

COOPERATION BETWEEN UKRAINE AND AFRICAN COUNTRIES IN AGRICULTURE: EAST AFRICA

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INTRODUCTION

In this report, we analyse three most-populated countries in East Africa (Ethiopia, Tanzania, and Kenya) to unveil their potential of partnership with Ukraine in agricultural and food processing industries. First, we observe food security profiles of these countries, comparing them with the regional benchmarks. Second, we describe local UN World Food Programme operations intended to strengthen local food security. Third, we examine agri-food trade patterns and the level of food self-sufficiency for the selected countries. Fourth, the local agricultural sector is analysed to understand the potential of food production in East Africa. Then, it is followed by the overview of current challenges of local agricultural producers. Finally, we provide the overview of the national agri-food policy and its effect on local production in each of the three countries.

EXECUTIVE SUMMARY:

Agricultural development in East Africa, specifically in Ethiopia, Kenya, and Tanzania, has made significant progress over the past decades. However, challenges such as food insecurity, climate risks, and infrastructure gaps remain acute. Food insecurity persists across all three countries, driven by factors like population growth and rural poverty. In Ethiopia, Kenya and Tanzania percentage of the food insecure population is slightly lower than the regional average (28.4%), but is still high, with increasing reliance on imported cereals to meet domestic demand. In the past years, the UN World Food Programme (WFP) was focused on providing food aid for vulnerable population and increasing resilience for smallholder farmers in the region.

Agri-food trade in East Africa has grown steadily, with imports of cereals, vegetable oils, and sugar being dominant across the three countries. Exports, however, remain specialized. Ethiopia is a major exporter of coffee and oilseeds, while Kenya specializes in tea, coffee, and cut flowers. Tanzania, meanwhile, exports maize and sugarcane. Trade between Ukraine and East Africa is relatively small, with Ukraine primarily exporting cereals to the region. Local agricultural production continues to play a vital role in the economies of these countries, but productivity levels remain low due to limited access to modern technologies and finance.

Agriculture contributes significantly to GDP and employment in East Africa. On average, half of the regional workforce in engaged in agricultural production. The primary crops in the region include maize, wheat, and sugarcane. Livestock production is also important, particularly in Ethiopia, where cattle and dairy production are central to the agricultural economy. Despite stable growth in agricultural production, the lack of irrigation infrastructure and modern farming techniques continues to hamper productivity.

The challenges faced by agriculture in East Africa include climate change and variability, poor infrastructure, and limited access to financial services and modern technologies. The reliance on rain-fed agriculture makes the sector particularly vulnerable to droughts and floods, leading to volatile yields and food insecurity. In addition, infrastructure deficits, such as inadequate rural roads and storage facilities, result in high post-harvest losses and limit market access for farmers.

Agricultural policies in East Africa are primarily focused on improving productivity and food security through modernization and investment in infrastructure. Ethiopia, Kenya, and Tanzania have introduced various programs aimed at enhancing irrigation, market access, and technology adoption. For instance, Kenya's Vision 2030 and Tanzania's Agricultural Sector Development Programme (ASDP II) are central to these efforts, prioritizing sustainable practices, value addition, and climate resilience. However, despite these policy efforts, the lack of consistent funding and coordination remains a barrier to achieving long-term agricultural development in the region.

EXECUTIVE SUMMARY

The options of cooperation between Ukraine and East African countries were discussed on the online seminar Partnership of Ukraine and African countries in agriculture: options for cooperation with East African countries organized by KSE Agrocenter on August 20, 2024. There are two main features of cooperation with this region. First, local markets for processed foods are protected by import tariffs imposed under the East African Community (EAC). Therefore, direct trade relations could be partially replaced by the joint investment activity intended to develop local food processing of imported raw commodities. Second, the humanitarian initiative «Grain from Ukraine» coordinated by UN World Food Programme pay attention to the region. The spread of humanitarian flows across the region positively affects diplomatic and trade relations between Ukraine and local states.

The main areas of partnership between Ukraine and East African countries in agriculture are the following:

- 1. Development of existing export markets and opening new destinations:
 - the development of agri-food diplomacy (through the network of agrarian attachés) aimed at the formation of preferential trade regimes for Ukrainian products;
 - provision of consulting services for the entry of Ukrainian businesses into African markets (including through the LLC "Ukrainian-African Trade Mission" headed by the Ministry of the Agrarian Policy and Food of Ukraine).
- 2. Joint investment projects in the following areas:
 - construction of infrastructure for product storage (elevators, cold storages);
 - · development of reclamation systems;
 - joint Ukrainian-African enterprises for the production and processing of agricultural products;
 - transfer of agricultural technologies.
- 3. Joint educational and scientific projects in agriculture in the following directions:
 - agronomy and selection;
 - veterinary medicine;
 - agricultural economics;
 - artificial intelligence and information technologies in agriculture;
 - ensuring product quality and safety;
 - extension services.

1. ETHIOPIA

1.1. FOOD SECURITY

Ethiopia is the most populated country in East Africa and has the second largest population on the continent (after Nigeria). Since 2000, its population has grown by 82%, exceeding 120 million people as of 2022 (Figure 1). It is interesting that such rates are close to the population growth rate of the entire East African region during the same period (83%). This demographic progress is based on strong economic growth since the 1990s and health care reform that has allowed a sharp reduction in child mortality (May, 2020).



Over the last two decades, Ethiopia has shown rapid economic growth, with GDP per capita increasing more than 8 times (Figure 2). The main drivers of this growth were the inflow of foreign investments (in particular, from China), productivity growth in manufacturing and the services sector (World Bank, 2024).



1. ETHIOPIA / 1.1. FOOD SECURITY

Economic improvements allowed to mitigate hunger in urban areas throughout the country. Therefore, the share of the undernourished population has halved over the past decade and reached 22% in 2022 (Figure 3).



As for the number of undernourished persons, it declined from 31 to 26 million persons during the observed period (Figure 4). This success is explained mostly by reduction of urban poverty, while the situation with rural poverty remains difficult (World Bank, 2020).



The growth of calories supply is reflected in the average dietary energy supply adequacy indicator. In 2000, Ethiopians received an average of about 88% of the required number of calories, in 2022 they receive 112% (Figure 5).



The share of dietary energy supply derived from cereals, roots and tubers decreased from 82% to 75% over the last decade, indicating the progress in diet diversification (Figure 6).







1. ETHIOPIA / 1.1. FOOD SECURITY

Nevertheless, the share of animal protein in diet remains quite low and was relatively stable over the last two decades (Figure 8).



Per capita food supply variability in the country followed the regional trend but showed higher magnitude due to strong local food demand (Figure 9).



The share of import in total cereal supply is reflected in cereal import dependency ratio. As Figure 10 shows, Ethiopia is more self-sufficient in cereals compared to the whole East African region; this self-sufficiency increases over the last years.



The priorities of World Food Programme (WFP) activities in Ethiopia are shifted towards the UN Strategic Development Goal (SDG) 2 - Zero Hunger (Table 1). In particular, WFP supports low-income population and refugees in targeted areas. Another track is related to SDG 17 - Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development. In particular, WFP conducts projects intended to enhance logistic system and ensure smooth functioning of food supply chains.

Table 1.	. WFP	Ethiopia	Country	Portfolio	Budget	2023	(2020-2025)
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SDG target	Strategic outcome	Expenditures, mln. USD	Share in total expenditures, %
2.1. Access to Food	Shock-affected populations in targeted areas and refugees in camps are able to meet their basic food and nutrition needs throughout the year. Vulnerable and food- insecure populations in targeted areas have increased resilience to shocks by 2025.	1817.4	75.8
2.2. End Malnutrition	Nutritionally vulnerable populations in targeted areas have improved consumption of high-quality, nutrient dense foods to prevent all forms of malnutrition through June 2025.	18.5	0.7

SDG target	Strategic outcome	Expenditures, mln. USD	Share in total expenditures, %
17.9. Capacity Building	Government, humanitarian and development partners in Ethiopia have access to and benefit from effective and cost-efficient logistics and engineering services, including air transport, common coordination platforms, improved commodity supply chains and information technology, through June 2025.	34.6	1.3
17.16. Global Partnership	Government, humanitarian and development partners in Ethiopia have access to and benefit from effective and cost-efficient logistics and engineering services, including air transport, common coordination platforms, improved commodity supply chains and information technology, through June 2025. Government, humanitarian and development partners in Ethiopia have access to and benefit from effective and cost-efficient logistics and engineering services, including air transport, common coordination platforms, improved commodity supply chains and information technology, through June 2025. Government, humanitarian and development partners in Ethiopia have access to and benefit from effective and cost-efficient logistics and engineering services, including air transport, common coordination platforms, improved commodity supply chains and information technology, through June 2025. Government, humanitarian and development partners in Ethiopia have access to and benefit from effective and cost-efficient logistics and engineering services, including air transport, common coordination platforms, improved commodity supply chains and information technology, through June 2025.	525.9	22.2
Total		2396.4	100

Source: WFP. (2024). Annual Country Reports – Ethiopia

1.2. AGRI-FOOD TRADE

Ethiopian food import increased over the last decade in monetary terms, while physical volumes remained more stable. The main import categories are vegetable oils and cereals (Figure 11). The presence of milling products in import implies on the potential for the local milling industry.



The geographical structure of import is quite diversified. The main food importers to Ethiopia are India, USA, Turkey, and Djibouti (Figure 12).



Ukraine is not primary food exporter to Ethiopia. Around 90% of import from Ukraine are wheat and corn (Figure 13).



Food exports from the country was relatively stable over the last decades. The primary export products are coffee, tea, spices, roots and tubers, oilseeds (Figure 14).



