Food Insecurity in Uganda and Nigeria

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Introduction

Food is the basic human need for survival, health and productivity, and forms the basis for human and economic development. This simple truism determines in a broad sense the physical, social and economic conditions of a region. Food security exists when safe and nutritious food that meets the peoples dietary needs and food preferences to live an active and healthy life; and paradoxically food insecurity results when food systems are stressed in such a way that food is not available, accessible or utilized properly (Turyahabwe *et al.* 2013). Global food insecurity affects one in eight people, or 870million worldwide, with two-thirds of these people found in Sub-Saharan Africa, India, and China (FAO 2013). Moreover, most households especially in developing nations are food insecure, with 2009 estimates suggesting that 102 billion people were undernourished worldwide, which is about 37% higher than 20 years ago (FAO 2009). Sub-Saharan Africa and South Asia are the regions most affected by food insecurity, being home to 60% of the world's food insecure people (Turyahabwe *et al.* 2013).

Indeed, the links between climate change, socio-economic development, health and environmental sustainability have become dominant and urgent global concerns. Low per capita food availability, high fluctuations in food supply and lack of innovative ideas as well as responsive policies for sustainable use and management of natural resources are primary challenges to address in food insecure nations. Environmental degradation and climate change add additional elements of complexity, insofar as climate change results in new and unpredictable patterns of precipitation and temperature, the increased frequency of

extreme weather events and rising sea levels (Hope 2016), and anthropogenic land change results in desertification. Sunderland (2011), Brussard *et al.* (2010) and Perrings *et al.* (2010) argue that the clear disaggregation of conservation goals with agricultural production have led to limited outcomes in the realms of conservation and food security for the local people. To achieve this duality, integrated and inclusive approaches must be actively pursued. The 2012 Human Development Report for Africa indicated that the food security situation in Africa has been unsatisfactory, and since 2000 Africa has experienced several episodes of acute food insecurity, with immense loss of lives and livelihoods. The report shows that crop failure and a lack of food are not the only causes of famine and hunger, and more often the challenge is in the uneven access to food. It is a symptom of the low incomes and high levels of vulnerability that still affect many Africans. Inclusive growth and people-centred approaches to food security are needed. Action focused on agriculture alone will not end food insecurity -- new multilateral approaches are necessary; from rural infrastructure to health services, social protection and empowerment of the people. Development must redress the institutional top down approach, insofar as the poor and vulnerable must have a greater voice through strengthened local government and civil society to ensure food security for all.

Case Study of Uganda

During 2010, the National Development Plan indicated that the food security situation in Uganda has been unsatisfactory (NDP 2010). At the time, approximately 1.4 million people were food insecure despite the abundant resources (FEWS-Net 2010), with the prevalence of food energy deficiency at the country level standing at 37% (Lisa *et al.* 2006). About 86% of Uganda's population live in rural areas and are predominantly rural farmers and agricultural practice is predominantly rain-fed (Turyahabwe *et al.* 2013), characterized by low levels of crop productivity. African agriculture depends mostly on rainfall, and high rainfall variability, drought, climate change and farm mismanagement result in crop failure and declining socio-economies; including increased poverty and starvation, as well as increases in the phenomenon of rural-urban migration.

Awareness among farmers

Increasing awareness that most poverty is rural, and that agricultural development has been neglected lent urgency to scholarly investigation of agricultural development investments – best described in the World Development Report for 2008 (World Bank 2007). Essentially, farmers of Uganda are vulnerable to starvation in times of environmental stress, drought and floods because of such dependence. Turyahabwe *et al.* (2013) found that about 83% of Ugandan households experienced food insecurity, with the main indicators attributed to low harvest (30.9%) and when people buy locally grown food items (18%). Moreover, 80% of the respondents reported that wetland resources provide products and services that contribute enormously to their household food security, of which, Uganda has lost about 11,268 km2 of wetland, representing a loss of 30% of the country's wetlands from 1994 to 2009 (Turyahabwe *et al.* 2013).

