

Policy Brief

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What Will East Africans Eat in 2040? Who Will Produce the Food and How?

Victor Ogalo

This policy brief has been developed out of a study exploring the existing dilemma in realising sustainable food security in the East African Community (EAC). The study, titled *“What Will East Africans Eat in 2040? Who Will Produce the Food and How?”* analyses whether the EAC has positioned itself to attain sustainable agricultural production and food security for its population, given the enormous challenges and uncertainties lying ahead. The specific objectives of the study are to:

- discuss the state of food security and agriculture development in the EAC and to understand the drivers, trends and challenges affecting agricultural development and food security in the region; and
- interrogate and deduce various results within the possible scenario setups. This is meant to provide an important input into developing robust and viable EAC policies for agriculture and food security.

The policy brief analyses various scenarios explaining how stakeholders perceive the evolution of agricultural development and food security. East Africans face a tremendous complexity of systemic pressures on agricultural development and food security. At the same time, it is not clear on whether the relevant institutions in the respective partner states are up to the task of discerning and articulating the choices, navigating and arbitrating between competing interests and resolving conflict by finding common ground on which to enlarge the space for vision and action.

Scenarios and their Purpose in Planning

Scenarios are rigorous stories about the future. Basically, scenario stories are preoccupied with describing a world we might have to face, not a world we want to face. They, therefore, embody a wide variety of ideas, integrating them in a way that is communicable and useful, simple, memorable and sharable. Scenarios seek to illuminate the future conditions within which we will seek to meet our goals and achieve our dreams. They are, therefore, fables of the future which are: internally consistent; plausible – can happen or stand up to rigorous analysis; credible – can be explained; relevant to the current concerns of leadership and provoke conversations about key relevant issues; and, challenging – they stretch the thinking of leadership, taking leaders beyond what they know.

Importance of Agriculture Sector to EAC Economies

East African agriculture has remained largely traditional and concentrated in the hands of smallholders and pastoralists. Since farming is largely rain-fed, yields are low and farmers have usually been trapped in a cycle of poverty and food insecurity for decades. Nevertheless, agriculture remains an important economic sector in the region, as reflected in its share in gross domestic product (GDP) and employment. However, as depicted in the table below agriculture contributes highest to employment than any other sector, but disproportionately lower to GDP.

Although the share of agriculture in East Africa's GDP declined from 47.2 percent in 1980 (UNECA, 2007) to below 40 percent presently, agriculture still holds the key to future industrialisation and poverty

Contribution of Agriculture to GDP and Employment in EAC



Source: Kilimo Trust, 2010.

reduction in the region. The sector employs and earns livelihood to over 80 percent of the region's population. It promotes sectoral linkages (supply of raw materials as well as final consumer goods to other sectors). In addition, increased agricultural output and income usually tend to expand markets for the output of other sectors, including manufacturing and services.

Food Security Scenario in EAC Countries

Burundi

Burundi is a net food importer and the country relies on primary exports (coffee and tea), which account for 90 percent of foreign exchange earnings, though exports are a relatively small share of GDP. Access to food is alarmingly low, with only 18 percent of the population being food secure. Chronic malnutrition rate was reported in 2007 to stand at 46 percent of the country's population. Because of income poverty, a poor household spends up to 67 percent of its earnings on food [CURDES (2006) and Survey QUIBB 2006]. The main threats to food security are recurrent population displacement, poor infrastructure and insecurity, loss of soil productivity, erratic rainfall and climatic changes and plant diseases. Lack of financing as well as the inability to effectively implement agricultural policies compounds the challenges.

Kenya

Kenya's *National Food and Nutrition Policy (2007)* paint a gloomy picture of the food security status in Kenya. Approximately half of the population today is poor and some 7.5 million people live in extreme poverty. In any given year, two to five million Kenyans stare at hunger, while, generally, about 10 million suffer from chronic food insecurity and malnutrition.

In February 2010, the food security symposium organised by the Food and Agricultural Organisation's (FAO's) Country Office in Kenya in Nairobi put a spotlight on Kenya as one of the EAC countries with the largest food deficit. By May 2011, the Government of Kenya declared hunger a 'national disaster' and sought more humanitarian assistance. In addition to external assistance, key corporate institutions started an initiative dubbed "Kenyans for Kenya" which helped mobilise over a billion Kenya Shillings to boost the official basket for helping Kenyans faced with starvation.