The primary destinations of food export are Saudi Arabia, Netherlands, USA, and United Arab Emirates (Figure 15). Export volumes to Ukraine are quite small; the main export category is tea and coffee.

1. ETHIOPIA / 1.2. AGRI-FOOD TRADE



Figure 15. Geographical structure of food exports from Ethiopia

1.3. LOCAL AGRICULTURAL SECTOR

Role of agriculture in Ethiopian economy have been slowly decreasing over the last three decades. Share of crop and livestock production in Ethiopian GDP decreased from 58.5% to 35.8% in 1993-2023. However, it still remains a quintessential sector, employing 62.8% of the total working population, as of 2022. This number decreased by 15 percentage points in 1993-2022 (Figure 16).



Despite the share of agriculture in GDP was decreasing, in monetary terms agricultural production have shown a rapid growth over the last two decades (Figure 17). In 2023, monetary value of produced commodities in constant 2015 USD accounted for almost 300% of the 2003 value.



Crop production

Main crops produced in Ethiopia are maize and wheat, with 10.2 and 7 million tons produced in 2022, respectively. They are followed by sorghum, barley, and taro. Other important export cash crops include coffee and sugar cane. Throughout the last two decades, commodity structure of production did not change significantly, the same 5 commodities were leading in crop production. High growth rate was observed for cereals, while taro and sugar cane, which was a second most produced crop in 2001, exhibited only a moderate growth. The highest growth rate of production amount was observed for wheat. It increased by 385% over the past two decades, from 1.4 million tons in 2002 to 7 million in 2022 (Figure 18).



Land use and sown areas

As of 2021, 386 thousand square kilometers of land were used for agricultural purposes, which is approx. 34% of the total Ethiopian area. Amount of agricultural land have been increasing since early 2000s, after decades of being relatively unchanged. Since 2000, the total agricultural area increased by 80 thousand square kilometers. The rapid drop in 1993, as it is seen on the Figure 19, is caused by the secession of Eritrea, because of the 1993 independence referendum, which put an end to the three-decade long civil war.

In the sown areas crop structure, maize, wheat, and sorghum are leading, reflecting the production statistics. As of 2022, these three crops accounted for almost 25% of the total sown areas, and 21% of the total agricultural land in Ethiopia.



According to FAO's AQUASTAT, as of 2015, only 5.3% of the cultivated land have been equipped for irrigation (858 thousand hectares) (FAO, 2016). Additionally, due to use of wetlands and inland valley bottoms, the total water-managed area reached 2 million hectares in 2015, which was 12.1% of the cultivated area.

Livestock production

Cattle meat and milk is the primary livestock commodities produced in Ethiopia with 420 and 4152 thousand tons produced in 2022, respectively. These are followed by goat, sheep, and game meat. Another livestock commodity that is commonly produced is camel milk, with 221 thousand tons produced in 2022 (Figure 20).

Over the last two decades, structure of livestock production did not change significantly. Production of meats was growing gradually. The highest growth rate is observed for cow milk. Amount of its production have been growing rapidly in 2001-2022, with a 70% increase over the past two decades.



1. ETHIOPIA / 1.3. LOCAL AGRICULTURAL SECTOR

The livestock data reflects the production statistics. Cattle is the most widespread animal in Ethiopian livestock sector, with 68 million heads, as of 2022. It is followed by goats, sheep, and asses. Throughout the period of 2001-2022, the highest population growth rate was observed for goats. It increased by 412% over the two decades. Number of sheep and asses have been growing rapidly as well, with an increase of 206% and 191% over the same period. Cattle population increased by only 92% over the 2001-2022 (Figure 21).



Processing sector

Food processing does not play a big role in the Ethiopian economy. As of 2015 (the latest available data), value added produced by processing sector amounted to 1.5% of the GDP, according to the World Bank data. This number have been decreasing throughout 1990s and 2000s. In 1990, processing sector accounted for 3% of GDP, thus the share decreased by 1.5 percentage points over 1990-2015. The main processing food commodities are skim cow milk, sugar, molasses, and cotton. Among beverages, the biggest product is beer, with 1.35 million tons produced in 2021 (Figure 22).



1.4. CHALLENGES IN AGRICULTURE

Environmental challenges: climate variability and soil degradation

One of the primary challenges for Ethiopian agriculture is its low utilization of irrigation and, consequently, heavy reliance on rain-fed farming. The country's agricultural sector is significantly affected by irregular rainfall patterns, prolonged droughts, and occasional heavy rains, which result in poor crop yields and livestock losses (Zerssa et al., 2021). Another environmental issue is soil degradation, particularly in the densely populated highlands. Factors such as deforestation, overgrazing, and unsustainable agricultural practices lead to significant soil erosion and loss of fertility. Approximately 40% of agricultural land in Ethiopia is already affected by land degradation (Zerssa et al., 2021). The depletion of soil nutrients is further compounded by limited access to organic and inorganic fertilizers. Although efforts have been made to increase fertilizer use, issues such as high costs, low availability, and unbalanced application of nutrients result in low efficiency and poor soil management (Bekabil, 2014). The inadequate use of organic matter, such as manure and compost, due to their use as fuel or animal feed, also contributes to declining soil health and productivity (Zerssa et al., 2021).

Limited access to inputs and technology

Ethiopian farmers often face difficulties accessing essential agricultural inputs, including high-quality seeds, fertilizers, and modern farming equipment. Smallholder farmers, who account for over 90% of Ethiopia's agricultural output, typically cultivate small plots of land with outdated tools and technologies (Zerssa et al., 2021). The low availability of improved or hybrid seeds and the lack of seed multiplication capacity are significant constraints that limit productivity gains (Bekabil, 2014).

Economic constraints and market access issues

Low income, lack of financial support and access to finance, and poor market access are another notable issue that affects Ethiopian agriculture. Due to these factors, farmers are often unable to invest in better inputs and technologies (Zerssa et al., 2021). Moreover, inadequate infrastructure, including poor road networks and storage facilities, increases transaction costs and reduces market efficiency, limiting farmers' ability to sell their products at competitive prices. As noted by Bekabil (2014), the lack of transportation infrastructure and market institutions decreases the profitability of adopting improved agricultural practices, further discouraging investment in modern technologies. Market volatility, combined with low purchasing power and high transaction costs pose a threat to small farmers' incomes and welfare.

Policy and institutional barriers

Despite various efforts by the Ethiopian government to support the agricultural sector, policy and institutional barriers remain significant obstacles. Issues such as land tenure insecurity, insufficient extension services, and inconsistent policy implementation hold back the adoption of sustainable and/or more productive agricultural practices and technologies. Furthermore, weak rural institutions and insufficient government investment in agricultural research and extension services limit the potential for improving productivity and adapting to changing environmental conditions (Bekabil, 2014).

1.5. AGRICULTURAL POLICY OVERVIEW

Ethiopian agricultural policy is guided by a set of strategies aimed at advancing the nation's development goals, which prominently include sustaining economic growth, poverty alleviation and bolstering agricultural productivity as long as a significant fraction of population is engaged in agriculture. Central to this framework are several key documents, each playing a crucial role in shaping the trajectory of agricultural development in the country. Among these, the **Ethiopia 2030: The Pathway to Prosperity Ten Years Perspective Development Plan (2021 – 2030)** stands as a cornerstone, outlining a strategic roadmap for the nation's economic growth and sustainability over the next decade. Complementing this plan are other governmental documents such as the National Food and Nutrition Strategy, Ethiopia's Updated Nationally Determined Contributions (NDC), Ethiopia's long-term low emissions and climate-resilient development strategy (2020-2050), and Ethiopia's Climate-Resilient Green Economy National Adaptation Plan.

The 10-Year Development Plan of Ethiopia (2021-2030) is multifaceted, aiming not only to sustain the economic momentum achieved in previous years but also to mitigate the risks associated with a public-spending-driven economy (Ministry of Planning and Development, 2021). A pivotal aspect of this strategy involves a deliberate transition toward a more private-business-led economic model, necessitating a significant focus on stimulating supply-side dynamics, setting clear targets to be reached over the decade (Table 2). Within the agricultural sector, the plan sets forth an array of objectives, ranging from bolstering the role of the private sector to enhancing irrigation infrastructure and widening access to agricultural inputs and financial resources. Moreover, it underscores the critical importance of improving productivity, safeguarding the environment and natural resources, reducing dependency on food imports, and achieving ambitious environmental targets.

As outlined in the 10-Year Development Plan of Ethiopia (2021-2030), through improving productivity with better access to fertilizers, finance and irrigation the Ethiopian government anticipates a substantial increase in crop production, projecting a 70% growth by 2030 compared to the baseline year of 2020. This surge is envisaged to be primarily driven by medium- and large-scale producers, whose contribution to crop production is slated to rise significantly from a mere 4% to 16%.

In parallel, the government is channelling ambitious efforts towards the livestock sector, with an emphasis on augmenting the production of essential commodities such as milk, meat, and eggs. For instance, the Plan envisions nearly tripling the total quantity of milk production from 4.37 billion litres to 11.8 billion litres by 2030. In contrast to the ambitious targets set for the coming decade, recent trends in milk production reveal a more modest growth trajectory. According to FAOSTAT data, from 2010 to 2020, milk production in Ethiopia saw an increase of only 15%. Similarly, meat production is slated to skyrocket, with targets set to increase nearly sixfold from 295 thousand tons to 1.7 million tons over 2020-2030 period.

