

Africa and the Challenges of Food Security: Yesterday, Today and the Future

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Introduction

AT the 1974 World Food Conference, the term food security was defined with emphasis on supply. Food security was described as the “availability at all times of adequate, nourishing, diverse, balanced and moderate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices” (FAO, 2006; UN, 1975). However, the most widely used definition of food security originates from the 1996 World Food Summit (WFS) at the Food and Agriculture Organization of the United Nations (FAO) which noted that, “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2016a; FAO, 1996).

The last definition encompasses issues of food availability, economic and social access, individuals’ ability to translate the food they eat into good health (commonly referred to as the utilisation dimension), and their ability to maintain stability in each of these dimensions over time. Individuals who are food secure do not live in hunger or fear of starvation. Availability, accessibility, utilisation, stability and sustainability have been identified as five dimensions of food security from the broad definition provided by FAO (Karim, 2020, Berry *et al*, 2015). The Summit, also reaffirmed the right of everyone to safe and nutritious food. Heads of state and government committed themselves to eradicate hunger in all countries, with the immediate goal of reducing the number of undernourished people to half the level at that time by 2015. One of the greatest challenges was to achieve the goal in Africa and especially in Sub-Saharan Africa where chronic hunger is widespread. It is worthy of note that the definition was again refined in FAO’s The State of Food Insecurity in 2001 Report, “as a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious

food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2002).

The fundamental right of people to the food they need is one of the greatest challenges facing the African community. In Africa, food-deficit is more prevalent in low-income households and countries. Of the 86 countries faced with food-deficiency in the world, 43 are in Africa. Food security is still increasing in Africa, and many Africans still live in hunger. The continent has the highest population growth rate among the world's regions; between 2010 and 2015, it grew at a rate of 2.55 percent per year. It is estimated that more than half of the global population growth between now and 2050 will occur in Africa (UN, 2018). Africa presently has the highest rate of population growth in the World. The population of sub-Saharan Africa is projected to double by 2050 (UN, 2020). The population growth has superseded food production, and ultimately, food security levels. Total population as of 2020 is estimated at more than 1.341 billion, with a growth rate of more than 2.5 percent per annum. It is true that Africa has a number of assets and natural resources, and therefore self-sustainability and development is expected for its fast growing population. Africa's population has increased swiftly, from 221 million in 1950 to over 1.25 billion in 2019. Africa's food production must continue to increase steadily with the population growth if it is to be food secure in the coming decades.

Reports indicate that most African countries generally have made progress over the past decade, but the food security situation remains appalling for some countries. In the year 2016, about 688.5 million people were severely affected by food insecurity worldwide, with 27.4 percent of the population in Africa, especially sub-Saharan Africa (FAO, 2017). According to the FAO (2015) State of Food Insecurity, Africa scored poorly in all indicators regarding food security and nutrition targets. For example, in 2015, only 18 out of 54 African countries achieved the Millennium Development Goals 1C (MDG 1C) hunger target. The 2030 Agenda for Sustainable Development puts forward a transformational vision recognising that our world is changing, bringing with it new challenges that must be overcome if we are to live in a world without hunger, food insecurity and malnutrition in any of its forms.

The trend of food insecurity in Africa is worrisome due to some inherent factors such as conflicts and instability, environmental issues, development and governance deficits, economic shocks, amongst others. For example, the 2020 analysis by the World Food Programme reports of UN show that Africa is the continent most affected by food crisis accounting for about 54 percent of the global total of the number of people in crisis (World Food Programme, 2020). In West Africa, the Sahel and Cameroon, people in food crisis increased from 11 million recorded in 2018 to 12 million in 2019. This increase is tied to acute food insecurity in Burkina Faso, Niger, and Cameroon. According to a report by the

WFP, with a record of 5 million people, Nigeria has the highest number of people in crisis in the 15 countries analysed in the continent (UN, 2020). Conflicts and instability have increased and become more intractable, spurring greater population displacement. Climate change and increasing climate variability and extremes are affecting agricultural productivity, food production and natural resources, with impacts on food systems and rural livelihoods (Berhane, 2018). Politics and poor governance are factors influencing economic and social development and consequently pervasive poverty in Africa. These challenges stand in the way of Africa's pursuit to achieving food security and eradicating hunger. Poor food production and processing and value addition are also noted as bottlenecks to food security in many nations in Africa. Traditional agricultural and food processing technologies still accounted for about 70 % of food supply, while the technologies are reported to account for about 30 percent post-harvest food losses (Karim, 2020).

According to the literature, Africa's responses to the food security challenges may be summarised as ineffective and inefficient. However, since the advent of the new millennium and the food crisis of 2007-2008, there has been renewed commitment by the African leaders, the African Union, the Regional Economic Communities, national governments, civil society, private sector, and many stakeholders in Africa in support of food security (Dodo, 2020). The need to strengthen global governance mechanisms, restore the central role of food within the international political and economic agenda; encourage economic development and realise increases in agricultural productivity have been established. This commitment is expected to disentangle the triggers of food insecurity, enhance agricultural production, reduce the prevalence of undernourishment, and eradicate hunger for an overall achievement of food and nutrition security in Africa. The chapter therefore focuses on the trends, triggers and evidences of food insecurity in Africa.

Food Insecurity

Food Insecurity exists when people do not have physical or economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life, at all times (FAO, 2006). According to FAO (2010), food insecurity refers to the consequences of inadequate consumption of nutritious food, considering the physiological use of food by the body as being within the domain of nutrition and health. Malnourishment also leads to poor health (makes the bread winner of the family unhealthy, hence individuals fail to provide for their families). If left unaddressed, hunger sets in motion an array of outcomes that perpetuate malnutrition, reduce ability of adults to work and to give birth to healthy children, and erode children's ability to learn and live productive, healthy

and happy lives. Food insecurity is not just about insufficient food production, availability, and intake, it is also about the poor quality or nutritional value of the food. It is intimately related to other forms and causes of extreme poverty and deprivation. It truncates human development and undermines a country's potential for economic development for generations to come. This scenario has been prevalent in Africa for many years (FAO, 2020).

Triggers of Food Insecurity in Africa

Food security remains an apparent issue on the African continent; however, not all components of the problem can be quantified. It is true that Africa has a good number of assets and natural resources, and therefore self-sustainability is expected. Several factors are still responsible for food insecurity on the continent. Although, it is difficult to choose one reason as the main cause of food insecurity, shortage, and malnutrition, one can pin-point some definite factors as the triggers of food insecurity in most African countries. These include civil conflicts, political crisis and instability, lack of government policies that encourage farmers, lack of financial support to farmers, institutional corruption, human resources, population growth, climate **change**, **desertification** and natural disasters. In 2018, a series of conflicts left 33 million people in ten countries in Africa in need of urgent humanitarian assistance. Another 23 million were in need of assistance due to climate shocks, while over 10 million people were acutely food insecure due to economic shocks (FAO, 2019). Dodo (2020) also agreed that it is true that one cannot put their fingers as to why food shortages, insecurity, and prevalence of malnutrition have persistently afflicted Africa. He identified number of failed internal economic policy tools and international policy prescriptions as the culprits or underlying causes of systemic food insecurity in Africa. In all, the triggers of food insecurity in Africa can be categorised as follows:

- (1) Population growth
- (2) Political instability and crises; poor governance and government policies
- (3) Regional or communal and civil conflicts and pandemic
- (4) Human resources
- (5) Climate change, desertification and natural disasters
- (6) Socio-economic development
- (7) Women in agriculture
- (8) Others such as poor agricultural systems, food processing, preservation and value chain; sheer neglect towards the farmers, etc.

Population Growth

In 1990, Africa's population was 635 million people but this rose to 1.2 billion in 2018. The growth rates continue to pose serious challenges to food security and

development as the rate is not measured by agricultural production. Population growth will greatly increase the amount of food needed to adequately feed Africa's people. Despite impressive reductions in child mortality and improvements in life expectancy, women's reproductive health lags behind and birth rates remain high. Women in sub-Saharan Africa have an average of 5.1 children, a slight decline from 6.7 children in 1970, but still more than double the world average of 2.5 children. Sub-Saharan Africa's population is projected to be more than double from 856 million today, to about 2 billion in 2050, even if couples choose much smaller families over the coming decades (Bremner, 2012). This implies that the food production rates must triple to meet the demand for the growing population. More importantly, almost 40 % of sub-Saharan Africa's population is under the age of 15 years, and are yet to enter their reproductive years. Consequently, the reproductive choices of today's young people will greatly influence future population size and food security in the region. Another major consequence of the population growth is the phenomenal growth rate of the urban population. Rapid urbanisation has put a stress on rural and agricultural development.

