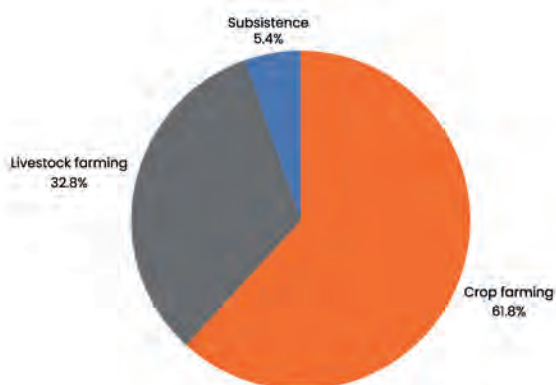
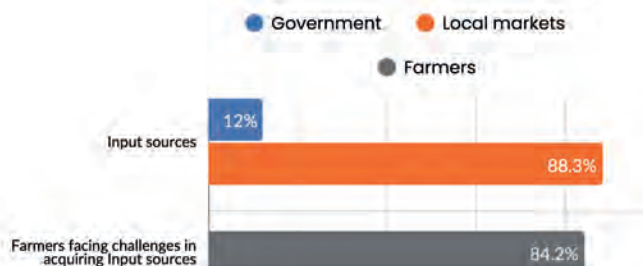
Kenya's agriculture sector receives only 3% of the national budget, well below the 10% Kampala target. Elgeyo Marakwet County allocates just 2.7%, limiting efforts to strengthen food systems. Weak coordination and funding gaps hinder food security programs.

FOOD FLOW ASSESSMENT FINDINGS

2.2.TANZANIA: Shinyanga District

INPUT SUPPLY

Most farmers in Shinyanga Region obtain farm inputs from local markets (88.3%), while others rely on the government (12%), companies, outlets, and farmer groups. 84.2% of farmers face challenges in acquiring inputs, with high costs of seeds and fertilizers remaining a major barrier despite subsidy programs.

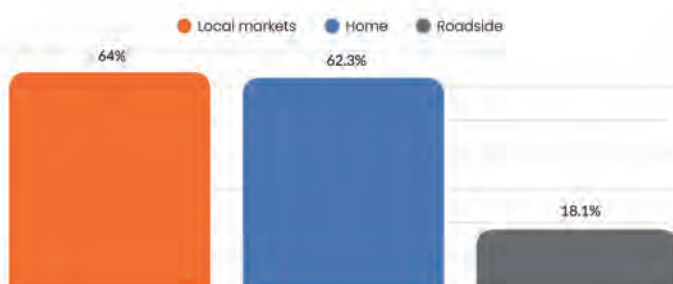
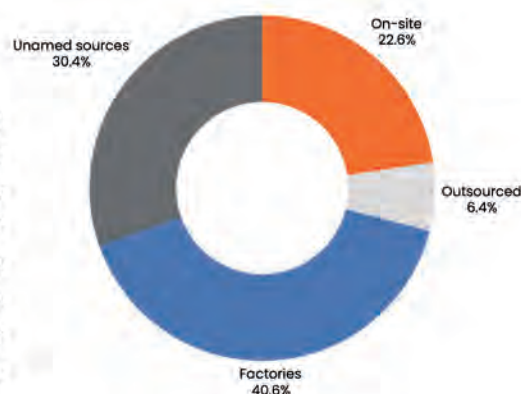


FOOD PRODUCTION

Majority of the farmers (91.5%) in Shinyanga region practiced crop farming, while only (6.0%) practiced livestock framing and subsistence farming (2.1%) respectively. Key challenges affecting food production were inadequate access to water resources, limited access to high-quality biofortified seeds, significantly impacting crop resilience and productivity, high cost of agricultural inputs, particularly seeds and fertilizers, soil degradation, pests and diseases.

FOOD PROCESSING

Food in Shinyanga region is processed on site (22.6%), outsourced (6.4%), factory (40.6%) and other unnamed sources (30.4%). Traditional food processing is prevalent in Shinyanga region, where methods like sun-drying, chopping, milling, sieving & sifting, packaging, washing/cleaning, grading, cooking & heating, smoking, and fermentation are commonly employed to preserve food. However, key challenges like unreliable power supply, poor road networks, and inadequate water supply result to increase production costs and this affects food processing processes.