1. ETHIOPIA / 1.5. AGRICULTURAL POLICY OVERVIEW

Table 2. Key targets outlined in the Ethiopia 2030: The Pathway toProsperity Ten Years Perspective Development Plan (2021 – 2030)

Target	Units	2020	2030 target	Change		
Сгор	Crop production					
Crop production	million tons	54.3	92.5	70%		
Food crop production	million tons	32.6	66.2	103%		
Crop production through irrigation	million tons	0.8	3.8	375%		
Share of crop production by medium- and large-scale private farms	%	4	16	300%		
Supply of improved seeds	thousand tons	109	203	86%		
Fertilizers distribution	million tons	1.6	3.29	106%		
Application of pesticides	thousand litres	20.3	105.5	420%		
Land allocated to private investors engaged in horticulture production	thousand hectares	17.6	43	144%		
Export of horticulture products	US\$ million	326.1	950	191%		
Livestoo	k productio	n				
Share of milk cows with improved breed	%	2.7	17	530%		
Milk production (cows, goats and camels)	billion litters	4.37	11.8	170%		
Meat production (cattle, goats, sheep, and camels)	thousand tons	295	1,700	476%		
Poultry production	thousand tons	48	106	121%		

Target	Units	2020	2030 target	Change
Egg production	billion tons	2.8	5.5	96%
Regular water fish production	thousand tons	59	247	319%
Honey production	thousand tons	59	152	158%

Source: own representation based on the Ethiopia 2030: The Pathway to Prosperity Ten Years Perspective Development Plan (2021 – 2030) plan

Amidst these ambitious production targets, the Ethiopian government committed to environmental stewardship and sustainability. This includes curbing soil pollution and bolstering efforts to reduce greenhouse gas emissions. By aligning agricultural development with environmental conservation, Ethiopia endeavours to foster a resilient and sustainable agricultural sector that not only meets growing food demands but also safeguards the ecological integrity of its landscapes for future generations.

One of the pivotal constraints that has significantly impeded the agricultural development of Ethiopia is the historical lack of investments in the sector, which has led to depressed productivity exacerbated by challenges such as recurrent droughts and land degradation (Attilo et al., 2006). During the decade spanning from 2010 to 2020, the Policy and Investment Framework (PIF) emerged as a strategic document, delineating a framework for prioritizing and planning investments aimed at driving Ethiopia's agricultural growth and development (Ministry of Agriculture and Rural Development, 2010). By directing government investments into agriculture, the government aimed to bolster agricultural productivity and increase production, thereby fostering agro-industrial development and improving food security across the country. Key areas prioritized for investment included the development of irrigation systems, ensuring the supply of fertilizers, enhancing soil fertility, and fortifying market infrastructure and systems.

Over the course of the decade from 2010 to 2020, central government expenditures on agriculture witnessed a significant uptick, doubling in comparison to the preceding decade of 2000-2010. This trend reached its zenith in 2017, with expenditures peaking at USD 1 billion, averaging over USD 585 million throughout the decade (Figure 23). However, a notable shift occurred in 2018, marked by a decline in government expenditures on agriculture, which decreased to approximately USD 375 million by 2020. This reduction represents a significant deviation from the previous trajectory, accounting for a mere 3% of the total central government spending during this period.

1. ETHIOPIA / 1.5. AGRICULTURAL POLICY OVERVIEW



Over the past few decades, development flows into the agricultural sector have exhibited a steady upward trajectory. In 2010, such flows amounted to a modest USD 18 million, but by 2021, they had surged significantly to USD 367 million (Figure 24). Notably, this represents a substantial increase from the intervening years, with figures rising to USD 154 million by 2015. Cumulatively, over the period from 2010 to 2020, development flows into agriculture totalled an impressive USD 3.5 billion. This trend underscores a consistent and escalating pattern across various sources of financial resources dedicated to agricultural development within the country.



In recent decades, there has been also a notable increase in access to finance for agricultural producers. From 2010 to 2020, average annual credits to agriculture doubled, reaching around USD 770 million per year (Figure 25). This trend continued into 2021-2022 with the implementation of new strategic plans, pushing credit flows to surpass USD 1 billion in 2022. This surge reflects ongoing efforts to support agricultural growth and development through enhanced financial accessibility.

1. ETHIOPIA / 1.5. AGRICULTURAL POLICY OVERVIEW



While Ethiopia currently stands outside the membership of the World Trade Organization (WTO) and consequently lacks bound tariff rates, it participates in the **African Continental Free Trade Area (AfCFTA),** fostering trade relations with 30 other African nations. The Ethiopian government is determined to join the WTO by 2026, demonstrating its commitment to deeper integration into the global trading system. Imports into Ethiopia are typically subject to value-added tax (VAT) and excise taxes, with certain exemptions applying to essential food products such as wheat, edible oil, sugar, rice, pasta, macaroni, and eggs.

However, owing to factors such as the nation's heavy reliance on grain imports, foreign currency deficits, and price instability, the Ethiopian government has intermittently enforced grain export bans (Tefera & Mello, 2022). These measures reflect the government's efforts to address challenges related to food security and economic stability within the country.

1.6. ETHIOPIA: SUMMARY

Ethiopia, the most populous country in East Africa with over 120 million people as of 2022, has experienced significant economic and demographic shifts in recent decades. Since 2000, the population has increased by 82%, in line with the general trend across East Africa. This population boom has been accompanied by strong economic growth, particularly from the 1990s onward, driven by foreign investments, particularly from China, as well as growth in the manufacturing and services sectors. As a result, GDP per capita has risen in eight times. However, despite these economic advancements, food security remains a pressing issue. While the proportion of undernourished people has halved over the past decade, 22% of the population is still affected, and the absolute number of undernourished people has only marginally decreased from 31 million to 26 million, largely due to the persistence of rural poverty.

1. ETHIOPIA / 1.6. SUMMARY

The Ethiopian diet has also seen some diversification, with a decreasing reliance on cereals, roots, and tubers, which now constitute 75% of dietary energy supply, down from 82% a decade ago. The country has seen improvements in protein intake, but the consumption of animal protein remains low and relatively unchanged over the past two decades. In terms of agricultural self-sufficiency, Ethiopia is performing better than its regional counterparts, as reflected in its lower cereal import dependency ratio. Ethiopia's agricultural imports have grown in value, particularly in the categories of vegetable oils and cereals. While imports have increased, Ethiopia has managed to maintain a relatively stable physical volume of these goods. On the export side, Ethiopia's key agri-food exports include coffee, tea, spices, roots, tubers, and oilseeds. Coffee remains the most significant export commodity, with major markets in Saudi Arabia, the USA, and the Netherlands. Trade with Ukraine is limited, comprising mostly wheat and corn.

Agriculture continues to play a dominant role in the Ethiopian economy, although its contribution to GDP has decreased from 59% to 36% over the last three decades. The sector still employs a majority of the working population, with 63% of Ethiopians engaged in agriculture as of 2022. Crop production, particularly maize and wheat, has grown substantially, with wheat production increasing by 385% over the past two decades. Livestock production also plays an important role, with cattle meat and milk being the primary livestock commodities produced. The production of cow milk, in particular, has grown by 70% over the last 20 years. However, the agricultural sector faces significant challenges, including climate variability, low levels of irrigation (with only 5% of cultivated land equipped for irrigation), and soil degradation, particularly in densely populated highlands where unsustainable farming practices have led to extensive soil erosion.

The Ethiopian government has introduced a range of policy measures to address these challenges, most notably the Ethiopia 2030: Pathway to Prosperity Ten-Year Development Plan. This plan emphasizes improving productivity by increasing access to fertilizers, irrigation, and financial resources, with the goal of achieving a 70% increase in crop production by 2030. The government also aims to significantly boost livestock production, with targets to nearly triple milk production and increase meat production sixfold by 2030. Ethiopia's agricultural policy also aligns with broader global efforts to enhance sustainability, with initiatives focused on reducing greenhouse gas emissions and improving soil health. However, these ambitious goals are hampered by historical underinvestment in the sector, recurring droughts, and land degradation, which continue to pose significant risks to the country's food security and economic stability.

2. TANZANIA

2.1. FOOD SECURITY

Similarly to the other East African states, Tanzania experienced substantial population growth over the last decades (Figure 25). Current population of the country exceeds 65 mln. people.



Economic growth in Tanzania was slower than in neighboring Ethiopia and Kenya (Figure 26). This is explained by slow structural reforms, which are constrained by declining industrial productivity and competitiveness and shallow financial markets (African Development Bank Group, 2024).



The share of undernourished population in the country is slightly smaller than regional average (Figure 27). Since 2000, this indicator declined by 10% to 23%.



By contrast to Ethiopia, the number of undernourished persons in Tanzania increased over the last two decades (Figure 28). This is explained by the spread of poverty in rural areas (World Bank, 2015).



The average dietary energy supply adequacy followed the general trend in the region (Figure 29); over the last two decades, it increased by 10% to 110%.



The positive shifts in diet diversification are reflected in the share of dietary energy supply derived from cereals, roots and tubers, which decreased from 62% to 57%, which is 7% less than on average in the region (Figure 30).



The average protein supply in Tanzania is higher compared to the regional average (Figure 31). However, the gradual growth over the last decades was not much based on animal protein (Figure 32).





By contrast to Ethiopia, per capita food supply variability in Tanzania was lower than on average in East Africa over the last years (Figure 33). This means that, despite the high number of undernourished populations, the level of caloric intake is relatively stable thanks to the proper functioning of markets and government intervention.



The cereal import dependency ratio shows the improvement of self-sufficiency level for cereals in Tanzania compared to Ethiopia, Kenya, and the rest of the East Africa states. Over the last two decades, it declined four times and reached 2.5% in 2020 (Figure 34).



The WFP operations in Tanzania are focused on increased access to food for lowincome population. By contrast to Ethiopia, WFP does not allocate many resources to the improvement of local logistic system (World Food Programme, 2023). Instead, it implements the programs aimed to increase sustainability of small farmers (Table 3).