The major factors hindering agricultural development and food security are inappropriate legal and regulatory framework, unfavourable macro-economic and external environment, low technology application, leading to low productivity, inadequate markets and marketing infrastructure, rising food prices, high cost and increased adulteration of key inputs, low productivity of the livestock sub-sector, limited capital and access to affordable credit and weak surveillance of offshore fishing.

Rwanda

Rwanda has a population that has been growing at a rate of 2.6 percent annually (2007) and it remains the most densely populated country in sub-Saharan Africa, considering a population density of 408 inhabitants per square km.¹ This population is however young, with an estimated 42.7 percent are under the age of 15 and 97.5 percent are under the age of 65, while the population aged 60 years or above constitutes a paltry 1.6 percent. The country has made significant economic progress in recent years.

Since the end of 1998, annual GDP growth has averaged 5.8 percent per annum. Agriculture, which

is the most important economic sector, has grown from -0.4 percent in 2007 to 15 percent in 2008, resulting in significant improvements in the food and nutrition security of the population. Given the prevailing levels of poverty in rural areas, it is not surprising that most rural households are not yet secure in their ability to obtain the food they need.

According to the Comprehensive Food Security and Vulnerability Analysis (CFSVA), Rural Rwanda (World Food Programme, 2006), 28 percent of the rural population is food insecure, 24 percent is highly vulnerable and 26 percent is moderately vulnerable. The unique challenges facing Rwanda are land scarcity, deteriorating soil fertility, limited application of technology, limited market access by producers, lack of financial services, weak human capital base as well as heavy burden on women in food production.

Tanzania

Tanzania is categorised as a least developed and low-income food deficit country with more than 40 percent of the population living in chronic food-deficit regions. The per day dollar poverty remains widespread at over 58 percent of the population. The Demographic and Health Survey of 2005 revealed that 38 percent of Tanzanian children below five years are chronically malnourished, while over 30 percent of all regions in the country have stunting rates of over 50 percent.

Almost 80 percent of Tanzania's population depends mainly on subsistence agriculture for its livelihood. On average, between 20-25 districts tend to have food shortages annually. The vulnerable regions which tend to experience transitory food insecurity are mainly in the northern regions of Dodoma, Singida, Shinyanga, Tabora, Tanga, Arusha, Kilimanjaro and Manyara. The regions that enjoy food surpluses are mainly in the southern regions. Unfortunately, in the regions that enjoy food surplus, there are high levels of malnutrition. In order for this country to be considered food secure, it should have at least 119 percent food self-sufficiency ratio (SSR) (based on MKUKUTA estimates) and a National Food Reserve of around 350,000-400,000 tons of grains, which can last 3-4 months through famine. But, this rate has not been attained over the last ten years.

Climate change has been identified as a major factor responsible for the fluctuating food production in Tanzania. Poverty has constrained farmers from accessing technology, seeds, and financing yet there is also limited access to extension services with high marketing costs. Traders on the other hand face low demand for modern farming inputs, high

transportation costs and lack of market information on food crops. The lack of clear strategic plans on agricultural development leads to having many priorities with no consistency on the government side.

Uganda

The hunger situation in Uganda has generally improved over the last few years. Uganda, as a whole, has no lack of food. However, access to and use of available food is inadequate in many locations. The north-eastern Karamoja region is most vulnerable. The combination of frequent natural disasters, gun violence, severe environmental degradation, extreme poverty, poor hygiene and other factors have eroded people's capacity to cope with crises.

Thus, relatively small shocks can lead to acute hunger and malnutrition. In recent years, the prevalence of acute malnutrition in Karamoja has remained above the alert threshold (10 percent) and sometimes reached emergency levels (above 15) in some areas. Even in the absence of a specific crisis, communities struggle with chronic hunger (stunting), especially children. The contribution of agriculture to GDP has been declining and the major challenges include high population growth (third highest in the world) as well as climate change.

Trends & Issues Affecting Food Security

Rising World Food Prices

EAC countries are increasingly becoming dependent on the import market to secure the most important of its staple food i.e. maize, wheat and rice. The worrying fact however is that the world price of these important staples (and indeed other staples as well) has been on the rise during this decade. That is why, when the FAO Cereal Price Index doubled in 2008, food security became a global crisis. The prices of agricultural commodities, including staples of many EAC diets, have been rising sharply over the last several years since 2005. In the period 2005-2008, prices of maize and wheat more than tripled and the price of rice has now reached unprecedented levels as illustrated in the table below.

