

**Food Security in the African Countries: The Case of Nigeria and
The Democratic Republic of the Congo**

Mary Brown
GEOG 275 Geography of Sub-Saharan Africa
Spring 2024
Dr. Mohamed B. Ibrahim

Introduction

In developing countries, food security is a dire issue as many people do not have access to basic needs such as food and nutrition. Two countries that will be the focus of this paper are the Democratic Republic of the Congo and Nigeria; both of these countries have issues of extreme inequality and food insecurity. The term food security can mean many things; for the purpose of this paper food security refers to the availability of food and an individual's access to it. A household can be considered food insecure, for example, when people live with unstable sources of food income or the fear of starvation (FAO, 2001). It can also be defined as being physically, socially, and/or economically unable to access sufficient and nutritious food to meet their dietary needs for a healthy life (Idachaba, 2006). There are many factors that can lead to food insecurity; this paper will focus on how economic development, political instability, and climate change affect food insecurity in Nigeria and the Democratic Republic of the Congo.

Climate Change and food security

Climate change as defined by the Intergovernmental Panel on Climate Change (IPCC) is “a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer” (IPCC, 2007). The change in the global climate has been reported to be a result of both human activities and natural variabilities.

Climate change not only threatens ecosystems of animals and natural equilibriums but also threatens the human quality of life and prosperity worldwide. Anthropogenic activity, namely the burning of fossil fuels has contributed to an increase in the accumulation of

greenhouse gases in the atmosphere which has caused an increase in temperature in the global climate. This phenomenon is known as global warming (Change, 2001). Global warming causes unpredictable and extreme weather events that impact and increasingly affect crop growth, availability of soil water, forest fires, soil erosion, droughts, floods, sea level rises, and pest infestations. All of which contribute to low and unpredictable crop yields, which not only make farmers more vulnerable but also cause significant food security issues (Garnaut, 2008). The growing problem of climatic change has impacts worldwide but developing countries, especially in Africa will be most affected. This is because the African economy is predominantly based on agriculture.

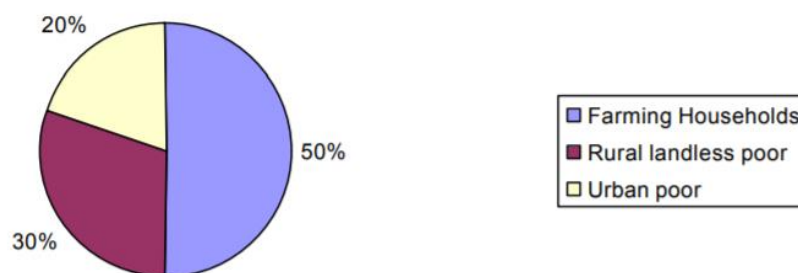
Climate change also changes the productivity pattern of rainfall. This is an issue because if rainfall is irregular it no longer coincides with the growing seasons and crops fail. Farmers bear the brunt of this issue as they do not know when to cultivate their grains and other vegetables (Change, 2001). For example, in some years, the rainfall comes too early and when farmers plant their grains, the rain stops and the grains rot under the ground. The farmers not only lose money and are unable to buy food for themselves but they are also not able to produce food for others in nearby towns and villages and there are major food shortages.

Food Insecurity

Food security issues are improving in every region of the world except in Africa, where they have been arguably worsening. Africa's weak development in the food and farming sector has many reasons such as shifts in economic focus, political instability, and climate change (Change, 2001). As a result of food insecurity, most developing countries in Africa have the issue of persistent malnutrition which causes children to be weak and vulnerable to common illnesses such as diarrhea, acute respiratory infections, malaria, and measles. Food insecurity

may also result in further political instability because food-insecure individuals may experience reduced productivity, reduced work and school performance, and reduced income earnings (Otaha, 2013). The figure below, Figure 1, shows that the proportion of the people that are food insecure in Africa are farming households followed by rural landless poor.

Figure 1: Proportion of the Food Insecure in Africa



Source: Mwaniki, (2006)

Food security in Nigeria

Write at least 4 pages in this country

Nigeria has the 6th highest population in the world with an estimated population of about 172 million people with an annual population growth rate of 2.8 percent. This population increase has led to the demand for food products increasing as well, however, there has been little to no increase in agricultural production to support this demographic change (Fawole et al, 2015).