Table 3.	WFP	Tanzania	Country	Portfolio	Budaet	2023	(2022 - 2027)
		ranzama	Country		Baagot	2020	

SDG target	Strategic outcome	Expenditures, mln. USD	Share in total expenditures, %
2.1. Access to Food	Crisis-affected populations in Tanzania can meet their essential food and nutrition needs in anticipation of, during and in the aftermath of shocks and build resilience to shocks and stressors by 2027.	35.2	78
2.2. End Malnutrition	Vulnerable populations in prioritized districts consume more diversified and nutrient rich diets and have improved access to nutrition, health and education services that contribute to human capitaldevelopment all year round.	1.3	3

SDG target	Strategic outcome	Expenditures, mln. USD	Share in total expenditures, %
2.3. Smallholder Productivity & Incomes	Populations in targeted districts achieve climate resilient rural livelihoods and improved food security and nutrition through sustained smallholder access to markets, enhanced value chains and sustainable management of natural resources by 2030.	6.1	14
17.16. Global Partnership	Government institutions and development partners in Tanzania have improved access to on-demand services and innovation platforms throughout the year.	2.2	5
Total		44.8	100

Source: WFP. (2024). Annual Country Reports – Tanzania

2.2. AGRI-FOOD TRADE

Decreased food self-sufficiency of Tanzania led to increased import volumes over the last 5 years (Figure 35). The most pronounced growth was observed for cereals, vegetable oils, sugars and confectionery.

2. TANZANIA / 2.2. AGRI-FOOD TRADE



The main food supplies to Tanzanian market are Russian Federation, Malaysia, India (Figure 36). The contribution of Ukraine is relatively small; trade flows consist mostly of cereals and vegetable oils (Figure 37).



Figure 36. Geographical structure of food import to Tanzania



Source: ITC Trade Map

Figure 37. Food import from Ukraine to Tanzania

Source: ITC Trade Map

2. TANZANIA / 2.2. AGRI-FOOD TRADE

Meanwhile, the export structure is more diversified than in neighboring countries. The main export products are oilseeds, vegetables, roots and tubers, fruits and nuts, cereals, fish (Figure 38).



Figure 38. Product structure of food export from Tanzania

As Figure 39 shows, the core export destinations are Asian markets (China, India, Vietnam), neighboring Uganda, and some EU countries (Netherlands, Belgium).



Figure 39. Geographical structure of food exports from Tanzania

Source: ITC Trade Map

2.3. LOCAL AGRICULTURAL SECTOR

Agriculture plays an important role in Tanzanian economy. Its' share in Tanzanian GDP remained relatively unchanged over the past three decades, fluctuating within the 25-30% interval. At the same time, it employs the majority of the working population, even though its' share has been gradually decreasing throughout 1990s-2010s. As of 2022, 65% of the total working population, have been engaged in agricultural production. This number decreased by 19 percentage points in 1990-2022 (Figure 40).



Despite the share of agriculture in GDP was stagnating, in monetary terms, agricultural production has shown a rapid growth over the last three decades. In 2023, monetary value of produced commodities in constant 2015 USD accounted for almost 230% of the 2003 value (Figure 41).



Crop production

Main crops produced in Tanzania are maize and cassava, with 5.9 and 6.4 million tons produced in 2022, respectively. They are followed by sweet potatoes, sugar cane, bananas, and rice. Throughout the last two decades, commodity structure of the crop production remained relatively unchanged, the same 5 commodities were leading in crop production. High growth rate was observed for cereals, maize, rice, and sugar cane. At the same time, cassava, bananas, and sweet potatoes exhibited only a moderate growth (Figure 42).



Land use and sown areas

As of 2021, there were 395 thousand square kilometers of agricultural land in Tanzania, which is approx. 42% of the total Tanzanian area (Figure 43). Amount of agricultural land have been gradually increasing over the whole observed period (1961-2021). Since 2000 total area used for agricultural purposes increased by 55 thousand square kilometers. The sown areas crop structure is dominated by maize, in 2022 it accounted for 4 million hectares. Maize is followed by sunflower, groundnuts, beans, sorghum, rice, cassava, and sesame seed. As of 2022, harvested areas of each these crops were approximately 1 million hectares.



According to FAO's AQUASTAT, as of 2015, only 2.3% of the cultivated land have been equipped for irrigation (364 thousand hectares) (FAO, 2016). This area has been steadily growing throughout 2000s and 2010s. Over the period of 2002-2015, total area equipped for irrigation in Tanzania have doubled (184 thousand hectares in 2002).

Livestock production

Cattle meat and milk is the primary livestock commodities produced in Tanzania with 526 and 3448 thousand tons produced in 2022, respectively. These are followed by goat milk, chicken eggs, and hides/skins of cattle (Figure 44). Another livestock commodity that is commonly produced is meat of chicken. Over the last two decades, commodity structure of livestock production did not change significantly. The most rapid growth was observed for cattle products: milk and meat. Amount of its production of the two have increased by 283% and 189%, respectively, over the past two decades.

2. TANZANIA / 2.3. LOCAL AGRICULTURAL SECTOR



The livestock data reflects the production statistics. Chicken is the most widespread animal in Tanzanian livestock sector, with 40 million heads, as of 2022. It is followed by cattle and goats. Their populations are 31, 22 million heads, respectively. Throughout the period of 2001-2022, the highest population growth rate was observed for cattle and goats, which have especially intensified since early 2010s. Over the last decade, their respective populations increased by 40% and 42% (Figure 45).



Processing sector

Food processing does not make up a large share of Tanzanian economy. According to the World Bank data, as of 2022, value added produced by processing sector amounted to 4.6% of the GDP. This number have been gradually decreasing throughout the past two decades. In 2002, food processing sector accounted for 5.7% of GDP, thus the share decreased by 1.1 percentage points over 2002-2022. Main processing commodities are skim cow milk, sugar, and molasses. Another major product is sunflower oil, with 304 thousand tons of it being produced, as of 2021. Also, a notable product of processing industry is cotton. Lint and seed are the main cotton products. Among beverages, the biggest product is beer, 497 million tons of which were produced in 2021 (Figure 46).



Figure 46. Processed commodities production in Tanzania, 2001-2021

Source: FAOSTAT

2.4. CHALLENGES IN AGRICULTURE

Access to finance and economic constraints

Access to finance is one of the most critical barriers faced by Tanzanian farmers. Many smallholder farmers and food processing firms struggle to obtain the necessary capital due to high-interest rates and stringent borrowing conditions imposed by financial institutions (Nkwabi et al., 2019). For instance, the food processing sector, which could significantly increase value addition and profitability in agriculture, is held back by limited access to affordable financing. This lack of financial support restricts investments in modern equipment and technologies that are essential for enhancing productivity and competitiveness. Furthermore, the low value of collateral and poor saving habits among farmers' access to modern technologies. Smallholder farmers in Tanzania often rely on outdated farming methods, which results in low productivity and high post-harvest losses. Technological constraints are not only related to equipment but also encompass knowledge gaps in managing and operating such technologies.

Market access

Limited market access is another significant issue that Tanzanian agricultural producers are facing. Farmers face challenges in accessing both local and international markets, partly due to poor infrastructure, high transportation costs, and a lack of market information (Nkwabi, 2019). Poor rural road networks and inadequate storage facilities further increase costs and losses, as well as reduce the quality of agricultural products reaching the market (Charles et al., 2016). The lack of organized supply chains and marketing channels limits farmers' ability to get fair prices for their products, impacting their overall income and welfare (Mgeni et al., 2019).

2. TANZANIA / 2.4. CHALLENGES IN AGRICULTURE

Environmental challenges

Environmental factors, such as unpredictable weather patterns and inadequate water resources, pose substantial threats to Tanzanian agriculture. Farmers often suffer from prolonged droughts, floods, and other extreme weather events, which negatively impact crop yields and livestock production. The reliance on rain-fed agriculture exacerbates this vulnerability, limiting productivity and increasing the risk of food insecurity. Additionally, poor soil fertility, often due to unsustainable farming practices and limited access to organic and inorganic fertilizers, further hampers agricultural productivity (Tumusiime & Matotay, 2014).

Policy and regulatory barriers

Bureaucracy and inconsistent government policies also impede the growth of Tanzania's agricultural sector. Complex regulations, high taxes, and slow administrative processes discourage both local and foreign investments in agriculture and food processing (Lauwo, Otusanya & Bakre, 2016; Nkwabi & Mboya, 2019). For instance, the food processing sector is subject to stringent regulations that limit the ability of small-scale processors to meet national standards and expand their operations (Swai, 2017). Additionally, large-scale land investments under initiatives such as the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) have raised concerns among smallholders and NGOs, who argue that these investments often favor large-scale commercial farming over smallholder interests (Tumusiime & Matotay, 2014).

2.5. AGRICULTURAL POLICY OVERVIEW

With agriculture playing a crucial role in the economy of the United Republic of Tanzania, agricultural policy is vital for achieving nationwide goals of economic growth and poverty reduction. Tanzania's agricultural sector operates within the framework of broad economy-wide strategies, including the **Tanzania Development Vision 2025**, the Long-Term Perspective Plan 2011/12–2022/26, and the Second Five-Year Development Plan 2016/17-2020/21. These strategies provide a foundation for developing specific agricultural policies aimed at enhancing productivity, food security, and overall national development (Rweyemamu et al., 2024).

The country's current agricultural policy framework is primarily established by the National Agricultural Policy adopted in 2013. The core objectives outlined in the National Agricultural Policy aim to enhance agricultural productivity and profitability through improved support services, increased production efficiency, enhanced food security, and value addition. Additionally, the goals include boosting export earnings, attracting private investment, improving market competitiveness, promoting sustainable land use, and addressing cross-cutting issues in agriculture.