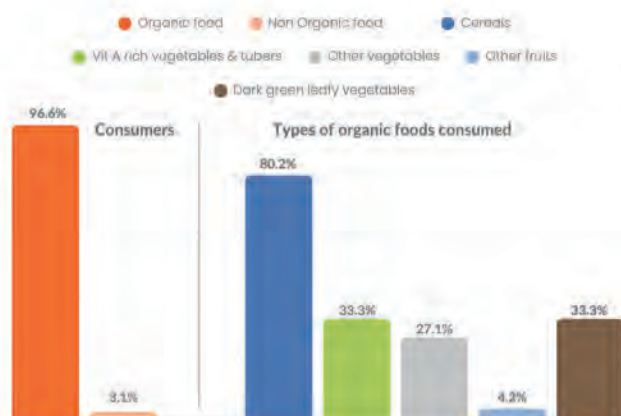
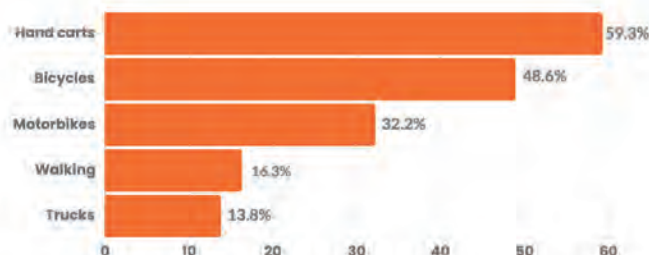
FOOD MARKETING

Most traders sell in local markets (64%), from home (62.3%), or by the roadside (18.1%). Informal markets are vital for small farmers, but poor infrastructure, high taxes, long distances to markets, and lack of marketing knowledge reduce profitability.



FOOD TRANSPORTATION

The most common modes of transporting food in Shinyanga region are hand carts (59.3%), bicycles (48.9%), motorbikes (32.2%), physically by person (16.3%), and trucks (13.8%). Key challenges cited that affect food transportation in Shinyanga include poor road infrastructure especially in rural areas and a lack of coordinated transport services and insufficient storage facilities along transport routes.



FOOD CONSUMPTION

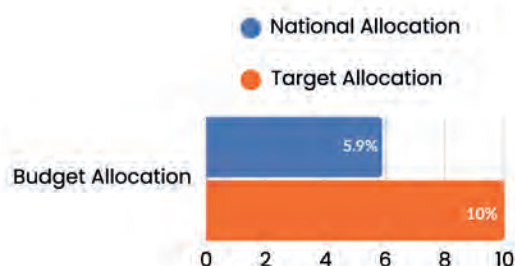
Majority of the consumers (96.6%) reported that they were consuming organic food while the 3.1% were not consuming organic food in their households. Cereals form a significant portion of the diet (80.2%) while consumption of vitamin A-rich vegetables and tubers and other vegetables is substantial (33.3% and 27.1% respectively), while other fruits are consumed less frequently (4.2%). Dark green leafy vegetables show moderate daily consumption (33.3%). Factors like over reliance on staple foods, lack of nutrition awareness and cost of nutritious foods were affecting the dietary diversity of most consumers engaged in Shinyanga Region.



FOOD WASTE & DISPOSAL

Despite interventions by government and NGOs to promote better waste management practices, such as composting organic waste or converting animal manure into biogas, general lack of awareness and knowledge about sustainable waste management practices results in the continued reliance on traditional disposal methods that are harmful to the environment and public health.

“Inadequate awareness and knowledge about sustainable waste management practices results in the continued reliance on traditional disposal methods that are harmful to the environment and public health.” – District Trade Officer, Shinyanga District Council



POLICY IN SUPPLY CHAINS

The major policy gaps in Tanzania's food sector is the lack of an integrated approach to supply chain management. The supply chains are often fragmented and inefficient, with smallholder farmers facing difficulties in accessing markets due to poor infrastructure, lack of storage facilities, and inadequate transportation. Inadequate resource allocation was also noted as a challenge where Tanzania allocates 5.9% of their budget on agriculture which falls short of the 10% required under the Malabo Declaration.