In Nigeria, there have been high levels of food insecurity for the past four decades as a result of neglect in food production when oil has become the major export product, internal conflicts such as war, and climate change (Otaha, 2013). Food is different from other commodities because everybody needs it for survival, and it is an indispensable factor in a

nation's quest for economic growth and development. Unfortunately, most of the food needed in Nigeria is produced by peasant farmers who lack capital, skills, energy, and other viable ingredients to produce in large quantities that will meet the requirement of the growing population (Otaha, 2013).

Climate Change and food security

The change in climate, also known as global warming, has been caused by anthropogenic activity and is a threat to food security in many developing countries such as Nigeria. This is because the agricultural system depends on the climate and there is a lack of coping capabilities. There is a study that was completed that used the spatiotemporal pattern of temperature and rainfall of Nigeria between 1901 and 2005, to investigate the concept of regional climate change and its impact on Agriculture and food security. They also assessed the level of agriculture funding and output in Nigeria (Bello et al, 2012). The results showed that within the period of 105 years, rainfall decreased by 81 mm with an increasing temperature of 1.1°C. In other words, unpredictable rainfall and steadily increasing air temperature were observed from 1971-2005. This resulted in land degradation, desertification, drying up of surface waters, and crop failure which over time drastically affected the food security in Nigeria (Bello et al, 2012).

A specific example of climate change-induced environmental degradation is in the southern ecological zone of Nigeria which has been known for high rainfall and is currently facing irregularity in the rainfall pattern. In addition, the Northern zone faces the threat of desert encroachment at a very fast rate per year as temperatures increase. However, Nigerians living in the coastal regions are vulnerable to floods, destruction of mangrove ecosystems, contamination of water, and transmission of water-borne diseases, leading to displacement and

communal crisis (Odjugo and Ikhuoria, 2003). The result is that low-income farmers have crop failures which lead to reduced agricultural productivity throughout the whole country. This in turn increases poverty and malnutrition. Due to environmental threats causing a decline in crop yields, farmers in Nigeria are giving up and abandoning farming completely for non-farming activities. This means that not only is there less food available due to crop failure but because of the variable climate conditions caused by climate change, farmers are quitting their jobs as food producers because they are not making enough profit (Bello et al, 2012).

The Democratic Republic of the Congo

Write at least 4 pages in this country

The Democratic Republic of the Congo, also known as DRC, is one of the largest and least developed countries in Africa. It is ranked 175th of 189 countries on the 2020 Human Development Index, and it is one of the largest hunger crises in the world. Hunger and conflict fuel one another, with armed conflict and widespread displacement prevailing for the past 25 years and multiple other crises compounding DRC's humanitarian challenges (Coghlan et al, 2006). The number of acutely food-insecure people stands at 27 million, making access to food a daily struggle for a significant part of the Congolese population. An estimated 3.4 million children are acutely malnourished (Ulimwengu et al, 2012). DRC is the second-largest country in Africa and it is now the second-largest hunger crisis in the world after Yemen (World Food Programme, 2019).

Climate Change and food security

Over 20 million forest farmers practice slash and burn agriculture in the forests of the Congo Basin and they rely on the long dry season to make sure that their yields are successful.

This type of weather pattern also helps to maintain a cycle that is important for local knowledge of the farmers and also helps to maintain soil health (Rugasa, 2016).

Data from the Ituri forest in the northeastern Democratic Republic of Congo show that the strength of the annual dry season has a direct positive impact on the food production and the severity of the subsequent year's pre-harvest hunger period. Dry periods are necessary and without them, the food supply decreases and causes food insecurity. (Terashima and Ichikawa, 2003). However, due to climate change, there is a prediction that an increase in rainfall predicted for much of the Congo Basin by the 2050s may cause an increase in the food insecurity of poor rural families across the region (Terashima and Ichikawa, 2003). It is therefore important that climate change and climate variability issues be taken seriously in order to develop strategies to ensure vulnerable groups do not face increased food insecurity. In addition, it is also important to note that forests are important to indigenous communities in the Congo Basin whose livelihoods directly depend on forest resources: food, fuel, water, medicine, and household incomes.