The Agricultural Sector Development Programme (ASDP II) is a more detailed implementation guide for the national agricultural policy, building upon the lessons learned from ASDP I (2006-2014). Embedded within the Agricultural Sector Development Strategy II, ASDP II targets by 2025 include achieving a 6% annual growth in agricultural productivity, reducing rural poverty from 33.3% in 2011/2012 to

24%, and enhancing food security and nutrition by decreasing the percentage of rural households below the food poverty line from 11.3% in 2011/2012 to 5% (Government of Tanzania, 2015). Designed for two phases between 2017 and 2028, the program seeks to transform Tanzania's agricultural sector, encompassing crops, livestock, and fisheries, to enhance productivity, commercialization, and smallholder farmer income. ASDP II identifies numerous challenges in the agricultural sector, such as poor policy implementation, inadequate coordination across agencies, weak data systems, insufficient infrastructure, ineffective research and extension services, inadequate land tenure systems, low input use, high post-harvest losses, and limited access to credit and markets.

ASDP II consists of four key components that include:

- (i) Sustainable Water and Land use Management;
- (ii) Enhanced Agricultural Productivity and Profitability;
- (iii) Rural Commercialization and Value Addition;
- (iv) Strengthening Agricultural Sector Enablers, and Coordination. (Government of Tanzania, 2015)

The Sustainable Water and Land use Management component is designed to increase the share of farmers practising sustainable irrigation and have access to water for livestock, expanded and modernize irrigation facilities with professional management increase the share of crop area under irrigation, enhance integrated management of natural resources for fish and seaweed farming.

The component's priority investments focus on several key areas. These include strengthening early warning systems and preparedness for effective risk management. Research and extension activities concentrate on developing new crops, varieties, and sustainable farming systems suitable for hotter, drier conditions. Enhancements in short- and long-term weather forecasting and response farming are prioritized through capacity building and improved early warning systems. Infrastructure development involves constructing and maintaining charco-dams, boreholes, and similar structures. Pasture quality is enhanced through activities such as seed and hay production, along with demonstrations of irrigated production in plots. Initiatives also support the establishment of fishponds and cages in lakes, promote diversification in seafood production, and facilitate the expansion of seaweed cultivation in oceans. Educating fisher folk on the principles of the Ecosystem Approach to Fisheries (EAF), coordinating fisheries surveys and border patrols, and improving standards for fish and fisheries products are integral parts of these efforts. Additionally, capacity building in land use management and the promotion of effective soil and water management technologies aim to encourage improved cropping practices.

The Enhanced Agricultural Productivity and Profitability component is aimed at boosting productivity among small-scale agricultural producers with emphasis on commercialization of these. Goals include increasing yield and profitability indicators of agricultural production, increased R&D allocations, improving access to extension services, fertilizers, improved seeds, artificial insemination services, veterinarian drugs, feed, vaccines. The primary focus of the component is to advance agricultural productivity within dairy, beef, sheep, and goat production sectors. Research and extension activities are pivotal, aiming to introduce improved breeding technologies that enhance livestock productivity. The conservation and utilization of indigenous genetic

resources are also emphasized to sustainably support local livestock populations. Disease management is another critical area, encompassing diagnostics, prevention, and control strategies against pests, pathogens, and disease vectors. Research efforts extend to optimizing feed resources, including pasture and forage production, as well as ensuring the quality and efficacy of animal vaccines.

The Rural Commercialization and Value Addition component prioritizes enhancing the supply of high-quality agricultural products for domestic and export markets, diversifying smallholder production into higher-value crops and livestock, and improving raw material supply to industries. It aims to strengthen farmer organizations, upgrade infrastructure and communications, and create opportunities for rural non-farm enterprises and youth employment. Key investment activities include improving the agricultural trade balance, attracting foreign direct investment (FDI) to the sector, empowering farmer organizations, enhancing agricultural processing for increased value addition, and improving farmers' access to markets and external financing.

The Strengthening Sector Enablers and Coordination component is focused on enhancing the capabilities of relevant government bodies and agents to facilitate and implement agricultural policy changes and interventions. Its primary goals include harmonizing, rationalizing, and aligning policies and regulatory frameworks governing the agricultural sector and related industries. Additionally, it aims to strengthen institutional capacity for effective sector development and management, ensure coordinated and efficient service delivery to prevent duplication of efforts and resource wastage, promote collaboration among all agriculture sector programs/projects under ASDP-2, and improve the timeliness, quality, and relevance of agricultural sector statistics and routine data systems.

Over the period of 2002-2015, Tanzanian central government expenditures on agriculture experienced moderate growth. While expenditures were at USD 37 million in 2002, they reached nearly USD 160 million in 2015, representing a fourfold increase. However, in 2016, there was a notable dip, with expenditures dropping to USD 80 million. Despite this decline, government spending on agriculture averaged USD 158 million in the subsequent years (Figure 47).

The COVID-19 pandemic significantly impacted agricultural expenditures, with funding cut to a 15-year low of USD 67 million. Nevertheless, by 2021, expenditures had recovered to pre-pandemic levels. In 2022, the government significantly increased its agricultural budget to over USD 339 million. This substantial increase occurred amidst the RF's full-scale invasion of Ukraine and the subsequent global food security crisis. This sharp rise in expenditure highlights the government's efforts to mitigate the risks of food insecurity caused by increased international crop prices.



Over the past decades, development flows to agriculture in Tanzania have exhibited mixed dynamics. Since 2000, these flows increased significantly from USD 19 million to over USD 204 million in 2010. However, in 2011, development flows dropped by 40%, and it took five years, until 2016, for them to recover to the 2010 level. During the period from 2016 to 2018, development flows remained at an all-time high, averaging USD 218 million annually. Following this peak period, development flows exhibited a significant downward trend, reaching USD 92 million in 2021, a record low since 2005 (Figure 48). This decline is notable given the consistent and significant amounts of resources directed towards agricultural development in Tanzania during 2008-2018. The stagnation since 2019 highlights a critical issue that needs to be addressed, as the country's agriculture still has many objectives to achieve within its national strategic plans.

This fluctuation in development flows reflects the challenges and uncertainties in sustaining agricultural investment, emphasizing the need for continued focus and strategic planning to ensure long-term agricultural growth and stability in Tanzania.



Credit financing has played an increasingly significant role in agricultural development in Tanzania. Over the period of 2000-2010, it showed an eighteenfold increase, rising from less than USD 27 million in 2000 to over USD 490 million in 2010. During the subsequent period of 2011-2015, agricultural producers attracted, on average, USD 600 million annually. This was followed by a decline to USD 421 million by 2018.

Despite the negative trend in development flows to agriculture, the sector continued to attract increasing amounts of credit financing. From 2019 to 2021, credit to agricultural producers averaged USD 746 million annually. In 2022, credit flows to agriculture reached an all-time high of almost USD 1.1 billion amidst the food security crisis caused by the RF's full-scale invasion of Ukraine.

This substantial increase in credit financing highlights the sector's resilience and the critical role of credit in supporting agricultural development, especially during times of global instability. The dynamics of credit financing demonstrate a robust and adaptive financial response to emerging challenges in Tanzania's agricultural sector.



Tanzania is a member of the East African Community (EAC), which promotes free trade and cooperation among its members, including in agricultural trade. In July 2023, to mitigate the risks caused by the food crisis resulting from the RF's full-scale invasion of Ukraine, Tanzania introduced new grain export procedures. These procedures require foreign buyers to source grain from registered local traders, significantly reducing grain exports and raising export costs (Mtaki & Snyder, 2024). This policy led to a substantial drop in corn exports in the latter half of 2023 and was aimed at prioritizing domestic consumers. Additionally, the EAC granted Tanzania a temporary waiver on wheat imports tariffs for key millers, allowing duty-free imports until June 2024 to stabilize the wheat supply.

2.6. TANZANIA: SUMMARY

Tanzania, with a population exceeding 65 million, has seen substantial demographic growth in recent decades, though its economic development has been slower compared to other East African nations such as Kenya and Ethiopia. This slower growth is partly due to lagging structural reforms, declining industrial productivity, and shallow financial markets. Although economic growth has been more modest, the country has made some progress in improving food security. The proportion of undernourished individuals in Tanzania has decreased slightly, now standing at 23%, which is marginally below the regional average. However, unlike in Ethiopia, the absolute number of undernourished people in Tanzania has increased over the past two decades due to persistent poverty in rural areas. Food security in Tanzania remains a challenge, with rural populations particularly vulnerable to malnutrition and food shortages.

Tanzania has made significant strides in improving its food self-sufficiency, as evidenced by the sharp reduction in its cereal import dependency ratio, which fell from over 10% to just 2.5% over the past two decades. This reflects the country's increasing ability to meet domestic food demand through local production. The country's food imports have grown in value, with cereals, vegetable oils, and sugar being the primary imported commodities. On the export side, Tanzania's agri-food sector is more diversified than that of its neighbours. Major export products include oilseeds, vegetables, roots and tubers, fruits and nuts, and fish. Key export destinations include China, India, and Vietnam, as well as regional partners such as Uganda. Trade with Ukraine remains small and focused primarily on cereals and vegetable oils.

Agriculture remains a critical sector in Tanzania, employing 65% of the population as of 2022, though its contribution to GDP has been relatively stable, fluctuating between 25-30% over the past three decades. Crop production in Tanzania is dominated by maize and cassava, with significant production of sweet potatoes, sugarcane, bananas, and rice. Livestock production is also important, with cattle meat and milk being the main livestock products, though goat milk and chicken eggs are also produced in large quantities. Over the past two decades, agricultural production in Tanzania has expanded substantially, with a 230% increase in value. However, the sector faces several challenges, including limited access to finance, inadequate infrastructure, and outdated farming practices. Smallholder farmers, who constitute most of the agricultural workforce, often lack access to modern technologies, quality seeds, and fertilizers, which limits their productivity.