Political Instability and Crises; Poor Governance and Government Policies

Unfavourable and poorly implemented government policies and support are key causes of food insecurity from the poor agricultural development status. Most African governments' policies did not encourage farmers and prospective farmers to farm on a large scale since most countries in Africa have shifted attention to other sectors, neglecting agriculture. This made a lot of people that should farm, even agricultural students to behold agriculture as a poor man business. For example, Nigeria relied very much on the exportation of groundnut, cocoa, kola, before the discovery of oil in 1958. The poor African leadership which translates into poor agricultural policies and underdevelopment has been the root cause of food insecurity. Dodo (2020) stated that the utter failure and lack of vision, political stability, and sound economic policies of the African leaders and economic decision-makers continued to be a bottle-neck in achieving food security.

Endemic, persistent, and institutional corruption, inconsistencies in government policies and formulations are the other factors of leadership and poor governance that have been crippling development in Africa and of course food security. Most sectors involved in food production, research, marketing, policies development and implementations are found to be corrupt. Many interventions by the government do not get to the farmers or to the primary stakeholders in food security. To say the least, Africa suffers from food insecurity today and has been suffering from it for so long, simply because of the utter failure and lack of vision, political courage, and sound economic policies of the *African leaders and economic decision-makers* of all political and ideological stripes on the continent.

Regional or Communal and Civil Conflicts and COVID-19 Pandemic

According to Karim and Adekunle (2010), in some African countries foods are available due to their agricultural systems; however many times the foods are not accessible due to incessant conflicts. The peasant farmers cannot access their farms nor are they able to bring their harvest to the markets due to security threats. Food production and availability drop, while food prices rise and poor families can no longer have access to food (Karim, 2020; Dodo 2020). Conflicts exacerbate food insecurity in Africa (Figure 15.1) by affecting the ability to produce, trade and access food, inhibiting farming, damaging infrastructure and destroying markets. In this context, women's access to food becomes particularly difficult due to the exacerbation of gender-based violence (FAO, 2016b). According to the Fund for Peace, in 2017, the three most fragile states in the world were in Africa. Those states were the Central African Republic (CAR), South Sudan, and Somalia. And each one of them subsequently became fragile states because of the protracted crises that have kept them unstable since the 1960s. There are many other African countries that are also fragile and politically unstable because of the protracted conflicts and never-ending political crises. In 2018, conflict left 33 million people in ten countries in need of urgent humanitarian assistance due to food insecurity (FAO, 2019).

The mutually reinforcing nature of food insecurity and instability has been increasing as it relates to the four looming famines in northeast Nigeria, Somalia, South Sudan and Yemen (WFP, 2017). In addition, newer political instabilities and short-lived *civil wars* have also occurred or unfolded in places like the Lake Chad Basin, Nigeria (Boko Haram), Libya (the bloody ousting of Muammar Kaddafi and the ensuing civil war), Egypt, Tunisia, the Central African Republic (CAR), Kenya, Cameroon, Mali, Burkina Faso, Burundi, South Sudan, Algeria, and Sudan as of late. Moreover, countries such as the Democratic Republic of the Congo (DRC), Sudan and Somalia where decades-long conflicts have weakened and rendered their respective governments inept and unable to assume the administration of their territorial security are also suffering from food insecurity.

Food security and nutrition and related interventions can contribute to conflict prevention and conflict mitigation by building and enhancing social cohesion, addressing root causes or drivers of conflict, and by contributing to the legitimacy of, and trust in, governments. Food security can support peace-building efforts and peacebuilding can reinforce food security (Karim and Adekunle, 2010). The relationship between food insecurity and instability is complex and best understood as the sum of its many parts as shown in Figure 15.2. Most recently, 2020, the COVID-19 pandemic also caused problems of food accessibility worldwide, which affected many African countries since agricultural operations, food importation, and accessibility to food markets are restrained.

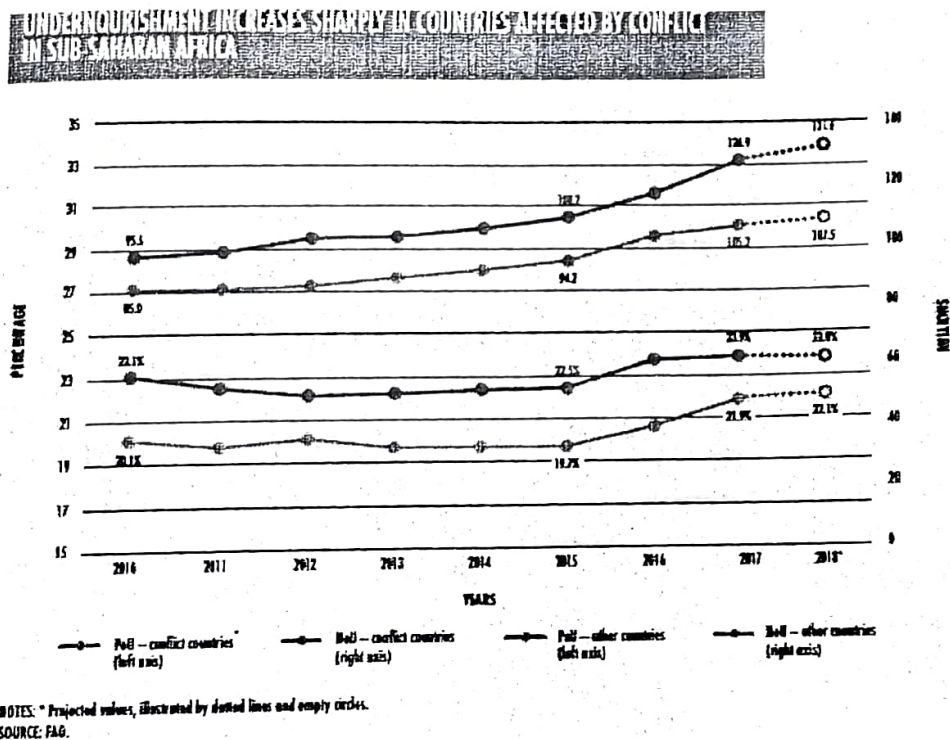


Figure 15.1: Impacts of Conflicts on Undernourishment in Sub-Saharan Africa
Source: FAO, 2016

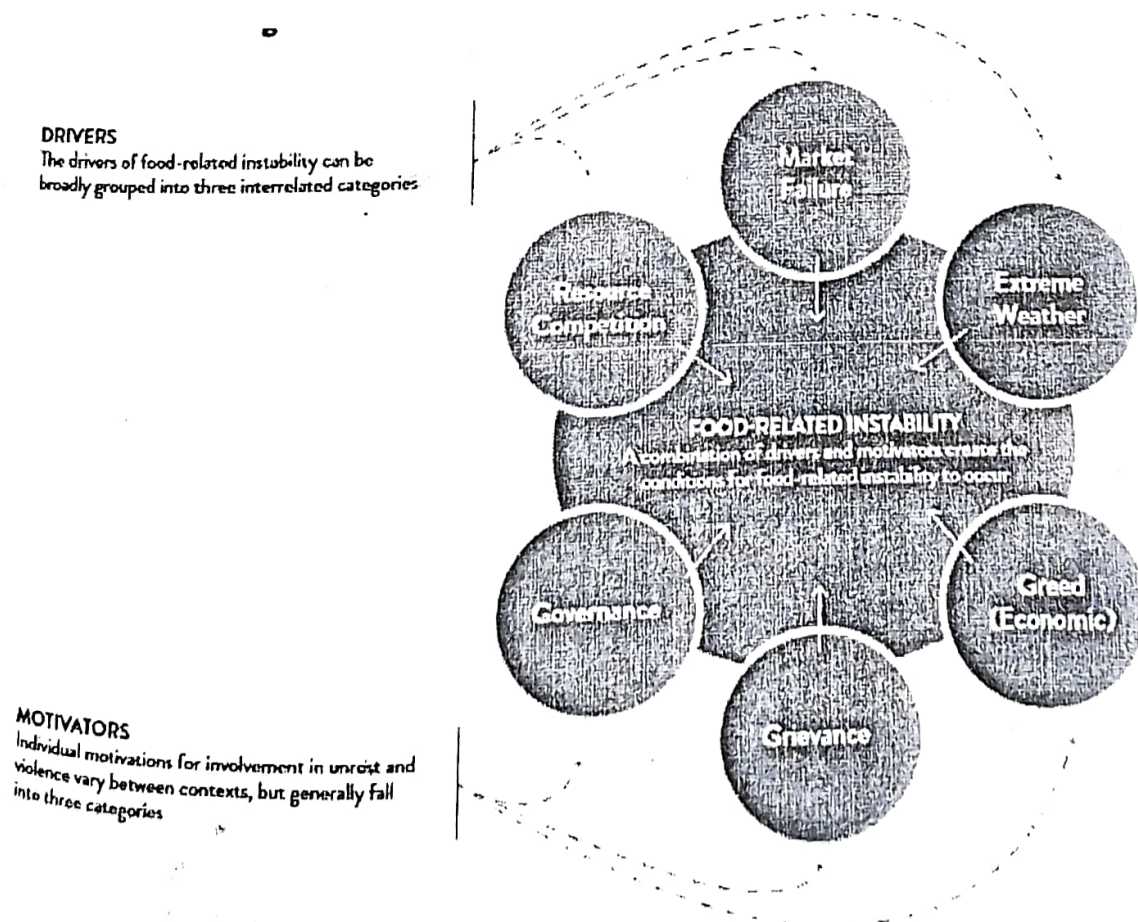


Figure 15.2: The Link between Food Insecurity and Conflicts in Africa
Source: WFP, 2017