Agriculture Commodity Prices, 2005 to 2008

Higher prices of staple food commodities are associated with a significant increase in poverty² and for East Africa's poor, who typically spend between 50 percent and 80 percent of their incomes on food, higher food prices lead to reduced food consumption, as well as a less nutritious diet. This increasing food and income poverty has led to increased need for food

Cereals	2005	2006	2007	1 st Quarter 2008	2 nd Quarter 2008
Wheat	152	192	255	411	347
Maize	98	122	163	220	259
Rice	288	304	332	516	953

Source: International Monetary Fund (IMF), "Table 3 Actual Market Prices for Non-Fuel and Fuel Commodities, 2005-2008," IMF Primary Commodities Prices (www.imf.org, accessed Aug. 12, 2008).

aid in almost all EAC countries. While one might expect higher food prices to benefit rural farmers and lead to higher incomes and increased production, in East Africa, this is not necessarily the case. It is difficult for small farmers to increase production in response to higher prices for several reasons, including lack of available land, inadequate irrigation, rising fertiliser prices, inability to get insurance and loans and reluctance to risk investment with no guaranteed return. In fact, sometimes, farmers end up planting less of the foods whose prices are rising.³

Other Challenges and Gaps

- a) Access to markets: Low farm-gate prices to farmers have a string effect of making agriculture less remunerative and leaving farmers with low bargaining capacity. Stringent standards compliance requirements and non-supportive and incoherent market policies all combined stand in the way of smallholder prosperity. In addition, constrained economic access to food, given high marketing cost of produce (transport, poor roads), tends to discourage efficient marketing.
- b) Low access to affordable and good quality inputs by farmers.
- c) Changing consumer diets and eating habits, which escalate demand for high-value food and grain-fed food – all tend to drive up food importation, in addition to more pressure on food, due to a growing middle-income group and increased urbanisation.
- d) Undercapitalisation of agriculture: Low research and development efforts, extension services, poor rural infrastructure, post-harvest handling and poor agricultural markets; low usage of production enhancing inputs such as fertilisers, improved seeds, agrochemicals and veterinary drugs, all lead to low and unstable production and productivity occasioned by over-reliance on rain-fed agricultural production systems.
- e) Rising energy prices have the effect of increasing demand for alternative energy and energy security. This has led to growth of bio-fuels and land-grabs, but with the result of reduced supply of grains and increased grain prices, as grains are diverted to the lucrative bio-fuel sector.
- f) Constrained financing and access to credit by farmers: Agriculture is viewed by banks as a high-risk venture and most resource-poor farmers do not have the necessary collaterals to access credit. Hence, the challenge of agriculture financing is further strengthened.
- g) High population growth rates above food production growth also exert pressure on food demand, thus raising food prices.
- h) Labour shortages due to urban migration and loss of suitable labour to the scourge of diseases, mainly HIV/AIDS.
- i) Globalisation of food markets tends to limit supplies from non-compliant farmers and giving access to cheaper imports, which ultimately kill the livelihood of smallholder farmers and economies of agriculture-dependent countries of East Africa.
- j) Land and water constraints, given the impact of climate change that reduces the volumes of low surface water storage per capita in the EAC region.
- k) Environmental degradation from present practices and how to balance food production and environmental conservation remains a real challenge.
- l) Demographic expansion into arable lands reduces the amount of available land for agriculture.
- m) Inefficient utilisation of the available water resources for production, including for irrigated agriculture.
- n) Inadequate and weak farmer's institutions incapable of supporting a vibrant agricultural sector.

Scenarios for Agriculture & Food Security

Three scenario stories have been presented here which are built on the Society for International Development's East Africa Scenarios to 2040. These stories sought to respond to the questions 'What do we want' and 'What will we become?' In asking these questions, the scenario process sought to challenge the region's citizens to discuss and to reflect upon the content and trajectory of the deepening integration process. It proposed three stories, each reflecting possible futures that the region might have to face, but each with very different outcomes.

Scenario 1: 'I Want to be a Star'

This is a scenario story about the seduction of beauty and wealth that embodies EAC (here in called CEA). It tells of a beautiful CEA that is so spellbound by the promise of her natural beauty and resource wealth that she welcomes all suitors (foreign investors and influential institutions) and relinquishes to them all control over her destiny. At the beginning, CEA was seduced and she felt like a super star. But, 30 years later, in 2040, CEA loses all her suitors, as she realises that she has been raped and abandoned. Bio-fuels and carbon farming are welcomed and this drives people off their land. Large-scale irrigation investments are brought that deliver quick returns initially, but increasingly devastate the wild bio-diversity and water shortages become more acute over time.