Tanzania's Agricultural Sector Development Programme II (ASDP II), which runs until 2028, aims to address these challenges by improving productivity, commercialization, and market access, particularly for smallholder farmers. The program emphasizes climate resilience and sustainable agricultural practices, with the goal of achieving a 6% annual growth in agricultural productivity by 2025.

2. TANZANIA / 2.6. SUMMARY

Investments in irrigation, rural infrastructure, and value addition are key priorities under ASDP II, as the government seeks to enhance Tanzania's competitiveness in both domestic and international markets. The program also focuses on improving access to finance for farmers and agribusinesses, which remains a significant barrier to growth in the sector.

3. KENYA

3.1. FOOD SECURITY

As most East African countries, Kenya faced gradual population growth since 2000. In 2022, total population number was around 54 mln. people (Figure 50).



As for economic development, Kenya showed much faster growth than neighboring countries (Figure 51). This growth is based on public infrastructure projects, strong public and private sector investment and appropriate economic and fiscal policies. Besides, the local financial market is more developed than in other East African countries (National Treasury and Planning, n.d.).



The share of undernourished population is close to the regional average, reflecting noninclusive economic growth of Kenyan economy (Figure 52).



In the last two decade, the number of undernourished persons increased from 10.3 to 14.7 mln. people; this pace is aligned with the regional trend (Figure 53).



The average dietary energy supply adequacy reached its peak at 2010-2012 (102%) and then gradually declined to 99% in 2022 (Figure 54).



The share of nutrient-poor cereals, roots and tubers in the diet of Kenyan population was initially at much lower level compared to the regional average. Despite the economic growth since 2000, this proportion increased from 55% to 57% (Figure 55).



The average protein supply showed quite modest growth compared to the regional average (Figure 56), while the average protein supply declined (Figure 57). This confirms the idea that economic growth has not led to the essential improvement in the diet structure of Kenyan population.



The per capita food supply variability shows much higher volatility compared to other East African countries; this indicates the potential problems with food supply chains functioning (Figure 58).



The instability of food supply could be explained by the high dependence of cereal imports, which had tendency to increase over the last decades (Figure 59).



WFP activity in Kenya is aimed to address the inequality problem: 70% of the budget are allocated for providing food access to refugees and asylum seekers. The rest of the budget is allocated mostly for increasing the resilience of smallholder producers (Table 4).

SDG target	Strategic outcome Expenditure mln. USD		Share in total expenditures, %
2.1. Access to Food	Refugees and asylum seekers living in camps and settlements and populations affected by natural and human-caused disasters have access to adequate food to meet their food and nutrition needs throughout the year.	524.6	70.8
2.4.Targeted smallholder producers, food-insecure and vulnerable populations benefit from more sustainable, inclusive food systems and increased resilience to climate shocks enabling them to meet their food and nutrition needs by 2023.		174	23.5

Table 4.	WFP Kenva	Country	Portfolio	Budget	2023	(2018 - 2023)	1
	VVII IXEIIYE	Country		Duuyei	2020	(2010-2020)	1

(2018-2023)
2023
Budget
Portfolio
Country
Kenya
WFP
Table 4.

SDG target	Strategic outcome	Expenditures, mln. USD	Share in total expenditures, %
17.9. Strengthened Capacity	National and county institutions in Kenya havestrengthened capacity and systems to assist food insecure and nutritionally vulnerable populations by 2023.	23.2	3.2
17.16. Global Partnership	Government, humanitarian and development partners in Kenya have access to and benefit from effective and cost-efficient logistics services, including air transport, common coordination platforms and improved commodity supply chains, when needed. Government, humanitarian and development partners in Kenya have access to and benefit from effective and cost-efficient logistics services, including air transport, common coordination platforms and improved commodity supply chains, when needed.	18.4	2.5
Total		740.2	100

Source: WFP. (2024). Annual Country Reports – Tanzania

3.2. AGRI-FOOD TRADE

The agri-food imports to Kenya gradually increased over the last years; it is focused on cereals, vegetable oils, sugars and confectionery (Figure 60).



The geographical structure of food imports changed over the last years. The share of Indonesia and Uganda decreased, while Malaysia, Russian Federation, and India increased own presence on Kenyan market (Figure 61).





Source: ITC Trade Map



Figure 62. Food import from Ukraine to Kenya



By contrast to Tanzania, food export from Kenya is guite specialized; it is inclined towards coffee, tea, cut flowers, live trees (Figure 63).



Source: ITC Trade Map

The export destinations are Pakistan, Netherlands and United Kingdom (especially for cut flowers), United Arab Emirates (Figure 64).

3. KENYA / 3.2. AGRI-FOOD TRADE



3.3. LOCAL AGRICULTURAL SECTOR

Agriculture plays an important role in Kenyan economy. Its' share in GDP have been gradually decreasing throughout 1990s-2000s and returned to the moderate growth since early 2010s. As of 2023, value of agricultural production in Kenya reached 22% of GDP. In contrast to the neighboring countries, agriculture does not employ most of the population. Its' share has been gradually decreasing throughout the past three decades, from 48% in 1993 to 33% in 2023 (Figure 65).



Despite the share of agriculture in GDP remained relatively unchanged, in monetary terms, agricultural production has shown a stable growth over the past decades. In 2023, monetary value of produced commodities in constant 2015 USD accounted for 163% of the 2003 value (Figure 66).



Crop production

Main crop produced in Tanzania are sugar cane and maize, with 8.7 and 3.1 million tons produced in 2022, respectively. They are followed by fruits and vegetables, in particular, potatoes, cabbages, and bananas being the most produced. Another important cash crop in Kenya is tea, 2.3 million tons of which were produced in 2022. Throughout the last two decades commodity structure of the crop production remained relatively unchanged, the same 5 commodities were leading in crop production (Figure 67).



Land use and sown areas

As of 2021, there were 277 thousand square kilometers of agricultural land in Kenya, which is approx. 48% of the total Kenyan area. Amount of agricultural land have been gradually increasing since the 1990s. Over the last two decades, total area used for agricultural purposes increased by 8.7 thousand square kilometers (Figure 68). As of 2012, approx. 78% of the agricultural land was classified as permanent meadows and pastures, rather than a cultivated land. The sown areas crop structure is dominated by maize and beans, in 2022 these crops accounted for 2.2 and 1 million hectares, respectively. They are followed by tea, cow peas, sorghum, and potatoes. As of 2022, total sown areas of these crops were close to 200 thousand hectares.



According to FAO's AQUASTAT, as of 2010, only 2.5% of the cultivated land have been equipped for irrigation (151 thousand hectares) (FAO, 2015). Irrigated land is mostly used for production of vegetables and rice.

Livestock production

Livestock production is an important sub-sector of Kenyan agriculture. Notable amounts of various milk types are produced in Kenya. These are cattle, camel, sheep, and goat milk, with 4215, 1097, 265, and 100 thousand tons produced in 2022, respectively (Figure 69).



Besides milk, significant amounts of meat are produced in Kenya as well. The mostproduced type of meat is the one of cattle, with 268 thousand tons produced in 2022. It is followed by chicken and goat meat. As of 2022, 111 and 74 thousand tons of them were produced in Kenya. Another livestock commodity that is commonly produced is chicken eggs, with 73 thousand tons produced in 2022. Over the last two decades, commodity structure of livestock production did not change significantly, except for the growth of chicken meat production. In the mid-late 2010s, a spike in chicken meat production was observed, with a simultaneous decrease of production of other meats (Figure 70).

3. KENYA / 3.3. LOCAL AGRICULTURAL SECTOR



The live animal stocks data reflects the production statistics. Chicken is the most widespread animal in Ethiopian livestock sector, with 61 million heads, as of 2022. It is followed by goat, sheep, and cattle. Their populations are 35, 26, and 24 million heads, respectively. Population of camels is the one that stands out from the rest. Over the past two decades, it increased by approx. 450% (Figure 71). The main factor contributing to this trend is climate change, which forces rural population to turn towards more enduring animals in face of more frequent and intense droughts (Oselu et al., 2022).



Processing sector

Food processing does not make up a large share of Kenyan economy. According to the World Bank data, as of 2022, value added produced by processing sector amounted to 4.3% of the GDP. However, this number have been gradually increasing throughout the past two decades. In 2002, food processing sector accounted for 3% of GDP, thus the share increased by 1.3 percentage points over 2002-2022. Given the large amounts of milk produced in Kenya, dairy products are one of the leading in the processing sector (Figure 72).



Other important processing commodities are cane sugar, molasses, and tea (both green and black, i. e., unfermented and fermented). Among beverages, the biggest product is beer, 430 million tons of which were produced in 2021 (Figure 73).



3.4. CHALLENGES IN AGRICULTURE

Climate change and variability

One of the most significant challenges for Kenyan agricultural producers is climate variability and climate change. Extreme weather conditions such as droughts, erratic rainfall, and floods have become more frequent and intense, negatively impacting agricultural production. According to Stigler and Lobell (2021), these climatic extremes directly affect crop yields, leading to food insecurity and economic instability among

smallholder farmers who rely heavily on rain-fed agriculture. The unpredictability of weather patterns complicates planning and resource allocation, making it difficult for farmers to manage crops effectively. The country also grapples with soil fertility and land degradation issues, particularly in regions where continuous cropping, soil erosion, and minimal use of fertilizers have depleted soil nutrients (Casaburi et al., 2016). Besides that, climate change and variability also affect the livestock sector. As it was mentioned previously, farmers are forced to change their livestock production decisions to adapt to those changes.