Human Resources

The development of human resources is essential for food security in Africa. According to FAO (2016a) an educated and informed populace is fundamental to any policies and strategies to reduce poverty, excessive population growth, environmental degradation and other factors that are most often the direct causes of hunger. This is especially true in the low-income, food-deficit countries of Africa, where there is an urgent need for human capacity development and for increased knowledge and information about food production. Information, education and training allow farmers to make use of new farming knowledge and technologies. Research shows that both formal education and non-formal training have a substantial effect on agricultural productivity. According to Mutisya (2016), the effects of education attainment on food security among the urban poor have not been closely examined. The findings are, however, mixed with some showing a negative effect of education on agricultural production (Amali, 2012) while, the majority found a positive association. The existing evidence points to a two way causal relationship between food security and education. First, food security has an effect on education and health. Food insecurity, especially during the early years of growth, leads to malnutrition among children; malnutrition is associated with poor cognitive growth and low educational achievement and the effects may extend to later life. Secondly, and for this study, the focus is on the effects of education on food security among the urban poor. According to UNESCO (1995)'s report in 1992, the farmers in Sub-Saharan Africa mostly lacked the literacy and numeracy skills needed to be applied on agricultural practices for improved yield. The reports indicated that 26 percent male, 20 percent females, in 1995, 33 percent men and 53 percent women in Sub-Saharan Africa were illiterate and only 5 percent males and 2 percent females proceeded to tertiary institutions.

The relationship between education and agricultural development (food security) spans both ways and the two are mutually reinforcing with the demand of more quality food. The present population economically active in agriculture in Africa is decreasing due to complex factors, including human development. A study in Nigeria in 1992 found that an increase in the average education of farmers by one year increased the value added to agricultural production by 24 percent. In Burkina Faso, a 1993 study found that crop yields were 25 percent to 30 % higher for farmers who participated in training programmes than those who did not. As farming becomes more and more complex and greater crop yields are required to feed more people, farmers' knowledge and information need to be constantly upgraded.

Climate Change, Desertification and Natural Disasters

Global climate change is another important driver of food insecurity that cannot be

underestimated. Climate change is overwhelmingly impacting the conditions in which agricultural activities are conducted in Africa. It disrupts food availability, reduces access to food and affects food quality as described in Figure 15.3 (FAO, 2016). Amongst other impacts, climate change is responsible for biodiversity loss in the ecosystem as well as other physical access (Adeagbo, 2012). There is also

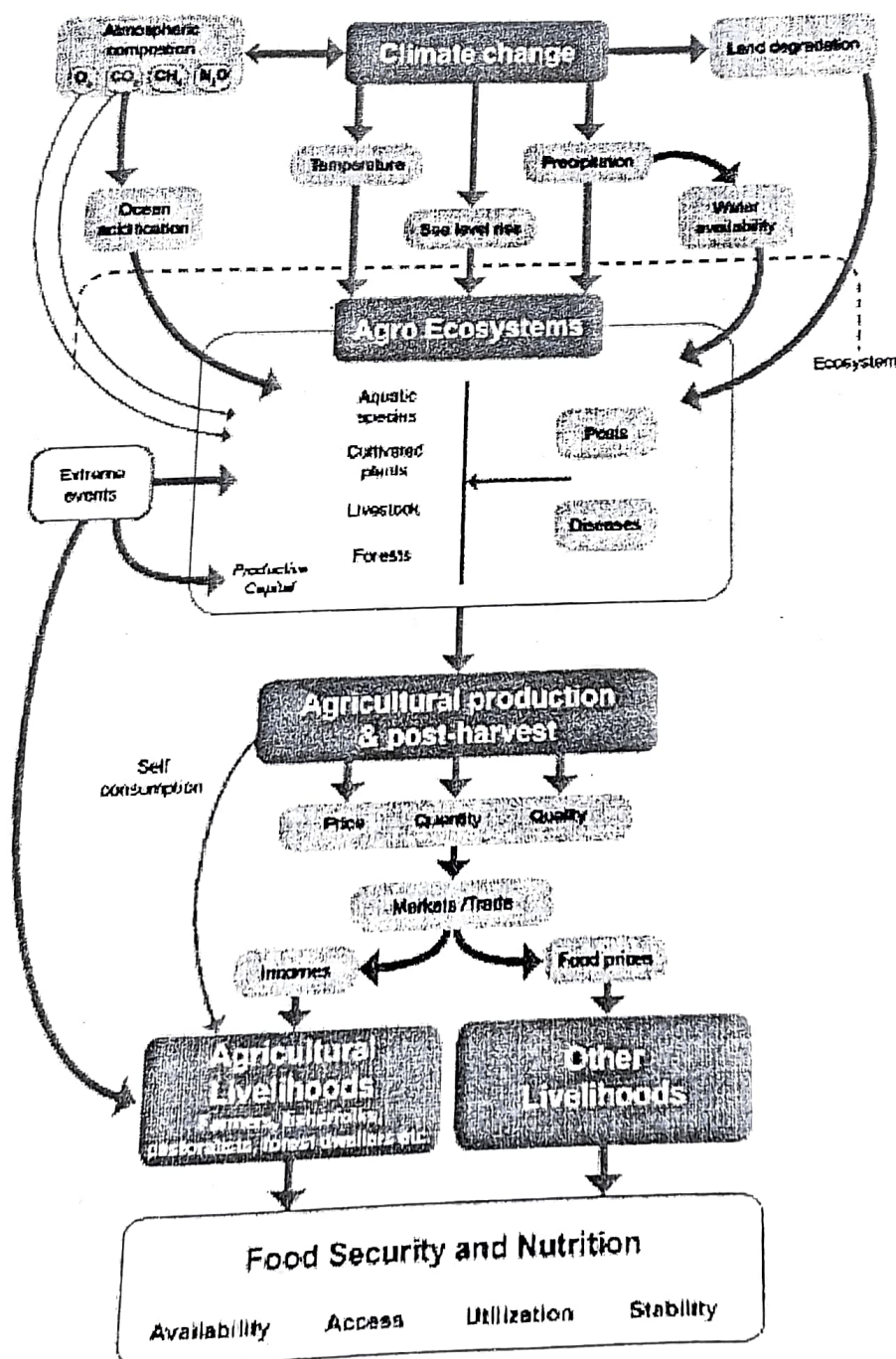


Figure 15.3: Schematic representation of the cascading effects of climate change on food security and nutrition
Source: FAO, 2016

the advancing threat of desertification. Climate change has become one of the key divisors that are reinforcing food insecurity through the negative impacts on agricultural systems. Negative impacts are expected because of the increased vulnerability of plants weakened by the direct impacts of climate change, as part of the classic triangle between plant hosts, pathogens and environment in causing disease (Pautasso *et al*, 2012). An International Food Policy Research Institute (IFPRI)'s climate change impact study on crop yields in Africa shows a significant geographical variation of impacts, indicating that, while most direct climate change impacts will be negative, there will be positive impacts on yields in some areas with projected increases in precipitation, and in some elevated areas that will be able to be cultivated due to warmer temperatures. The impacts of climate change on animal health have been reported, especially for vector-borne diseases. The outbreaks of Rift Valley fever in East Africa was associated with increased rainfall and flooding due to El Niño-Southern Oscillation events (Porter *et al*, 2014). Moreover, many African countries especially those in sub-Saharan, are particularly drought-prone and were already subjected to desertification and other forms of land degradation, which negatively impacts agriculture and frequently spurs conflicts over subsistence crops, thus perpetuating food insecurity and the risk of hunger (FAO, 2016c; 2016d).