Due to the increased rainfall that is predicted to plague DRC, there will also be increased flooding. Findings showed that flooding was considered 57 times more likely than other factors

Comparison Between Nigeria and Congo

The Democratic Republic of Congo (DR Congo) and Nigeria will be one-half of the world's population living in extreme poverty by 2050. The poverty-related food insecurity issues affect DR Congo and Nigeria, but these countries are the epicenter of the world's food insecurity cases. They have similarities and differences in how this circumstance of extreme food security came about. Both of these countries are located in Sub-Saharan Africa and there are general similarities in how climate change is affecting this region. In both countries crop yield has been

decreasing because of reasons such as climate change, decreased support from the government, and internal conflicts, and as a result food prices have increased, contributing to food insecurity because poor populations cannot afford these prices. For example, rice, wheat, and maize prices are projected to increase by 41, 28, and 36 percent by 2030, respectively in both Nigeria and DRC (Thompson, 2010).

However, there are differences in the levels of food security within Nigeria and the DRC. One study showed that countries such as Nigeria, and Ghana had the highest per capita calorie availability, while the Democratic Republic of Congo had the lowest calorie availability (Thompson, 2010). The international solutions for the food security issues within these two countries are similar though. Many interventions programs throughout Sub Saharan Africa have been implemented to help solve food insecurity issues such as Women's Empowerment Groups (WEG), Prevention of Malnutrition in Children under 2 Approach (PM2A), Farmer Field Schools (FFS), and the Farmer to Farmer approach (F2F), which were all implemented in the context of a five-year Development Food Assistance Program (Doocy et al, 2018).

Conclusion

The Democratic Republic of the Congo and Nigeria both have issues of extreme inequality and food insecurity. Though the themes of the insecurity are similar each country has unique circumstances and complex histories to how they became in this dire circumstance. There are many factors that can lead to food insecurity; this paper focused on how economic development, political instability, and climate change affect food insecurity in Nigeria and the Democratic Republic of the Congo (Thompson, 2010). Although climate change was largely not caused by Africa, the consequences will disproportionately affect African people, especially the farming communities.

Though intervention programs can be helpful the solution lies in combining traditional knowledge with science and connecting with each community within food-insecure countries individually (Njeru, 2013). In order to make effective changes, we have to connect with people's cultures to make solutions that will solve their individual food insecurity problems. For these reasons, the local communities have adopted some solutions to dampen the effects of climate change. Some of these measures include using different crop varieties, crop diversification, changing planting dates, strengthening nonfarm activities, and increased use of irrigation. These will each be tailored to the individual communities needs (Njeru, 2013). Food security is an important aspect of economic and social development for all developing countries and a vital first step to achieving stability and success.

References

Must be at least ten references

- Agbiboa, D. 2013. The ongoing campaign of terror in Nigeria: Boko Haram versus the state. Stability: *International Journal of Security and Development*, 2(3) 24-36.
- Bello, O. B., Ganiyu, O. T., Wahab, M. K. A., Afolabi, M. S., Oluleye, F., Ig, S. A., & Abdulmalik, S. Y. 2012. Evidence of climate change impacts on agriculture and food security in Nigeria. *International Journal of Agriculture and Forestry*, 2(2), 49-55.
- Coghlan, B., Brennan, R. J., Ngoy, P., Dofara, D., Otto, B., Clements, M., & Stewart, T. 2006. Mortality in the Democratic Republic of Congo: a nationwide survey. *The Lancet*, 367(9504), 44-51.
- Collier, P. 1988. Oil shocks and food security in Nigeria. *Int'l Lab. Rev.*, 127, 761.
- IPCC. 2007. AR4 Climate Change 2007: Synthesis report. Retrieved From <https://www.ipcc.ch/report/ar4/syr/>
- Odjugo PAO, Ikhuoria AI. 2003. The impact of climate change and anthropogenic factors on desertification in the semi-arid region of Nigeria. *Global J. Env. Sci.*, 2(2): 18-126
- Ragasa, C., Ulimwengu, J., Randriamamonjy, J., & Badibanga, T. (2016). Factors affecting performance of agricultural extension: evidence from Democratic Republic of Congo. *The Journal of Agricultural Education and Extension*, 22(2), 113-143.
- Ulimwengu, J. M., Roberts, C., & Randriamamonjy, J. (2012). Resource-Rich Yet Malnourished: Analysis of the demand for food nutrients in the Democratic Republic of Congo (No. 1154). *International Food Policy Research Institute (IFPRI)*. Washington D.C.
- World Bank. 2006. Nigeria Poverty in the Midst of plenty. The Challenge of Growth without Development. *A World Bank Poverty Assessment*. Washington D. C.