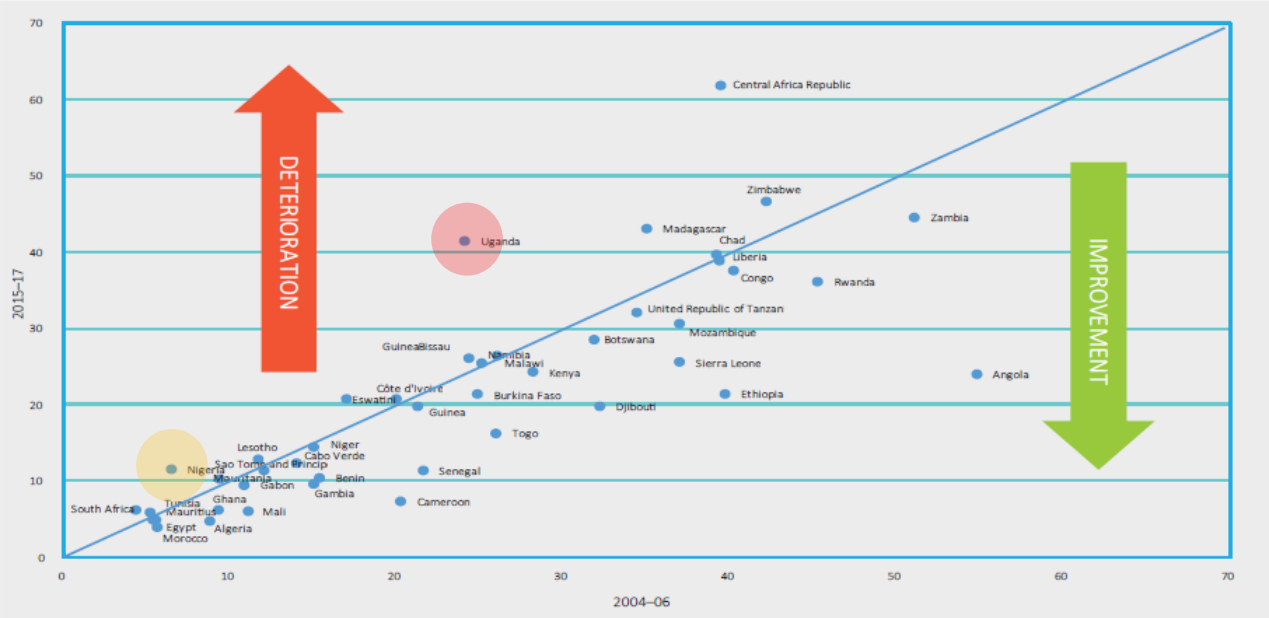
Effect of regional integration and trade

Regional integration and trade have multiple advantages for sub-Saharan Africa, especially for countries that are landlocked, are far from major transportation routes, have low population density and have small domestic markets (UNDP 2012). Such is the case for Uganda, where regional integration and trade can help production, markets, new technologies and opportunities. Expanding regional integration requires careful policy management. Uganda buffered the impacts of the global economic slowdown in 2009 and the contraction in demand for its traditional cash crops (coffee, tea and cotton) from its international trade partners by expanding cross-border trade with its neighbours in non-traditional exports (maize, beans and livestock).

Undernourishment in Uganda

In Uganda, the number of undernourished has been inflated by the influx of over 1.4 million migrants and refugees, of which about 1 million alone came from South Sudan (FSIN 2018). In addition, poor rainfall and crop and livestock pests and diseases reduced production and contributed to record high maize prices in 2016–17 (FAO 2018c; FAO 2018a). As seen in figure 1, Uganda is characterized as an undernourishment African country, in a state of deterioration. With increasing population around the wetlands, coupled with land shortage and weather variations, households with limited options will continue to generally rely on wetlands for food security and income for sustaining their livelihoods unless alternative livelihood options are provided (Turyahabwe *et al.* 2013).

Figure 1. Change in the prevenance of undernourishment in African countries from 2004-06 to 2015-17



Source: UNDP (2012)

Case study of Nigeria

The rise in the prevalence of undernourishment in Western Africa between 2014 and 2016 was strongest in Guinea, Mauritania, Niger and Nigeria (FAO 2018). Nigeria, which accounts for half the population of Western Africa, is also adversely affected by a depreciating currency, leading to high inflation, reflected in food prices, such as rice (FAO, 2018a). In addition, in north-eastern Nigeria, civil conflict left millions in need of urgent assistance - 2.9 million people were expected to be severely food insecure during the 2018 lean season (June to August) (FAO 2018b; FAO 2018c). The last two decades of the twentieth century have been noted for the frequency and intensity of extreme weather conditions. In Nigeria, temperatures have risen continuously (Buba 2009), and the impacts of climate change on food production and food security is a great threat.

Agriculture and climate change

Agriculture is under pressure in large part due to increased demand, and depletion of natural resources. According to Tanko (2010), several adaptive practices or coping measures, and lack of any formal or semi-formal organization in the communities, render it impossible for formally organized measures to be adapted. Again, in figure 1, Nigeria is characterized as an undernourishment African country, in a state of deterioration (albeit less consequential than Uganda).

Perception of climate change

Tanko's (2016) study on two local farming communities in rural northern Nigeria revealed not only local perceptions of climate change, but its impacts on their communities. The overarching aim here was to enhance food security by facilitating sustainable climate change adaptation and mitigation among small-scale farmers in the area. Although members of Cifatake and Aburom communities came to differing conclusion as to the process of climate change, they both had observed a shortened length of the rainy season. Each community was assessed using variables relevant to the vulnerability of the agricultural sector to climate change, seen in Table 1 and Table 2. Indeed, the study found that both the climatic conditions and the anthropogenic factors were contributing to the vulnerability to climate change in agrarian communities. Cifatake, with a vulnerability value of 0.57, showed more resilience to the impact of climate change than Aburom with a rating of 0.29.