A range of physical, biological and biophysical impacts bear on ecosystems and agro-ecosystems, translating into impacts on agricultural production. This has quantity, quality and price effects, with impacts on the income of farm households and on the purchasing power of non-farm households. All four dimensions of food security and nutrition are impacted on by these effects (FAO, 2016c; 2016d; 2016f).

Socio-economic Capacities

Eradicating poverty is a crucial challenge to achieving food security in Africa. The current pervasive poverty in the continent is a cumulative consequence of the general failure of economic policies and/or their implementation over time. The broad base of the economy comprising agriculture which still contributes about 40 percent of the GDP, and employs up to 70 percent of the labour force, has been neglected. So, notwithstanding the much talked about vast natural resource endowments and potentials, agriculture has been witnessing serious decline in its traditional roles on the continent. Often, in most African countries where foods are available and plentiful, they may not be accessible to everyone, especially when food prices are on the high side. Thus, poor families and their children may be unable to afford healthy and balanced dietary foods. Poverty is a major source of chronic food insecurity in Africa generally as reported by FAO (2019). Many households do not have adequate means to secure their access to quality food to meet their nutritional needs and taste, even when the food is available in the local markets. This is reported to be as a result of development failures and/or skewed

development patterns that exclude parts of the population. It was stated by the World Bank that "it is common to have 20 percent to 30 percent of a country's population consuming less than 80 percent of caloric requirements even though national-level food availability is at or greater than 100 percent (FAO, 2016). Additionally, poverty could contribute to low yields of agriculturists since they are mainly constituted of low-income earners. Many African farmers do not have access to improved agricultural tools, seeds, fertilisers, and pesticides as well as the knowledge to aid productivity.

Although poverty may also be found in developed nations, those nations possess the means to implement interventions that minimise the risk of people becoming undernourished which is not the case in Africa. Ironically, food insecurity is most severe in rural Africa, where farming and herding are still the main means of livelihood. Ninety percent of the Africans living in poverty are rural dwellers. Development is critical for addressing effectively, the problem of food insecurity. It is now widely accepted that economic growth is a necessary condition for a sustainable solution to food insecurity in Africa.

Women in Agriculture

Agriculture and food security are characterised by gender dimensions in that women play a key role in agricultural production, food processing and marketing. FAO stated in 2011 that if women have the same access to skills, resources and opportunities as men in Africa, food security will be in a better level. They are powerful drivers in the fight against hunger, malnutrition and poverty as they play decisive roles in dietary diversity and are responsible for nutrition in the home. In addition, women are involved in the production and domestication of plants and animals; they are knowledgeable in seed selection and vegetative propagation; they understand how plants and animals grow and reproduce; and they plant trees. Women comprised 20 percent to 50 percent of the agricultural labour force in developing countries and 79 percent of women in least developed countries who were economically active reported that agriculture was their primary economic activity (FAO, 2013). In Africa, 31 percent of rural households were headed by women involved in agriculture. Despite this level, many of them did not have access to resources such as land, farm inputs, credit facilities, education etc as their counterpart. For example in 2017, according to FAO (2018). 51 percent of male against 32 percent of female owned a bank account in Northern Africa and 45 percent against 35 percent in Sub-Sahara Africa. Agricultural policies, investment and rural context do not provide an enabling environment sufficiently conducive to gender equality and women's empowerment, while accountability to gender equality in agriculture remains weak (FAO, 2016b). The gender gaps in agriculture are militating against food security in the continent. Addressing gender inequalities

in food security therefore has a dual purpose: closing the gender gap in agriculture is beneficial to achieve food security objectives while also contributing to greater gender equality and realising women's rights.

Other Factors: Poor Agricultural Systems, Food Processing and Preservation and Value Chain, etc.

Poor agricultural systems, lack of government aid in terms of financial support, machinery, tools, training, and provision of improved seedlings by governments, research centres and institutions promotes food insecurity because most farmers are poor and they need motivation in all aspects of farming to be able to plant more crops. Africa's agricultural productivity is very low, averaging 300 to 500 kg/ha as compared to 2.5 tons/ha in the United States, for example. To a large extent, low yields are a result of poverty. African farmers lack access to improved seeds, fertilisers and pesticides as well as the knowledge and information to use them effectively and efficiently.

Poor processing methods and equipment that could be used to preserve fresh produce is another bottle neck to food security in the continent. Much of Africa's food is wasted. It is estimated that African farmers lose 15 percent to 25 percent of their crop in the field and another 15 percent to 20 percent after harvest to pests and poor handling. Traditional methods are still employed for production of major staple foods, while reports abound that the methods are characterised by loss of valuable nutrients during production and some of the traditional foods are becoming extinct due to the drudgery of their technology of production. The physiognomies of traditional food processing technologies are summarised to be rudimentary and underdeveloped to meet the food and nutritional needs of the people as specified in the definition of food security. Other attributes include inconsistent quality of products, lack of innovativeness and product diversification, inadequate use of appropriate food packaging, very poor access to appropriate technologies and processing information and operations are small scale based with women as major executors (Karim, 2020).

Evidences of Food Insecurity in Africa

The status of food security in the past in Africa is worrisome and the present is not encouraging either. There are diverse reports and evidences that alluded to the persistence of food insecurity in Africa, and of course, the call for pragmatic action to save the lives of many Africans and reduce the morbidity rate. Many international policies and programmes, notable among them, the Millennium Development Goals and Sustainable Development Goals (IFPRI, 2015; Karim and Karim, 2012) have been developed to address this and many other global issues. The FAO, 2010 publication, showed the number of people suffering from hunger

in the world to be 925 million, which was below the 1020 million in 2009. Confirming the situation, Van (2010) gave a breakdown of the estimated figures of people suffering from hunger in 2010 as 578 million in the Asia pacific region; 239 million people in sub-Saharan Africa; 53 million in Latin America and the Caribbean; 37 million in North Africa; and 19 million in developed countries. These figures showed an increase in 2011 due to rise in food commodity prices (FAO, 2016). From the FAO 2015 report on State of Food Insecurity in the World, Africa scored poorly in all indicators regarding food security and nutrition targets. In 2015 too, only 18 out of the 54 African nations had reached the MDG hunger target. It was reiterated that Africa was still very far from achieving the number one millennium development goal. In 2015, the number of people suffering from hunger in sub-Saharan Africa was estimated at 239 million, and this figure was expected to increase in the nearest future.

The United Nations' 2017 statistics explained the level of food insecurity to be moderate and severe, as presented in Figure 15.4. The figure shows that from a total of 2 billion people suffering from food insecurity, Asia had the largest share of 52 percent (1.04 billion); followed by Africa with 34 percent (676 million), Latin America with 9 percent (188 million), while North America and Europe shared the remaining percentage. The distribution of food insecurity severity level as at 2018 is shown in Figure 6, according to the FAO/UNICEF's (2018) report. One in four people in sub-Saharan Africa was believed to be undernourished in 2017, which represents one-third of the 821 million people suffering from chronic hunger globally. It was further shown that for a world population of 7,633 million people, food insecurity was severe amongst 704 million people, while 2014 million demonstrated moderate food insecure status.

The severity of food insecurity is different for each region; for a population of 4545 million in Asia, 354 million were severely food insecure whereas 1039 million were moderately food insecure. Africa is also the region where severe levels represented the largest share of the total population, while Latin America recorded a low level of severity. However, severity is lowest in North America and Europe when compared to the total population of the region (Figure 15.5).

Other reports showed that Sub-Saharan Africa's urban population's share was 40.4 percent in 2018, up from 18.3 percent in 1970; and was projected to an average of 47.0 percent by 2030 and 58.1 percent by 2050, respectively (UN, 2018). Also, urban areas now consume most of the food supply in sub-Saharan Africa. Based on Living Standards Measurement Study (LSMS)'s data, and urban and rural population shares, the urban areas account for between 50 and 70 percent of food consumption nationally in sub-Saharan Africa. The numbers of undernourished people and prevalence of undernourishment (PoU) in the world are evidences of food insecurity (Table 15.1 and 15.2). From 2005 to 2018 Africa region experienced a steady increase of undernourished people more than any

other region. Sub-Saharan Africa had the most occurrence of undernourishment across the years than any other region. Surprisingly, resource-rich countries in these regions still have high rates of undernourishment (Tables 15.1 and 15.2), suggesting that something more crucial is at play in terms of the structure of their food systems, and that much more still should be done to improve distribution and consumption of food. A steady increase is seen in almost all the sub-regions. It has reached levels of 26.5 percent and 30.8 percent in Middle and Eastern Africa, respectively, with rapid growth in recent years, especially in Western Africa (Figure 15.6). These trends are mostly driven by a combination of factors, including conflicts and extreme weather events, currently affecting a number of countries in Africa. In conflict-affected countries in sub-Saharan Africa (WHO, 2017) for instance, the number of undernourished people increased by 23.4 million between 2015 and 2018 – a significantly sharper increase compared with countries not exposed to conflicts (Figure 15.6). Food insecurity has been implicated to bring about increase in neonatal disorders, child growth failure, cognitive, and immune function.