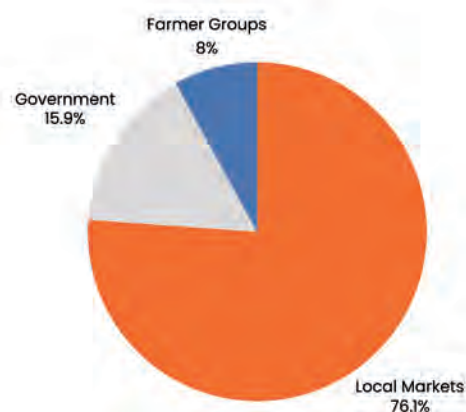
FOOD FLOW ASSESSMENT FINDINGS

2.3. SOMALIA: Nuugal Region

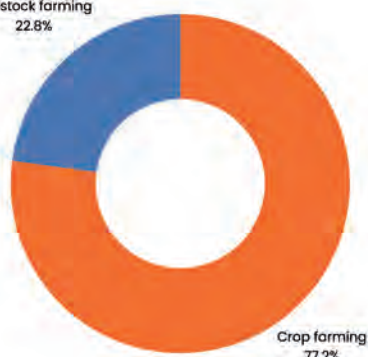


INPUT SUPPLY

Most farm inputs (83.9%) in Puntland come from local markets, with limited contributions from government (17.5%) and farmer groups (8.8%). However, nearly 90% of producers struggle with access due to high costs and lack of knowledge on appropriate inputs..



Livestock farming
22.8%



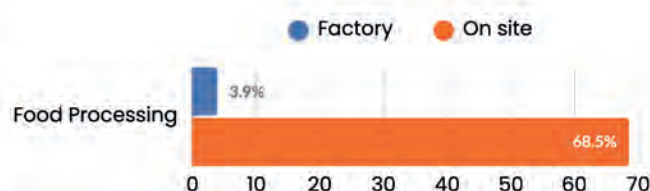
FOOD PRODUCTION

The Majority of the producers engaged (69.3%) practised crop farming compared with only 20.5% of the farmers practising livestock farming. The desk review findings further emphasized that livestock farming, particularly camel, goats, and sheep, is a cornerstone of Puntland's economy and food production. Key factors affecting food production include unpredictable rainfall, lack access to modern agricultural technologies, including efficient irrigation systems, machinery, and high-yield crop varieties for local farmers.

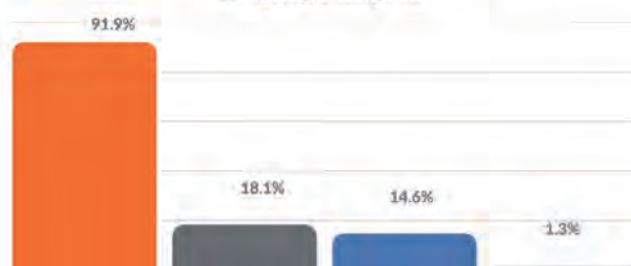


FOOD PROCESSING

Food processing is mainly done on-site (68.5%), with minimal factory processing (3.9%). Limited milling facilities lead to high post-harvest losses, affecting both smallholder farmers and processors.



Local market Suppliers Retail outlets
Export processing area



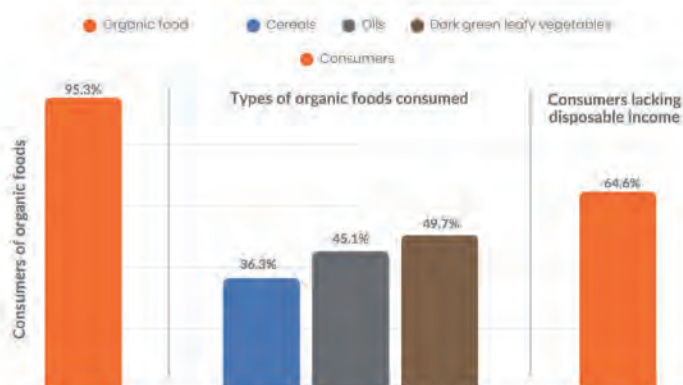
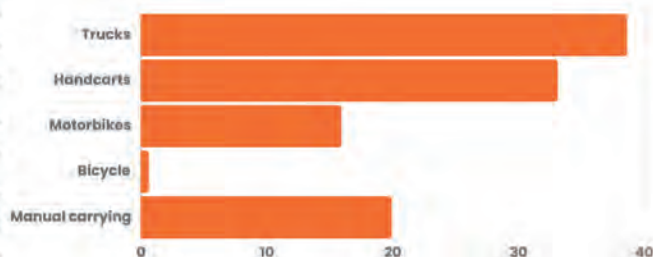
FOOD MARKETING

The most common market for farm products (91.9%) was the local market. The other markets included suppliers (18.1%) of the farm retail outlets (14.6%) and export processing area (1.3%). Key challenges affecting food marketing in Puntland included poor infrastructure of available markets, poor road network which limits access and government policies such as import/export regulations, taxation, and customs duties.