Land use challenges

Only about 17% of Kenya's land is classified as high or medium potential for agriculture, where intensive crop production occurs. The rest of the land is arid or semi-arid, making it unsuitable for rain-fed agriculture, which is the dominant farming practice (Muriu & Biwott, 2013). Poor utilization of irrigation potential further exacerbates the problem, with less than 7% of the cropped land under irrigation. Consequently, agriculture in Kenya remains highly vulnerable to climate variability, with poor rainfall often leading to poor agricultural performance and famines affecting large sections of the population (Kashindi, 2020).

Access to finance and economic constraints

Economic challenges, particularly limited access to finance, significantly affect the agricultural sector in Kenya. Smallholder farmers, who constitute most of the agricultural workforce, often struggle to access credit, limiting their ability to invest in quality inputs, expand their operations, or adopt new technologies (Kashindi, 2020). The lack of a comprehensive land use policy further complicates matters, as land tenure issues and unclear land rights reduce the incentive for long-term investment in agriculture (Greatrex et al., 2015; Kashindi, 2020). The extension services, which are meant to bridge the gap between research and farmers, are often ineffective due to inadequate funding and structural inefficiencies (Kashindi, 2020). As a result, farmers do not have access to quality seeds, planting materials, and other vital agricultural inputs, leading to low productivity and income levels (Ayenew & Arquitt, 2018; Kashindi, 2020).

Inadequate infrastructure and market access

The agricultural sector is significantly hindered by inadequate infrastructure, including poor rural roads, markets, and transport systems. This deficiency results in high transaction costs and limited access to input and output markets for farmers. The lack of proper storage facilities also leads to high post-harvest losses, further diminishing the profitability of agricultural production. Inadequate infrastructure affects every stage of the agricultural value chain, from production to marketing, both domestically and internationally (Kashindi, 2020).

3.5. AGRICULTURAL POLICY OVERVIEW

As agriculture contributes over 30% of Kenya's GDP, the primary objective of Kenya's agricultural policy is to boost economic growth, reduce poverty, and enhance food security by increasing productivity. The central framework for this policy is outlined in the **Kenya Vision 2030 plan**, adopted in 2007. The plan identifies key challenges in the agricultural sector, including below-average crop yields, insufficient land use, limited market infrastructure, low value addition, and inefficient institutional capacities (Government of Kenya, 2007).

Kenya's Vision 2030 aims to transform agriculture into a key driver of the economy, enhancing productivity, profitability, and sustainability. The strategy focuses on several key areas:

- **Technological Advancements:** Implementing modern agricultural technologies to increase yields and efficiency.
- Market Access and Value Addition: Improving infrastructure to facilitate market access and adding value to agricultural products through processing and packaging.
- Institutional and Legal Reforms: Strengthening legal frameworks and institutions to support agricultural development and address challenges such as land tenure issues.
- Research and Extension Services: Enhancing research to develop better crop varieties and farming techniques, coupled with extension services to disseminate this knowledge to farmers.
- Infrastructure Investment: Developing irrigation systems, roads, and storage facilities to support agricultural activities and reduce post-harvest losses

Aligned with the broader goals of Kenya Vision 2030, **The Agricultural Policy 2021** is an important policy document aimed at transformation and modernization of the agricultural sector to ensure it remains a key driver of economic growth and food security. This policy emphasizes improving productivity, increasing agricultural land use, and enhancing market infrastructure. It also focuses on value addition to agricultural products and strengthening the institutional capacities that govern the sector. Key objectives include addressing challenges such as low crop yields, inefficient land use, and insufficient market infrastructure, which have historically hindered the sector's growth.

The Agricultural Policy 2021 outlines several strategic activities. These include promoting technological advancements in agriculture, developing robust market systems, and implementing comprehensive land use plans. The policy also highlights the importance of agricultural mechanization to increase efficiency and production, as well as the need for sustainable practices to protect natural resources. By addressing these areas, the Agricultural Policy 2021 aims to create a more productive, competitive, and sustainable agricultural sector, contributing to the nation's economic development and the well-being of its population.

The strategic plans are complemented by a series of more targeted initiatives and action plans within the agriculture sector. These include the Agriculture Sector Transformation and Growth Strategy, Green Economy Strategy and Implementation Plan 2016, National Irrigation Policy 2020, Kenya Agricultural Sector Extension Policy (KASEP) 2022, Kenya Climate Smart Agriculture Strategy 2016, National Agribusiness Strategy, National Agricultural Research System Policy 2021, National Agriculture Investment Plan (NAIP) 2019-2024, The Livestock Policy 2020, and numerous others.

Implementation Area	Implementation Action	
Adopting Modern Technologies	Promote the use of improved seeds, fertilizers, and irrigation systems to enhance crop yields	
Adopting Modern Technologies	Facilitate the adoption of climate-smart agricultural practices to increase resilience against climate change	
Capacity Building	Provide training and extension services to farmers on modern farming techniques and sustainable practices	
Capacity Dunding	Develop partnerships with educational and research institutions to disseminate new technologies and innovations	
Extension Services	Strengthen and expand agricultural extension services to ensure farmers receive timely and relevant information	
Extension Services	Utilize ICT platforms to disseminate agricultural knowledge and market information to farmers	
Market Infrastructure Improvement	Develop and upgrade storage facilities, transport networks, and marketplaces to reduce post-harvest losses and improve market access	
	Implement policies to ensure fair and efficient market operations, including price regulation and market information systems	

Table 5. Key implementation priorities outlined in the KenyanAgricultural Policy 2021

Implementation Area	Implementation Action
	Support the establishment of agro-processing industries to add value to raw agricultural products, thereby increasing farmers' income
Value Addition Initiatives	Encourage investment in processing plants, packaging facilities, and marketing systems to enhance the competitiveness of Kenyan agricultural products
Sustainable Practices	Promote sustainable land management practices to prevent soil degradation and enhance soil fertility
	Implement water conservation techniques and efficient water use practices to ensure sustainable water management in agriculture

Source: The Agricultural Policy 2021

The National Agriculture Investment Plan (NAIP) 2019-2024 outlines a comprehensive five-year strategy aimed at advancing Kenya's agricultural sector. Key components of the plan include:

- Supporting approximately 1 million farmers involved in crop, livestock, and fish production by providing inputs, equipment, processing, and post-harvest aggregation through collaboration with nearly 1,000 SMEs;
- Transitioning from traditional procurement of fertilizer and maize seed to implementing a digital e-voucher system, benefiting 1.4 million registered high-needs farmers through the nationwide subsidy program;
- Establishing six agro-processing hubs with support from a specialized government entity, the Agro-Processing Delivery Team;
- Facilitating the establishment of 50 new large-scale farms through competitive bidding, ensuring protection of community land ownership rights and provision of essential infrastructure;
- Overhauling governance and operations of the Strategic Food Reserve, responsible for ensuring food security among vulnerable consumers in Kenya;
- Strengthening the resilience of 1.3 million farming and pastoralist households through community-driven interventions;
- Launching knowledge and skills-building programs, including tailored curricula for government leaders, skill enhancement initiatives for the public and private sectors, and technical training for IT-enabled youth extension agents;
- Prioritizing digital and data applications to improve decision-making and enhance performance management;
- Implementing monitoring systems for sustainable and climate-smart natural resource management, disease and pest control, and resilience against climate and global price shocks. (Ministry of Agriculture, Livestock, Fisheries and Irrigation, 2019).

In line with ambitions to foster agricultural development, the Kenyan government has significantly escalated its financial commitment to the sector. Over the period from 2006 to 2014, expenditures from the central government towards agriculture saw a remarkable four-fold increase. This substantial rise catapulted the budget allocation to nearly USD 429 million by 2014, reflecting efforts to enhance productivity, infrastructure, and sustainability within the agricultural industry. Following a brief downturn in spending during the years 2015-2016, expenditures quickly regained momentum. The subsequent years witnessed a resurgence in financial support, peaking at over USD 518 million in 2021 (Figure 74). This upward trend underscores Kenya's enduring commitment to bolstering its agricultural sector.





Source: FAOSTAT

Over the past few decades, development flows into the agricultural sector in Kenya have exhibited diverse trends. From 2000 to 2005, these flows showed a gradual decline, averaging below USD 45 million annually. However, beginning in 2006, there was a notable shift towards consistent growth. Initial investments rose to USD 77 million in 2006 and steadily climbed, reaching over USD 227 million by 2018. This upward trajectory signalled increasing international and domestic support for enhancing Kenya's agricultural capabilities. The years 2019-2020 marked a significant turning point, as development flows into Kenyan agriculture experienced a dramatic surge, totalling almost USD 1.2 billion (Figure 75). This influx of funding was unprecedented, equating to the cumulative development flows of the previous seven years combined. These developments highlight a positive transformative period where Kenya's agricultural sector managed to attract substantial investments and support, that bolster its strategic development initiatives.



In recent decades, there has been a consistent and notable increase in access to finance for agricultural producers in Kenya. Since the year 2000, there has been a significant rise in average annual credits allocated to agriculture, doubling from previous levels. Specifically, during the period from 2010 to 2022, these credits averaged almost USD 880 million per year, as illustrated in Figure 76. Since 2010 alone, credit extended to agriculture, forestry, and fishing has totalled over USD 10.3 billion, highlighting substantial funds streamed to improve productivity within Kenya's agricultural sector. This surge in financial resources not only facilitates capital investment but also enhances the overall access to funding for farmers and agribusinesses. The increased availability of finance for agriculture provides promising indications of Kenya's agricultural potential to evolve. Advancing agricultural productivity and resilience are essential for ensuring food security, rural development, and economic improvements in the country.