EXPLANATION OF FOOD-INSECURITY SEVERITY LEVELS MEASURED BY THE FIES IN SDG INDICATOR 2.1.2

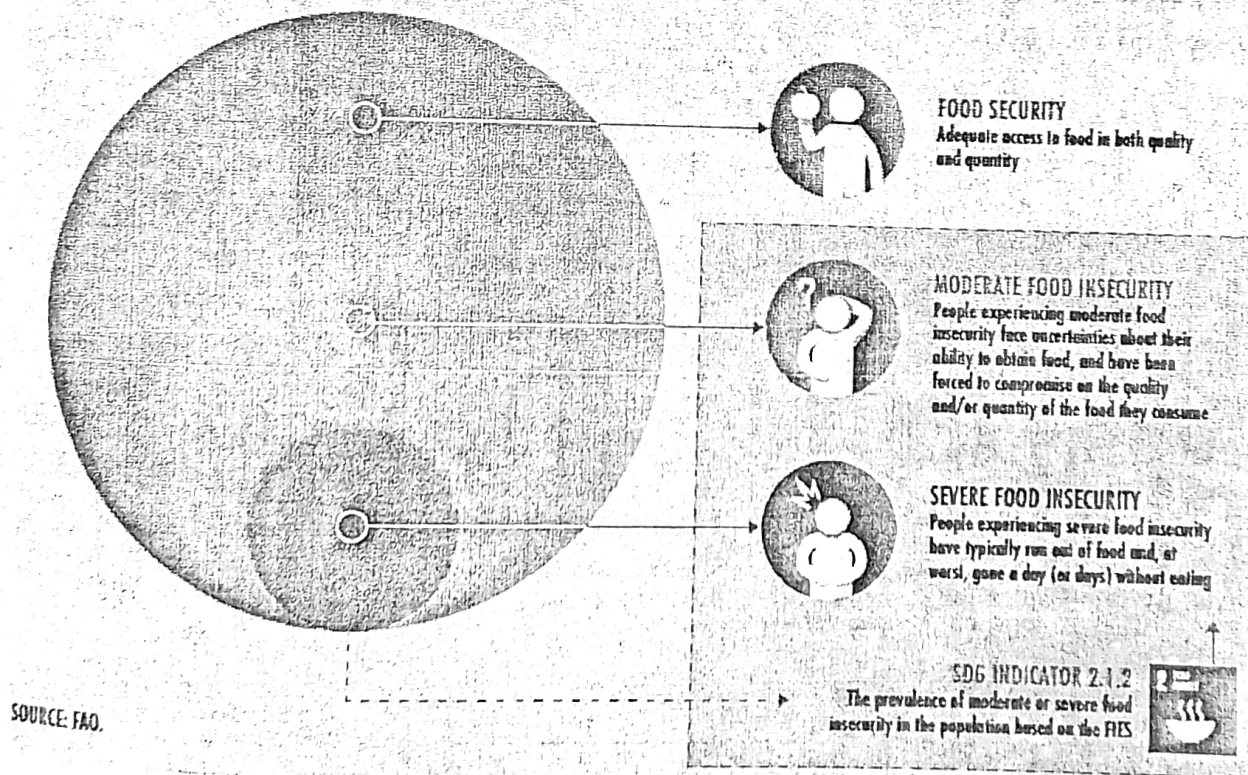


Figure 15.4: Levels of Food Insecurity
Source: FAO, 2019; UN, 2017

With respect to the World Food Summit (WFS) target (halving the number of undernourished people by 2015) and despite the overall progress made in reducing

the prevalence of hunger, there is still considerable scope for improvement. Since 1990-92, approximately 44 million people were added to the total number of undernourished people in SSA, with an estimated 220 million in 2014-16 compared to 176 million in 1990-92. Thus, the region continues to lag behind global and regional trends. This progress towards the MDG 1.C target has been made with substantial differences among the four sub-regions in SSA. Progress has been recorded across the sub-regions with the exception of Middle Africa (FAO, 2015).

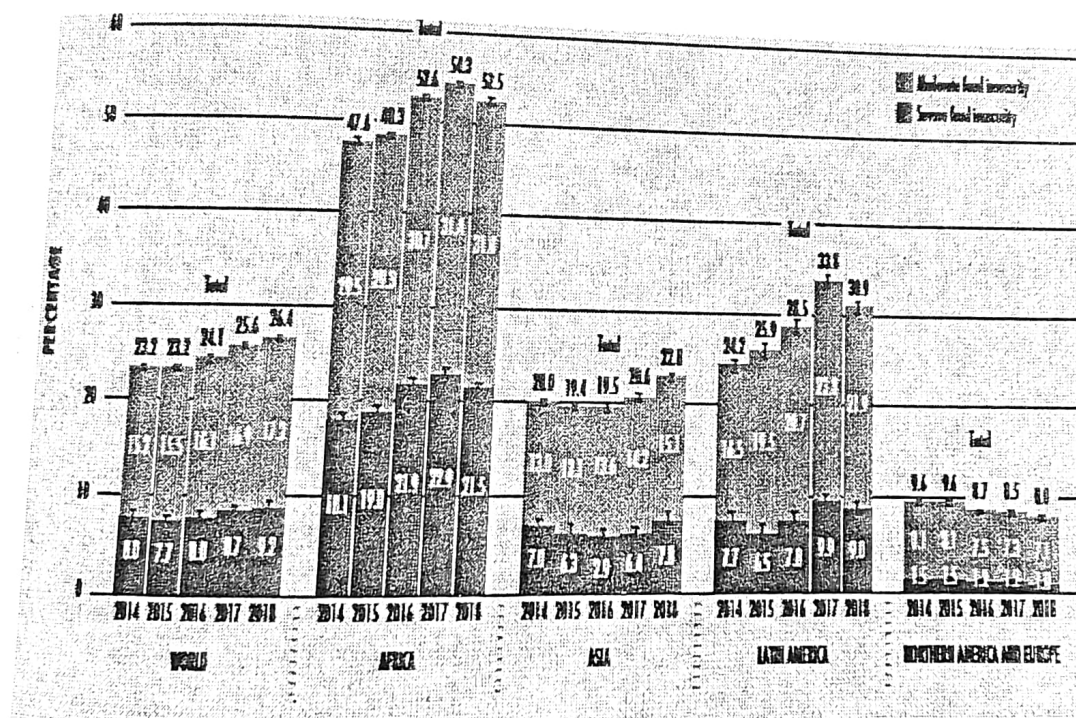


Figure 15.5: Total Level of Food Insecurity in the World from 2014-2018

Source: FAO, 2019; UN, 2017

Table 15.1: Number of Undernourished people in the World, 2006-2018

	Number of undernourished (millions)					
	2005	2010	2015	2016	2017	2018
WORLD	947.2	822.3	785.4	796.5	811.7	821.6
AFRICA	196.0	199.8	217.9	234.6	248.6	256.1
Northern Africa	9.7	8.5	15.5	16.1	16.5	17.0
Sub-Saharan Africa	176.7	180.6	202.4	218.5	232.1	239.1
Eastern Africa	113.5	118.6	119.3	126.9	129.8	133.1
Middle Africa	36.2	36.5	37.9	41.1	43.2	44.6
Southern Africa	3.6	4.2	5.0	5.5	5.4	5.3
Western Africa	33.0	31.9	40.3	45.0	53.7	56.1

Source: FAO, 2019; UN, 2017

Table 15.2: Prevalence of Undernourishment (PoU) in the World, 2005-2018

	Prevalence of undernourishment (%)					
	2005	2010	2015	2016	2017	2018 ^a
WORLD	14.5	11.8	10.6	10.7	10.8	10.8
AFRICA	21.2	19.1	18.3	19.2	19.8	19.9
Northern Africa	6.2	5.0	6.9	7.0	7.0	7.1
Sub-Saharan Africa	24.3	21.7	20.9	22.0	22.7	22.8
Eastern Africa	34.3	31.2	29.9	31.0	30.8	30.8
Middle Africa	32.4	27.8	24.7	25.9	26.4	26.5
Southern Africa	6.5	7.1	7.8	8.5	8.3	8.0
Western Africa	12.3	10.4	11.4	12.4	14.4	14.7