Lack of awareness and planning

It was observed that the lack of formalized awareness and the lack of articulated knowledge for alternative adaptive responses led to the high vulnerabilities in local communities (Tanko

2016). It is therefore clear that there are major obstacles that limit the success of small-scale farming. These challenges can be categorized into rather broad sectors; (1) climate, (2) technology and education, (3) financing and (4) policy and infrastructure. Smallholder farmers in Nigeria, such as these communities are considered amongst the poorest in the world, with their adversity characterised by the marginal potential to develop without modern agricultural technologies, sufficient investment and a distribution structure.

Table 1. Vulnerability to climate change rating for Cifatake community (Tanko 2016)

Issues in agricultural sector	*Resource mobilization*	*Institutional organizations and regulations*	*Additional inflow of capital investment*	*Vulnerability all +s divided by 21*
Land put to cultivation	+	0	0	12/21 = 0.5714
Crop varieties	+	+	+	
Use of improved seeds	+	?	?	
Harvest	+	?	0	
Improved technology for harvest	+	0	0	
Length of rain days	0	0	0	
Rainfall storms	0	0	0	
Water availability	0	0	0	
Vegetation cover	0	0	0	
Species varieties	+	0	0	
Available energy types	0	0	0	
Road infrastructure	0	0	0	
Time distances to market	0	0	0	
Available transportation	+	0	0	
Available markets	+	+	+	
Agro-Allied industries	0	0	0	

Source : Tanko (2016)

Table 2: Issues on agricultural Sector

Issues in agricultural sector	*Resource mobilization*	*Institutional organizations and regulations*	*Additional inflow of capital investment*	*Vulnerability all +s divided by 21*
Land put to cultivation	+	0	0	6/21 = 0.2857
Crop varieties	+	+	+	
Use of improved seeds	+	0	?	
Harvest	+	0	0	
Improved technology for harvest	?	0	0	
Length of rain days	0	0	0	
Rainfall storms	0	0	0	
Water availability	0	0	0	
Vegetation cover	0	0	0	
Species varieties	0	0	0	
Available energy types	0	0	0	
Road infrastructure	0	0	0	
Time distances to market	0	0	0	
Available transportation	0	0	0	
Available markets	0	0	0	
Agro-Allied industries	0	0	0	

Scores *(0 = no improvement has taken place, + = improvement has taken place, ? = improvement may have taken place)*

Source : Tanko (2016)

Comparison

The key drivers of food insecurity for Uganda and Nigeria can be owed to food prices, rising demand for food due to population growth, changing consumption patterns and pressure on food production rate from climate change, and natural resource availability as affected by land degradation and water scarcity. In Uganda, the number of undernourished has been inflated by the influx of over 1.4 million migrants and refugees, of which about 1 million alone came from South Sudan (FSIN 2018). However, Nigeria is characterized as an undernourishment African country, in a state of deterioration (albeit less consequential than Uganda).

In Uganda, there is a need to design appropriate food production technologies that ensure sustainable use of wetland resources for food security, and in Nigeria, there is the need to monitor ongoing adaptation practices, provide alerts about the risks of maladaptation, and establish links with policymaking and, at the same time, to assess the value of indigenous knowledge in the context of managing future risks (Tanko 2016).

Conclusion

For too long the face of sub-Saharan Africa has been one of dehumanizing hunger. Expanding populations and growing economic well-being in emerging economies and changes in urban demographics are increasing the global demand for food. More than one in four Africans is undernourished (UNDP 2012), and food insecurity is pervasive. Yet sub-Saharan Africa has ample agricultural land, plenty of water and a generally favourable climate for growing food. Like Fyles and Madramootoo (2016).

Climate change impacts

Climate change impacts, increasing water scarcity, and loss of productive land due to poor management can be addressed, at least to some extent, in the agricultural sector through technological improvements and investments in infrastructure, research, and capacity building. In the absence of such improvement, food insecurity will prevail, and communities will be forced to seek alternate nutrition sources and livelihoods, having their very own consequential, if not compounding challenges. In many cases, the use of forest resources is already changing, and these changes largely influence the roles that forest food plays in household nutrition (Arnold *et al.* 2011). Arnold *et al.* (2011) described how forests meet three fundamental household needs; (1) the provision of healthy foods, high in micronutrients and fibre; (2) the provision of culturally valued products, integral to food sovereignty; and (3) fulfillment of food gaps, acting as a resource buffer.

paradigm shift

Thus, a paradigm shift is needed; sustainable development and food security efforts must account for geo-cultural barriers to change and shift towards a healthy model that recognizes systemic vectors affecting food security. In Uganda, there is a need to design appropriate food production technologies that ensure sustainable use of wetland resources for food security, and in Nigeria, there is the need to monitor ongoing adaptation practices, provide alerts about the risks of maladaptation, and establish links with policymaking and, at the same time, to assess the value of indigenous knowledge in the context of managing future risks (Tanko 2016). Indeed, such adoptions would see a reversal of trend and an indication of a way to move forward under modernization through technology, and innovation through education. African governments must to take note; to continue in the same direction or turn instability into an asset.

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