There are visible inequalities in access to food markets. The wealth in urban areas can access supermarkets, which are increasingly stocked with imported foodstuffs. The urban poor are increasingly eating less and nutrition levels are worsening. Pastoralists have been displaced off their land and they have lost their livelihood. In the rural areas, declining and erratic yields mean that people are more reliant on food markets than on their harvests, but their low income levels mean that they are not able to purchase much of their needs.

Poverty, hunger and disease deepen. Conflicts proliferate and resolution tends to favour those with money and connections. There is a lean towards serving global needs and wealthy elites, to the utter neglect of the locals. Money, science and credit are available to the wealthy and the outside investors. Little credit is available for smallholder agriculture. Labour is largely unskilled and underpaid, available in large quantities. Most

populations do menial jobs on farms owned by foreigners.

Scenario 2: 'I want a visa'

In this scenario story, an East Africa is depicted that trusts in its executive elite, motivated by enlightened self-interest, deploys its intellectual skills and state power to deliver development through the coordinated execution of what appears to be a visionary and progressive strategy. Eventually, it discovers that confidence in control has its limits. The local executive elite regard smallholders as important to increase food production and there is increased investment in Research and Development as well as extension services.

Scenario 3: 'Usiniharakisha' (Don't Rush Me)

The story explores ordinary East Africans struggling to retain and reclaim control over their most local assets – land, water, trees and creativity in an effort to determine their own futures. Success is not assured as small units grapple with and risk being overwhelmed by the big challenges. But eventually, it proves that with resilience and adaptation one can go far.

Conclusion

While the EAC Food Security Action Plan is clear on how to address these issues, it is blind to the fact that the future might unfold differently from the world policy makers would want. What the region, through its food security policy, does not seem to tackle clearly is how to develop a staunch strategy against the enormous threats from climate change, water scarcity, environmental degradation and competition for scarce energy resources. How these factors will affect the realisation of the region's food security needs is yet to be understood and addressed.

However, what is certain is that, in order to increase agricultural productivity and food production sustainably, the region will have to do more with less: less water and other natural resources, less energy, less financial resources and a less certain climate. These are not mere predictions, because they are already being experienced anyway. To harness the scarce agricultural resources against the competing demands for them will demand more efforts in finding appropriate technologies and more resilient policies against future uncertainties.

Recommendations

- a) There is need to encourage investments in productivity by enhancing inputs leading to a better exploitation of good seasons. Such actions will help in avoiding the risk of losing investment loss in inputs among the small holder farmers.
- b) Mechanisms should be created to enhance credit availability to farmers. This should involve an insurance arrangement that will pay off part or the entire loan in case of severe drought in order to encourage lenders to provide more credit to smallholder producers as it will reduce the chance of default.
- c) Governments should reduce the need for food aid and hand-outs. This will reduce dependence on welfare-type programs, thus building the confidence among the smallholders to focus on self supporting programmes.
- d) There is need for a regional policy to emphasise on linking the emergency food aid to long-term development as well as promote the use of appropriate technology which is affordable and adaptable to climate change.
- e) There is need to enhance tailor made programmes on food security for marginal groups such as vulnerable communities, households and individuals; and Promote women and youth entrepreneurs in food supply.
- f) There is need to increase and optimise the use of water for agricultural production by promoting integrated water resources management in the EAC including joint water systems.
- g) There is need to enhance Intra-regional trade share in regional food products market by strengthening the current food information systems within the EAC Partner States.
- h) There is need to improve Market infrastructure by strengthening storage facilities, facilitating development of community based storage facilities in target areas and Promoting renting/leasing of storage facilities for food commodities/products.
- i) There is also need to streamline gender in the regional food action plan by up scaling access to credit for rural communities, including women and youth associations, through the provision of microfinance services and training programmes.

Endnotes

- 1 NISR, July 2008 Population Projections
- 2 Maros Ivanic and Will Martin, "Implications of Higher Global Food Prices for Poverty in Low-Income Countries," *World Bank Policy Research Working Paper* 4594 (2008)
- 3 "The New Face of Hunger," *The Economist*, April 17, 2008

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