Source: FAO, 2019; UN, 2017

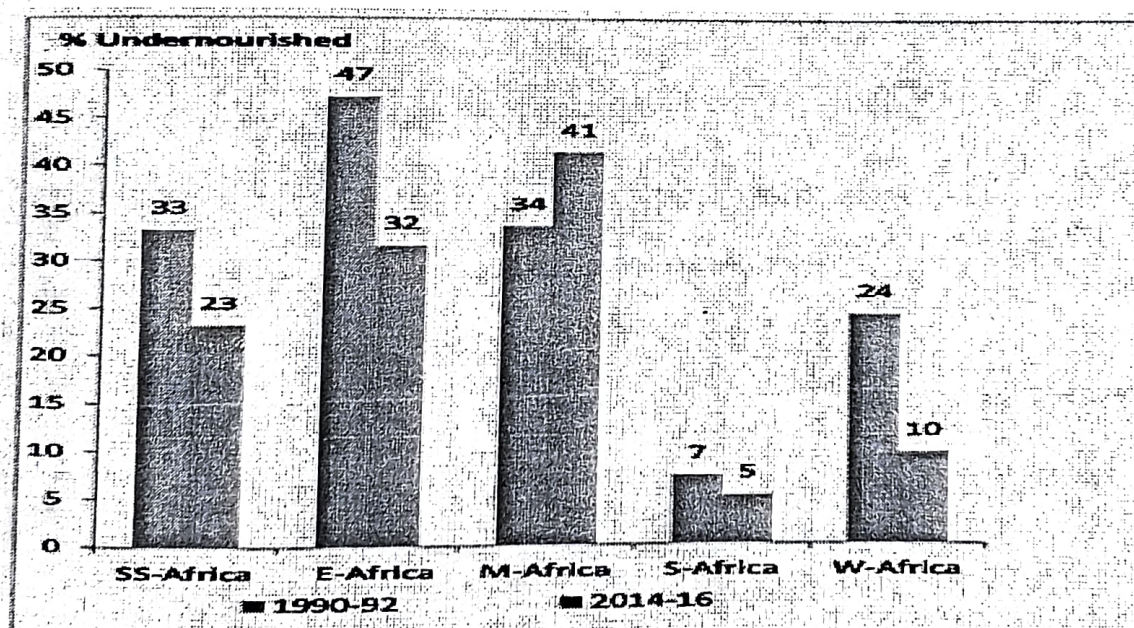


Figure 15.6: Level of Undernourishment in Africa 1990-2016

Source: FAO, 2019

In another report 5.2 percent of females compared with 23.7 percent of males, were found to be food insecure in sub-Saharan Africa (FAO FAD, UNICEF, WFP and WHO. 2017). About 39 percent of the adult females suffered from anaemia while obesity increased sharply, reaching 17 percent for females against 6 percent of male at AU level (Figure 15.7). Women's deficits in agricultural

foods (perishable and non-perishable) account for just over 50 percent of total imports value. Imports of highly processed, non-perishable goods have increased by an annual average of 1.8 percent over the period 2007 to 2016, whereas imports of unprocessed, non-perishable foods have declined by an annual average of 1.9 percent. This may be indicative of increased demand for processed foods, increased local production of raw agricultural commodities, and lower global prices in recent years for grains and many other bulk commodities (UN, 2017). Karim (2020) reported the restriction on foreign exchange (FOREX) for food importation by President Muhammad Buhari of Nigeria in 2019. The action was defended on the premise that 'if the nation has food items that could be produced (processed) in the country, why should the country waste scarce hard currency importing those items into the country, when they can be produced (processed) in the country?' (Akinfenwa, 2019).

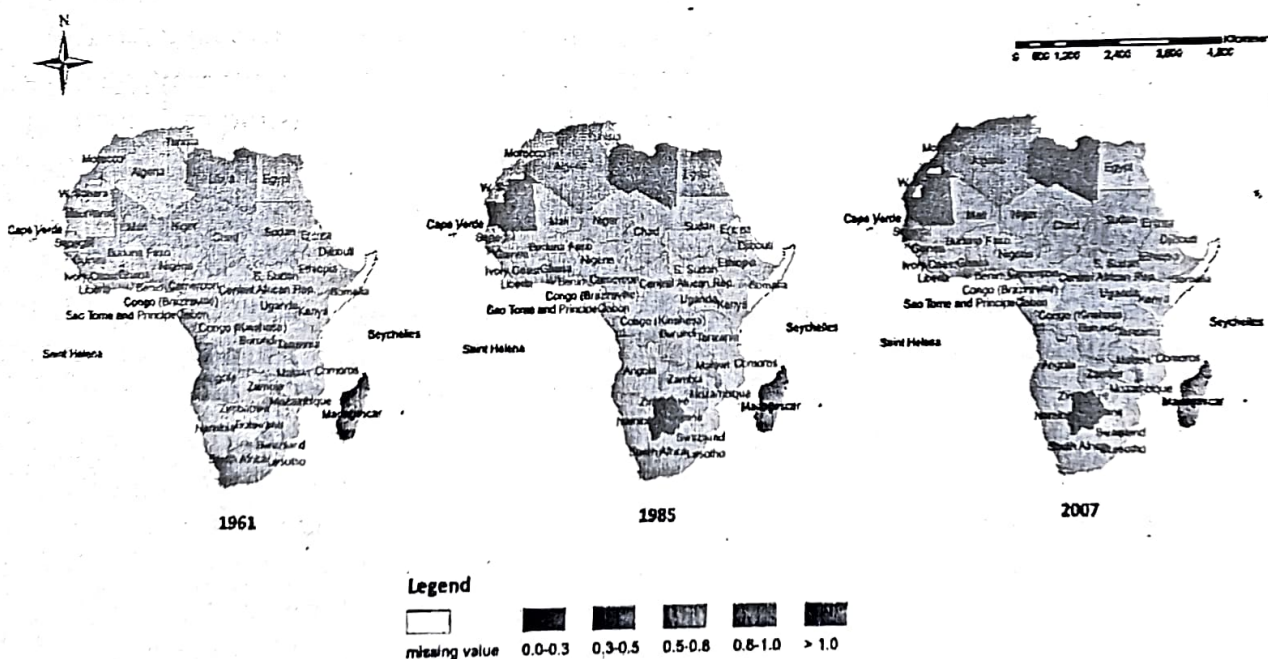


Figure 15.8: Historical Trends of Food Self-Sufficiency Ratio in Africa (1961-2007)
Source: FAO, 2019

The prevalence of food insecurity in Africa is worrisome and continues to be the thrust of discussions at global levels. Below are some case studies reported by the Food and Agricultural Organisation, FAO, of the UNFAO (2016):

Nigeria

The country has been grappling with severe security threats from the Boko Haram insurgency. The activities of the group have caused massive internal displacements of the population in the northeast region of the country. In addition to the displaced

Nigerians, thousands of refugees from Niger, Cameroon, Chad, and the Central African Republic, have flocked into the region, and swelled the IDP camps, which made matters worse for everyone involved in those camps. As a result, they all have become victims of food and nutrition insecurity.

South Sudan

Due to the clashes between the South Sudanese Government and armed opposition groups, millions of South Sudanese people have become internally displaced, while millions more have been forced to flee and became refugees in the neighbouring countries. The situation has led to a severe case of food insecurity and malnutrition challenges in that country (Buchanan, 2018).

Somalia

This country is another example in Africa where protracted conflicts since 1991, have made it impossible for the Somali population to escape from poverty, misery, and never-ending threats and real cases of food insecurity and chronic malnutrition, that have for years affected both the youth and general Somali population.

The Central African Republic

The country is the latest among African countries suffering from food insecurity and widespread malnutrition in the continent, a situation that has persisted since the short-lived Civil War of 2013, and the ensuing political unrest, rebellion, and ongoing sectarian aggressions between the Christian and Muslim communities.