Kenya's agricultural policy framework aims to elevate agriculture as a cornerstone of economic growth, poverty reduction, and food security. Despite challenges such as below-average yields and inadequate infrastructure, strategic initiatives emphasize technological advancement, market access enhancement, institutional reform, and sustainable practices. These efforts are complemented by targeted strategies and investment plans, which focus on modernizing farming practices, expanding market reach, and bolstering resilience against climate and economic fluctuations. Recent decades have seen significant increases in both government expenditures and development flows into Kenya's agriculture, reflecting a robust commitment to sectoral growth and sustainability. Yet, Kenya's agricultural policy is to adapt to address climate change challenges, coordinate and consistently implement existing policies, introduce strategies for food security such as adopting GMOs, ensure its continuity and funding stability despite government changes (Laichena et al., 2022).

3.6. KENYA: SUMMARY

Kenya, with a population of approximately 54 million, has experienced faster economic growth than its regional neighbours, driven by strong public infrastructure investments, private sector development, and sound fiscal policies. The country's financial markets are more developed than those of its neighbours, contributing to its rapid growth. However, despite this economic progress, food insecurity remains a major challenge. The proportion of the population that is undernourished has remained relatively stable over the past two decades, but the absolute number of undernourished individuals has increased from 10.3 to 14.7 million as of 2022. This rise in food insecurity is largely driven by inequalities in economic development and disparities in food access across the country. Kenya's reliance on imported cereals has increased, further exacerbating food insecurity as global supply chains face disruptions.

Kenya's agri-food imports have grown steadily in recent years, with cereals, vegetable oils, and sugar being the primary imports. In terms of exports, Kenya is more specialized compared to its East African counterparts, with tea, coffee, and cut flowers accounting for most the country's agri-food exports. Key export markets include Pakistan, the Netherlands, and the United Kingdom, particularly for cut flowers. While the volume of agricultural exports has grown, Kenya remains highly dependent on food imports to meet its domestic demand, particularly for cereals. Trade with Ukraine is limited, focusing primarily on wheat and corn. The World Food Programme has been active in Kenya, focusing on increasing food access for refugees and asylum seekers, as well as supporting smallholder farmers to improve resilience to climate shocks.

Agriculture continues to play a vital role in Kenya's economy, contributing 21% to GDP as of 2023. However, unlike in other East African countries, the agricultural sector employs a smaller share of the population, with only 32% of Kenyans working in agriculture. The major crops produced in Kenya include sugarcane, maize, and tea, with livestock production focusing on milk, meat, and eggs. Agricultural production has shown steady growth over the past two decades, with production values increasing by

3. KENYA / 3.6. SUMMARY

163%. However, the sector faces significant challenges, including climate variability, inadequate irrigation infrastructure, and limited access to modern agricultural technologies and financing.

Kenya's Vision 2030 development strategy and the Agricultural Policy 2021 seek to address these challenges by promoting modernization, technological advancement, and improved market access. The government has prioritized the expansion of irrigation infrastructure, with a focus on increasing the share of cultivated land under irrigation. In addition, the strategy emphasizes the importance of value addition, particularly in the tea and coffee sectors, to enhance competitiveness in international markets. Sustainable practices are also a key component of Kenya's agricultural policy, as the country seeks to build resilience to climate change while improving productivity and food security. The government's commitment to increasing public and private sector investment in agriculture, along with its focus on improving market infrastructure and access to financing, will be critical to ensuring the long-term growth and stability of the agricultural sector.

REFERENCES

Achandi, E., Mujawamariya, G., Agboh-Noameshie, A., et al. (2018). Women's access to agricultural technologies in rice production and processing hubs: A comparative analysis of Ethiopia, Madagascar and Tanzania. Journal of Rural Studies, 60, 188-198.

African Development Bank Group. (2024). African Economic Outlook 2024: Driving Africa's Transformation - The Reform of the Global Financial Architecture. African Development Bank.

Attilo, A., Berhanu, K., Ketsela, Y., & Addis Ababa University. Dept. of Political Science and International Relations. (2006). Ethiopia: Politics, Policy Making, and Rural Development.

Ayenew, M. & Arquitt, S. (2018). Kenya agricultural performance and targets: Scenarios and implications. Changing Course in Global Agriculture (CCGA) Policy Brief No. 2.

Bekabil, U. T. (2014). Review of Challenges and Prospects of Agricultural Production and Productivity in Ethiopia. Journal of Natural Sciences Research, 4(18), 70-77.

Casaburi, L., Kremer, M., & Mullainathan, S. (2016). Contract farming and agricultural productivity in Western Kenya. In S. Edwards, S. Johnson, & D. N. Weil (Eds.), African Successes, Volume IV: Sustainable Growth (pp. 137–160). University of Chicago Press.

Charles, G., Jeppesen, S., Kamau, P., & Kragelund, P. (2016). Firm-level Perspectives on State–Business Relations in Africa: The Food-processing Sector in Kenya, Tanzania, and Zambia. Forum for Development Studies, 44(1), 109-131.

FAO. (2015). AQUASTAT Country Profile – Kenya. Food and Agriculture Organization of the United Nations. Rome, Italy.

FAO. (2016). AQUASTAT Country Profile – Ethiopia. Food and Agriculture Organization of the United Nations. Rome, Italy.

FAO. (2016a). AQUASTAT Country Profile – Tanzania. Food and Agriculture Organization of the United Nations. Rome, Italy.

Government of Kenya. (2007). Kenya Vision 2030: A globally competitive and prosperous Kenya. Nairobi: Government of Kenya.

Government of Tanzania. (2015). Agricultural Sector Development Strategy II (2015/16 – 2024/25). Ministry of Agriculture, Dar es Salaam.

Kashindi, G. (2020). Local Agricultural Production in Kenya: Legal Framework, Obstacles and Challenges. KAS African Law Study Library, 7. <u>https://doi.org/10.5771/2363-6262-2020-4-581</u>.

Laichena, J., Kiptoo, E., Nkanyani, S., Mwamakamba, S., Jacobs-Mata, I., Ires, I. (2022). Kenya agricultural policy profile. Colombo, Sri Lanka: International Water Management Institute (IWMI). CGIAR Initiative on Diversification in East and Southern Africa. 11p.

Lauwo, S., Otusanya, O., & Bakre, O. (2016). Corporate social responsibility reporting in the mining sector of Tanzania. Accounting, Auditing & Accountability Journal, 29(6), 1038-1074.

May, J. (2020). Ethiopia: A demographic giant at a crossroads. Population & Avenir, 2020/1 No 746. pp. 17-19.

Mgeni, C., Müller, K., & Sieber, S. (2019). Reducing Edible Oil Import Dependency in Tanzania: A Computable General Equilibrium CGE Approach. Sustainability, 11(16), 1-17.

Ministry of Agriculture and Rural Development. (2010). Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010-2020: Draft Final Report. Federal Democratic Republic of Ethiopia.

Ministry of Agriculture, Livestock, Fisheries and Irrigation, Republic of Kenya. (2019). Investing in Kenya's Agricultural Sector Transformation: National Agriculture Investment Plan (NAIP) 2019-2024. Nairobi: Government of Kenya.

Ministry of Planning and Development. (2021). Ten-Year Development Plan: A Pathway to Prosperity 2021–2030. Federal Democratic Republic of Ethiopia.

Mtaki, B., & Snyder, M. (2024). Grain and Feed Annual: Tanzania (Report No. TZ2024-0001). USDA Foreign Agricultural Service, Dar es Salaam.

Muriu, A. R., & Biwott, H. (2013). Agricultural Sector Functional Analysis: A Policy Regulatory and Legislative Perspective.

National Treasury and Planning, Republic of Kenya. (n.d.). Kenya economy. Retrieved 19 September, 2024, from https://www.treasury.go.ke/kenya-economy/

Nkwabi, J. (2019). Supply chain management constraints in Tanzanian small and medium enterprises. African Journal of Business Management, 13(6), 564-570.

Nkwabi, J., & Mboya, L. (2019). A Review of Factors Affecting the Growth of Small and Medium Enterprises (SMEs) in Tanzania. European Journal of Business and Management, 33(1), 1-8.

Oselu, S., Ebere, R., & Arimi, J. M. (2022). Camels, Camel Milk, and Camel Milk Product Situation in Kenya in Relation to the World. International journal of food science, 2022, 1237423. <u>https://doi.org/10.1155/2022/1237423.</u>

Rweyemamu, M. R.; Mruma, T.; Nkanyani, S. (2024). Tanzania agricultural policy profile. Colombo, Sri Lanka: International Water Management Institute (IWMI). CGIAR Initiative on Diversification in East and Southern Africa. 21p.

Stigler, M., & Lobell, D. (2021). Optimal index insurance and basis risk decomposition: an application to Kenya. American Journal of Agricultural Economics. DOI: 10.1111/ajae.12375.

Tefera, A., & Mello, E. (2022). Grain and Feed Annual: Ethiopia (Report No. ET2022-0014). USDA Foreign Agricultural Service, Addis Ababa.

Tumusiime, E., & Matotay, E. (2014). Agriculture Sustainability, Inclusive Growth, and Development Assistance: Insights from Tanzania. Journal of Sustainable Development, 7(4), 181-185.

World Bank. (2015). Tanzania Mainland Poverty Assessment: Executive Summary (Report No. AUS6819). Washington, D.C.: World Bank.

World Bank. (2020). Ethiopia Regional Poverty Report: Promoting Equitable Growth for All Regions. Washington, DC: International Bank for Reconstruction and Development / The World Bank.

World Bank. (2024). Ethiopia overview. Retrieved 19 September 2024, from https://www.worldbank.org/en/country/ethiopia/overview

World Food Programme (2023). United Republic of Tanzania Annual Country Report 2023: Country Strategic Plan 2022-2027. World Food Programme.

Zerssa, G., Feyssa, D., Kim, D.-G., & Eichler-Löbermann, B. (2021). Challenges of Smallholder Farming in Ethiopia and Opportunities by Adopting Climate-Smart Agriculture. Agriculture, 11(192), 1-25.