FOOD TRANSPORTATION

More than a third of the farm produce (38.6%) was transported to the market by trucks followed by handcarts at (33.1%). Other means of transport utilized to transport food included motorbikes and bicycles 15.9% and 0.6% respectively. About 19.9% of the producers transport producers by manual carrying. Poor road infrastructure, insecurity, conflicts, and extreme weather conditions all hinder food transportation, especially in rural areas, leading to delays and reduced food quality.



FOOD CONSUMPTION

The majority of the consumers (95.3%) reported that they were consuming organic food products. Discussions with consumers also revealed that only 36.3% of households consume cereals daily. Oils are used by 45.1%, while 49.7% never eat dark green leafy vegetables. Traditional foods like bariis, canjeero, and camel milk dominate diets. Affordability significantly influenced dietary patterns, with 64.6% of consumers reporting a lack of disposable income.



FOOD WASTE & DISPOSAL

Poor roads hinder access to markets, causing farmers to store produce until spoilage occurs. Lack of awareness of modern waste management techniques results in environmental hazards from traditional disposal methods.

"Extreme weather events, such as floods, damages both crops and infrastructure, leading to increased food waste. Remote areas experience difficulty accessing larger markets due to damage and blockage of roads, resulting in local oversupply and spoilage." -Trader, EYL District



POLICY IN SUPPLY CHAINS

Despite agriculture being a priority in development plans, policy gaps exist in climate adaptation, irrigation promotion, and quality control. Weak regulations limit Puntland's ability to export food products competitively.



The Grow ENRICH project supports over
506,000 direct beneficiaries
addressing systemic barriers to food
security and sustainability.

FOOD FLOW ASSESSMENT FINDINGS

2.4. Biofortification



Kenya has mandatory food fortification regulation and quality standard for salt, wheat flour, maize flour, and edible oils and fats production. Kenya has made notable progress in promoting biofortified crops such as Nyota beans with the support of organizations like KALRO. However, limited access to information agricultural extension services and certified seeds remains a significant barrier to widespread adoption. Rural populations, where food insecurity and nutrient deficiencies are more prevalent, may not be aware of food fortification programs, or may not trust fortified foods due to misinformation or lack of education on the subject.



The Tanzania National Biofortification Guidelines 2020 were also developed to contribute to national efforts to reduce nutritional deficiencies as a significant public health problem among vulnerable groups[1]. Tanzania has achieved significant milestones in biofortification, particularly with vitamin A- ENRICHed maize and cassava, supported by government and research institutions like TARI. However, one of the main challenges hindering the production of bio-fortified crops in the community is the limited availability of seeds. While there have been efforts to introduce bio-fortified crops like sweet potatoes and yellow maize, the distribution has been insufficient.

[1] Tanzania National Biofortification Guidelines 2020



Food fortification initiatives in Somalia are guided by the National Food Fortification Strategic Plan 2019-2024 whose objective was to improve nutritional status of people in Somalia, by combating micronutrient deficiencies through national food fortification for accelerated socioeconomic development. In Somalia, efforts are still in their early stages, with limited awareness and adoption of biofortified crops due to traditional farming practices, weak infrastructure, and limited access to improved agricultural inputs.

FOOD FLOW ASSESSMENT FINDINGS

2.5. Gender & Food Systems

Kenya



Women in Kenya's food systems occupy a pivotal role, contributing extensively to agricultural production, food processing, and distribution. They manage key stages of production, including planting, weeding, harvesting, and post-harvest activities. However, these contributions are undermined by systemic gender inequities that limit their access to productive resources, such as land, quality farm inputs, and financial capital. According to the findings, cultural norms and legal frameworks significantly influence women's access to land, leaving many unable to secure ownership or long-term rights.

Tanzania



Women in Tanzania's food systems are integral to agricultural production, food processing, and distribution. They participate actively in smallholder farming, which forms the backbone of the country's food supply, and are involved in cultivating staple crops such as maize, cassava, and pulses. Despite their contributions, Tanzanian women face systemic barriers, including limited access to land, credit, and agricultural inputs. Cultural and traditional norms often restrict women's land ownership, leaving them reliant on male family members for access to farmland which hinders their ability to engage in large-scale farming or adopt climate-resilient practices.