In general, the most recent United Nations' report on Global Food Crises in 2019, showed that over 27 million people in six IGAD member states (Ethiopia, Kenya, Somalia, South Sudan, the Sudan and Uganda), were classified as in Crisis, or worse in food security. This figure represents around 20 percent of the global total number of acutely food-insecure people in need of urgent humanitarian food and livelihood assistance. Armed conflicts, violent extremism, inter communal violence and other localised tensions; have continued to affect peace and security across the whole region, and constituted the primary driver of acute food insecurity for 8.5 million people in Sudan and Uganda. Approximately 13.5 million children under 5 years of age (almost 1 in 3 children), were stunted across the region, with 'very high' numbers in Ethiopia, the Sudan and Uganda. These children would likely not reach their full growth and developmental potential because of the irreversible physical and cognitive damage caused by persistent nutritional deprivations at an early age. In West Africa, more than 12.3 million people in 15 countries were estimated to be in crisis or worse in 2019. The highest numbers were in northern Nigeria (5.0 million), Cameroon (1.4 million), Niger (1.4 million) and Burkina Faso (1.2 million). Around 48 million were classified in stressed with

minimally adequate food consumption and unable to afford some essential non-food items without resorting to harmful coping strategies. They were also likely to slip into a higher phase of acute if they faced an additional trigger of food insecurity (UN, 2020). Economic shocks also affected food security in Sudan, Zimbabwe and Burundi. In Sudan, currency depreciation, dry spells, and floods, along with the removal of wheat subsidy, led to the displacement of people, reduced harvests, and higher prices of staple foods. The currency was devalued twice in 2018, and in November 2018, year-on-year inflation reached nearly 70 percent. In all, 6.2 million people were in need of urgent food assistance and, although the security situation has improved, 2.1 million people continued to be displaced in Darfur.

Nigeria's Story of Food Insecurity

Nigeria has the largest population in Africa, and it is blessed with abundant natural and human resources that if properly harnessed can feed its people and the surpluses can be exported to other countries. At the moment, however, it is still in the experiencing a persistent qualitative and quantitative food crisis. The number of food insecure people in the country increases daily. A report of Karim and Oladimeji (2010) revealed that the former Head of State, Chief Olusegun Obasanjo, stated at an International forum that the problem of food security in Nigeria is not that of potential but of policy disconnect. He opined that:

We have dampened creativity and confidence in our people and decreased investment in Agriculture through wrong policies, inconsistencies and political conflicts (Obasanjo, 2004).

Nigeria is richly endowed with both human and vast natural resources. Its large population, currently estimated at over 180 million, is considered as the largest single market in Africa and it is growing at about 3.0 percent per annum. Its enormous natural resource base includes a vast territory of about 940,000 sq. km. (98 million hectares) more than 70 percent of which is agricultural land that is suitable for the production of a wide range of from crops that are suited to the high rainfall in tropical forest in the South, other crops and livestock production that are most suited to the drier Savannah belts and to the far North. Its climate, topography, rivers and lakes, coupled with a long coastline of about 1833 km, offer enormous opportunities for fishery and forestry development as well as irrigation agriculture. (Oladimeji and Karim, 2010).

In a Report by Karim (2020), food insecurity is described as one of the top challenges militating against the country's development. The country is ranked 93rd out of 117 countries on the 2019 Global Hunger Index (GHI, 2020) as shown in Figure 15.9. The ranking shows that the level of hunger and under-nutrition in Nigeria is in the serious category, a drop from a value of 40.9, in 2000 down to 27.9 in 2019. The reduction in the GHI scores since 2000 demonstrates that hunger

and under nutrition are not immutable problems, and serves as a cause for cautious optimism. Shockingly, however, but perhaps not surprisingly, the description of Nigeria as a 'paradox' by the World Bank in 1996, continues to be confirmed by events and official statistics in the country, as the poverty and food insecurity levels are in contradiction to its country's immense human and natural resource wealth.

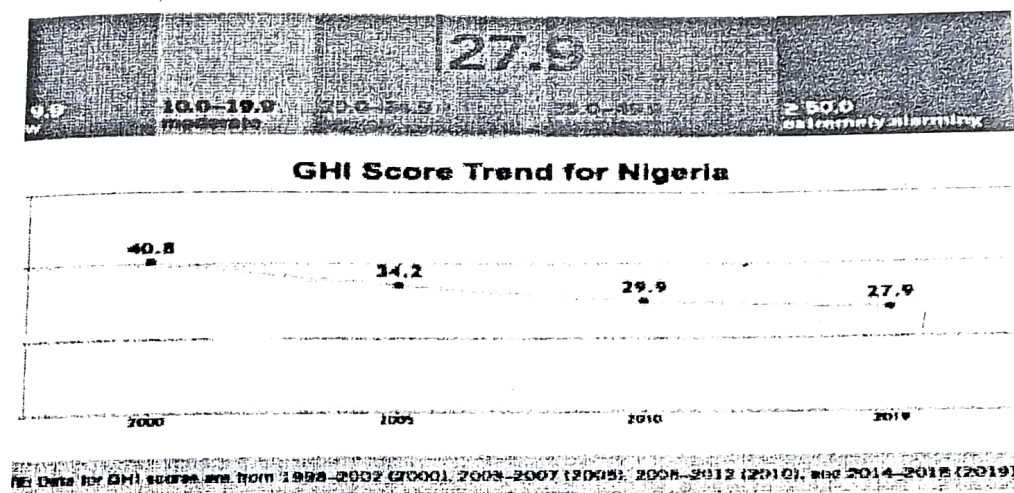


Figure 15.9: Nigeria Global Hunger Trend 2000-2019

Source: GHI, 2020

In 2010, Nigeria's population was more than 160 million people, out of which 10 million were undernourished. This figure increased to almost 13 million in 2012, and has been growing steadily since then, along with the population (FAO, 2016). Although, each elected government has over the years put in place numerous programmes and policies, which include; operation feed the nation, green revolution, lower river basin development authorities, national agricultural and land development authority, and the directorate of foods, roads and rural infrastructure. What is common to all of them is that they all yielded very little results as each change of government resulted in major delays, as the new governments abandoned the agricultural policies of their predecessors. The result has been policy summersaults and instability in agricultural production, which also led to serious stumbling blocks in efforts aimed at putting an end to hunger and food insecurity in the country.

In March 2017, the FAO declared that about 7.1 million people in Nigeria are facing acute food insecurity and in need of urgent lifesaving and livelihood protection (FAO, 2017). The paradox, however, is that as domestic food production is increasing in the country, so also are hunger and undernourishment increasing.

Although chronic and seasonal food insecurity occurs throughout the country, and is exacerbated by volatile and rising food prices, the impact of conflict and other shocks have resulted in acute levels of food insecurity in the North East zone, because most farmers have been displaced from their homes, and in IDP camps. They have all also lost their means of livelihood, thereby making them victims of hunger and food insecurity as a result. An estimated 3.1 million people in the states of Borno, Yobe, and Adamawa, were reported to have received emergency food assistance or cash transfers in the first-half of 2017. However, since much of the North East zone has been inaccessible to aid agencies, the number that actually needs food assistance is likely to be much greater (FEWSNET, 2017). Diet-related non-communicable diseases are also on the rise in Nigeria due to globalization, urbanisation, lifestyle transitions, socio-cultural factors, poor maternal, foetal, and infant nutrition (Karim, 2020).

Peeping into the Future of Africa's Food Security

Africa is heading towards a breakthrough in food production, and the expected food security for its ever-growing population. This is vital for the food security of millions of its population, and also for its economy and sustainable development on the continent. Despite the food insecurity challenges faced by Africa countries, progress is being made in some to improve food security. Real food security can, and must be restored in Africa, even though some factors still militate against the restoration to enhance peace and security. These factors include; insufficient production of food, inefficient policies and corruption, conflicts, climate change and natural disasters, gender inequality, low use of technology and other important inputs, inadequate attention to critical aspects of the value chain such as processing, handling and storage/preservation, amongst several others. If African nations could also redefine and re-focus their agricultural policies to eliminate functional muddles and assign complimentary and mutually reinforcing roles to all the stakeholders, the future of the continent's food security could be assured. Regional approaches to development can also enhance African countries' competitiveness for economic growth, and also address human security issues as identified and discussed earlier in the chapter.

Pragmatic approaches to and development in democracy and political stability in key countries like Nigeria, Kenya, have rekindled hope of assuring food security through increased production, distribution and accessibility. From the submission of FAO (2019), to end hunger and sustain food security, Africa must address some of main drivers of food insecurity, i.e. conflict, climate extremes, economic slowdowns and downturns. These drivers, which sometimes overlap, and are often connected through their negative impacts on livelihoods and exacerbated by inequality, would continue to undermine food security today and pose a daunting

challenge to achieving zero hunger in the future. It is very imperative to reduce the population growth rates and levels of youth un- and underemployment. Focus must also be on promoting and investing in sectors that create employment, especially in agriculture. African governments must aim to promote broad-based, labour-intensive growth while investing in human capital to achieve to diversify their economies to enhance production and bring about the structural transformation needed to ensure pro-poor and inclusive (Torero, 2016) development. Socio-economic protection programmes will not only reduce poverty and food insecurity, but will also address their triggers and become pillars of tomorrow's food security in Africa.