Somalia



In Somalia, women play an integral role in sustaining food systems, particularly in the household and community contexts. They are the primary managers of food security within their families, often ensuring the availability, preparation, and nutritional adequacy of food. Despite their critical contributions, Somali women face significant challenges due to systemic inequities and vulnerabilities exacerbated by conflict, weak governance, and recurrent climate shocks. Customary and Islamic laws often restrict women's rights to own or inherit land, leaving them dependent on male relatives.



Women in Kenya's food systems occupy a **pivotal role**, contributing extensively to agricultural production, food processing, and distribution.

FOOD FLOW ASSESSMENT FINDINGS

2.6. Cross-border

While cross-border food flow in East Africa has significant potential, challenges such as policy inconsistencies, infrastructure deficits, and security concerns hinder its full realization. Cross-border food flow policies have made progress in reducing trade barriers and enhancing food security, but significant gaps remain in harmonization, infrastructure, and enforcement. Opportunities to strengthen cross-border food flow include policy harmonization, infrastructure investment, technology adoption, and empowering smallholder farmers and women traders.

Addressing these areas can create a more integrated, efficient, and resilient regional food trade system, enhancing food security and economic growth. Institutions like the EAC, EAGC, and AU must play a central role in bridging these policy gaps but stronger enforcement mechanisms and inclusive frameworks (e.g., Somalia's integration into EAC and AfCFTA) are essential for realizing the full potential of regional food trade.

Cross-border food flow policies have made progress in reducing trade barriers and enhancing food security, but significant gaps remain in harmonization, infrastructure, and enforcement.



3.1. Conclusions

In Kenya, agriculture remains a primary livelihood source, with Elgeyo Marakwet County showcasing a mix of crop farming, livestock rearing, and subsistence practices. Challenges include climate change, limited access to quality inputs, and infrastructure deficits. Women play a critical role in food production and processing but face systemic barriers such as inadequate access to resources. Food supply chains are characterized by inefficiencies, particularly in transportation and market accessibility. The integration of technology, such as biofortified crops and mobile banking, offers promising avenues for enhancing productivity and resilience.

Somalia's food systems are among the most vulnerable in East Africa, with the Nuugal Region heavily reliant on livestock farming and small-scale crop production. Key challenges include recurrent droughts, weak governance, and limited infrastructure, which exacerbate food insecurity. The fishing industry, despite its potential, remains underdeveloped. Women are integral to household food management but are disproportionately affected by systemic vulnerabilities. Local markets are constrained by poor integration and high transportation costs, limiting producers' access to buyers.

Tanzania's Shinyanga Region demonstrates significant reliance on rain-fed agriculture and smallholder farming. Key crops include maize, cassava, and pulses, but erratic rainfall and pests like the Fall Armyworm present ongoing challenges. Livestock farming complements crop production but suffers from inadequate veterinary services and feed shortages. Women's participation in food systems is pronounced, with their contributions spanning production, processing, and distribution. Market access is improving, but transportation costs and infrastructure deficits remain critical bottlenecks.

Biofortification enhances the nutritional quality of staple crops, improving food security and public health across Kenya, Somalia and Tanzania. Key biofortified crops, such as vitamin A- ENRICHed sweet potatoes, iron- fortified beans, and zinc- ENRICHed maize, contribute to addressing micronutrient deficiencies. However, adoption remains low due to limited awareness, inadequate seed distribution, and weak market linkages. While Kenya and Tanzania have made progress through government and NGO- led initiatives, Somalia faces significant challenges due to weak governance and infrastructural deficits.

CONCLUSIONS & RECOMMENDATIONS

3.2. Recommendations

Kenya

- **Improvement of Infrastructure and Transport:** The findings indicated that investment in rural roads and transportation facilities would enhance farmers' access to processing plants. This would reduce delays in receiving raw materials, ensuring the timely and efficient transport of goods, ultimately improving the overall food supply chain.
- **Enhance Adoption of Biofortification Practices:** The government and CSOs working in the food security sector should support the development of biofortified varieties of staple crops, such as maize, beans, sweet potatoes, and millet, which are crucial to the Kenyan diet. Research can focus on enhancing the levels of essential nutrients such as vitamin A, iron, zinc, and folate.
- **Enhancement of Training and Skill Development:** Training on the use of new technologies and techniques in food processing was seen as a key driver for improving product quality and operational efficiency. Stakeholders in the food value chain emphasized that a skilled workforce is essential for minimizing waste and maximizing the potential of the food flow system, making it more sustainable and productive.
- **Adoption of Modern Technologies and Innovation:** The findings emphasized the importance of integrating modern technologies to improve the yield and resilience of crops like maize, beans, and cassava. Genetically modified crops can withstand pests, diseases, and harsh climatic conditions.
- **Advocacy for Supportive Policies:** The stakeholders engaged highlighted the need for supportive policies that would enable a more favourable environment for food processors. Policies focused on reducing costs, offering subsidies for technological advancements, or improving access to funding for infrastructure projects would create a more conducive environment for growth in the food processing sector.
- **Market Diversification and Targeting:** Findings from the assessment noted that understanding market dynamics is critical for improving food sales. Strategies like market research and segmentation to identify high-demand products and target specific customer groups. Seasonal discounts, bundles, and sourcing from local farmers were proposed to attract price-sensitive customers and reduce transportation costs.

CONCLUSIONS & RECOMMENDATIONS

3.2. Recommendations

Tanzania

- **Promote Climate-Smart Agricultural Practices:** Adopt and promote climate-smart agriculture practices across the sector to enhance productivity and environmental sustainability. This includes the use of drought-resistant crop varieties, improved water management techniques, and soil conservation practices.
- **Enhance Adoption of Biofortification:** Encourage research and development of biofortified varieties of staple crops, such as maize, cassava, sweet potatoes, beans, and rice, that are rich in essential micronutrients like iron, zinc, and vitamin A.
- **Strengthen Market Connections and Supply Chain Integration:** Develop programs like use of farm-to-market digital platforms that connect farmers directly with buyers, including processors, retailers, and exporters, to improve market access and reduce the layers of intermediaries. Implementing supply chain integration initiatives such as cooperative farming models can help achieve economies of scale, improve bargaining power, and reduce costs.
- **Implement and Enforce Supportive Policies and Regulations:** Review and streamline agricultural policies and regulations to ensure they support the growth and sustainability of the sector. This includes policies that encourage investment in agriculture, streamline land ownership issues, and provide incentives for sustainable practices.
- **Foster Public-Private Partnerships:** Encourage partnerships between the government, private sector, and non-governmental organizations to leverage additional resources, expertise, and innovation. The private sector can facilitate financing for programs aimed to empower local farmers while CSOs could design programs to train farmers on adoption of modern techniques of farming and biofortification.
- **Invest in Infrastructure Development:** Prioritize the development and maintenance of critical infrastructure such as roads, irrigation systems, and storage facilities. Expanding irrigation infrastructure will decrease dependency on rain-fed agriculture, thus mitigating the impact of climatic variability. Develop crop zones based on soil types to optimize agricultural productivity and construct water storage structures like pans and check dams to address water scarcity.

CONCLUSIONS & RECOMMENDATIONS

3.2. Recommendations

Somalia

- **Financial Support and Education for Farmers:** Providing financial support through subsidies, loans, and access to credit is a critical recommendation for enhancing food production. Education and training programs in agricultural best practices, financial literacy, and business management were repeatedly emphasized in the interviews as crucial for empowering farmers to improve productivity and profitability in the long run.
- **Infrastructure Improvement and Access to Markets:** The findings indicated that improving infrastructure, particularly rural roads and storage facilities, is essential to reducing post-harvest losses and enhancing market access for farmers. Better roads, storage options, and irrigation systems could significantly improve productivity and ensure farmers can sell their products at fair prices.
- **Adoption of Sustainable Agricultural Practices:** Promoting sustainable farming practices, including conservation agriculture and organic farming, is crucial for improving soil health and resilience against climate impacts. The findings revealed that such methods can boost long-term productivity and environmental sustainability.
- **Promoting Biofortified Varieties:** Local farmers and government should collaborate with agricultural research institutions (like ICARDA or CIMMYT) to develop genetically improved varieties of biofortified crops. Department in charge of Agriculture should also ensure that biofortified seeds are widely available and affordable to farmers across Somalia, especially in rural and conflict-affected areas, is crucial. Government and NGO partnerships can facilitate this.
- **Promote Climate-Smart Agriculture:** Promote practices that are climate-friendly that minimize emissions or increase carbon sequestration where possible. Integrate renewable energy (e.g. solar pumps) into agricultural operations. Promote practices that conserve the environment and implement measures to protect water catchments and reduce land degradation.



Key biofortified crops, such as vitamin A-**ENRICHed** sweet potatoes, iron- fortified beans, and zinc- **ENRICHed** maize, contribute to addressing micronutrient deficiencies.

PARTNERS

THANK YOU





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