According to the world food summit plan of action, human resources development and communication technologies are the keys to sustaining food security in Africa. Human resources development such as education literacy, agricultural extension programme and other skills training, if implemented effectively and efficiently, can boost agricultural production and enhance food security in the continent. Communication technologies can equally be used to promote human capacity development, and serve as powerful tools for informing people and providing them with the needed knowledge and skills to put agricultural science and production inputs to the best uses. The specific contributions that communication technologies can make to agricultural knowledge production for enhanced food security in Africa include the Internet, traditional folk media, rural radio and video. It is believed that the provision of these media will facilitate communication from agricultural extension workers and researchers to farmers; facilitate dialogue among communities, encourage their participation in decision making, that impacts their lives, provide information, knowledge, skills and training in a responsive and flexible manner to promote the development of agricultural systems in the rural areas of Africa. Building resilience to conflict and sustaining peace is a complex challenge that must include livelihood support to address the root causes of conflicts and conflict stressors and to promote re-engagement in productive. In order to promote peaceful coexistence and conflict resolution, a focus on interventions which contribute to national and local reconciliation efforts, good governance and the proper management of land and natural resources is necessary

Conclusion

Africa nations need to strengthen food supply response, reduce its food import dependence, and curb rising food prices. It is also important to provide incentives to stimulate and to diversify agricultural production by investing in research and development, rural infrastructure, irrigation, provide input subsidies and strengthen post farm-gate supply chains to reduce postharvest losses. A regional approach to ecosystem-based adaptation can serve as a flexible and cost-effective solution for

addressing food security problems as it strengthens ecological foundation of food systems. In the short term, African countries need to protect incomes and purchasing power, particularly for the most affected households, through social protection programmes, including cash transfers and school feeding; public works that help reduce unemployment; health sector policies that protect the poor against catastrophic out-of-pocket healthcare costs; and policies that are aimed at reducing excessive volatility of food prices. In the longer term, many African countries need to invest wisely during periods of economic boom to reduce economic vulnerabilities and inequalities; build capacity to withstand shocks; maintain health and other social expenditures; use policy tools to create healthier food environments; and quickly recover during periods of economic turmoil. Such policy orientation will require balancing a set of policies and investments to achieve the structural transformation that also fosters poverty reduction and more egalitarian societies. Integrating food security and nutrition concerns into poverty reduction efforts, while increasing synergies between poverty reduction, hunger and malnutrition eradication, must also be part of the transformation agenda. Furthermore, reducing gender inequalities and those arising from social discrimination and exclusion of population groups, needs to be either the means to improving food security and nutrition, or the outcome of doing so.

Climate change gives rise to new and increased demands for collective action, which requires putting in place appropriate policies and institutions that facilitate and support collective elaboration and implementation of actions either in a space (for instance a watershed, a forest) or sector, for instance along the food chain, including to increase and adapt storage facilities. This can be done by improving inclusiveness and transparency of decision-making and providing the means to incentivise actions that provide public and collective adaptation benefits in the long term. From the report of FAO (2016) on the impacts of climate change on food security, a cascade of risks from physical effects to ecosystems, agro-ecosystems, agricultural production, food chains, incomes and trade, with economic and social impacts, were significant on livelihoods and food security. Increasing resilience of food security in the face of climate change calls for multiple interventions from social protection to agricultural practices and risk management. The changes needed for adaptation to reduce the effects of climate change and improve the food security of the ever growing African population will require effective interventions, strategies and plans. They should also be gender-sensitive, multi-scale, multi-sectors and multi-stakeholders. They should be elaborated in a transparent way and also consider the different dimensions (social, economic, environmental), of the issues and different time scales by which the changes will need to be implemented and supported.

It is also imperative for specific efforts to be made to promote an enabling environment and strengthen accountability mechanisms to promote gender equality

and women's empowerment. The role of women in food security is enormous; therefore, efforts should be made by all African nations to elevate the gender benchmarks in the planning, monitoring and accountability mechanisms. They may need to also develop multi-sectorial programmes with other institutions to tackle gender issues that go beyond the agricultural sectors (e.g. rural infrastructure, education and social norms). With strong political commitment and investment in complementary health services, safe drinking water and good sanitation, maternal and child malnutrition can be reduced significantly (FAO, 2019). Africa must therefore integrate food security and nutrition concerns into poverty reduction efforts to make the most of the synergies between eradicating poverty, hunger, food insecurity and malnutrition. The continent must ensure that reducing gender inequalities and social exclusion of population groups is either the means to, or the outcome of improved food security and nutrition. However, that will require accelerated and aligned actions from all stakeholders and countries, including tireless and more integrated support from the United Nations and the international community. It is critical to have in place economic and social policies to counteract the effects of adverse economic cycles when they arrive, while avoiding cuts in essential services such as health care and education, at all cost in the longer term. Finally, the chapter has revealed that the yesterday of food security in Africa was moderate, but it is worrisome today due to multidimensional challenges faced by the continent. The future of food security in Africa would be bright only if the relevant stakeholders cooperate; upgrade socio-economic, political, and national systems; ensure peaceful co-existence; reduce the menace of climate change and jointly fight the common enemies of food insecurity.

References

- Adeagbo, M.O. (2012). Curbing the Menace of Food Insecurity in Nigeria's Democratic Setting. *International Journal of Economic Development Research and Investment*, 101-109.
- Akinfenwa, G. (2019). Stakeholders react to FOREX restriction on food items. *Guardian Newspaper*, 25th August, 2019, 23.
- Africa Hunger and Poverty Fact (2018). Available at <https://www.worldhunger.org/africa-hunger-poverty-facts-2018/>. Accessed June 20, 2020
- AfDB (2016). *African Development Bank Group Annual Report*. Abidjan: Côte d'Ivoire.
- Amali, I. O. O. (2012). Schooling and human capital development in agro-based rural economy in southern Benue, Nigeria. *International Journal of Humanities and Social Science*, 2(10), 105-110.
- Berry, E.M., Dernini, S., Burlingame, B. and Meybeck, A. (2015): Food Security and Sustainability: Can one Exist without the other. *Public Health Nutrition* 18 (13) 1-10.
- Berhane, A. (2018). Climate Change and Variability Impacts on Agricultural Productivity and Food Security. *Climate Weather Forecasting* 6: 240.

- Bremner, J. (2012). Population and Food Security: Africa's Challenge. Population Reference Bureau. Al.
- Buchanan, E. (2018). Hungry for Peace: Exploring the links between conflict and hunger in South Sudan. Oxfam.
- Dodo, M. K. (2020). Understanding Africa's Food Security Challenges. In *Food Security in Africa*. IntechOpen.
- Eckstein, D., Künzel, V., Schäfer, L. and Winges, M. (2019). Global climate risk index 2020. *Germanwatch*.
- Global Hunger Index (2020). 2019 Global Hunger Index by Severity and Progress since 2000. FAO (1996). Rome Declaration on World Food Security and World Food Summit Plan of Action. World Food Summit 13-17 November 1996. Rome.
- _____ (1996). Food, Agriculture and Food Security: Developments since the World Food Conference and Prospects. *Technical Background Document No. 1* for the World Food Summit.
- _____ (2000). The State of Food and Agriculture: Lessons from the Past 50 Years. Rome, Food and Agriculture Organization of the United Nations.
- _____ (2002). The State of Food Insecurity in the World 2001. Food and Agriculture Organization of the United Nations, Rome, Italy.
- _____ (2006). Policy brief. Food and Agriculture Organization of the United Nations, Rome, Italy.
- _____ (2010). World Food Crisis the price of Neglect. Food and Agriculture Organization of the United Nations, Rome, Italy.
- _____ (2011a). The State of Food and Agriculture 2010-2011. Women in Agriculture: Closing the Gender Gap for Development. Food and Agriculture Organization of the United Nations, Rome, Italy
- _____ (2011b). The State of the World's Water Resources for Food and Agriculture: Managing. Systems at Risk. Food and Agriculture Organization of the United Nations, Rome, Italy.
- _____ (2011c). The State of Food Insecurity in the World. How does International Price Volatility affect Domestic Economies and Food Security. Food and Agriculture Organization of the United Nations, Rome, Italy.
- _____ (2013). Food and Agriculture Organisation of the United Nations, Rome, Italy.
- _____ (2015a) Regional Overview of Food Insecurity Africa. Food and Agriculture Organization of the United Nations, Rome, Italy.
- _____ (2015b). The State of Food Insecurity in the World. Meeting the 2015 international hunger targets: taking stock of uneven, Food and Agriculture Organization of the United Nations Rome, Italy.
- FAO, IFAD and WFP (2015). State of Food Insecurity in the World-Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress. Food and Agriculture Organization Publications, Rome.
- FAO. (2016a). The State of Food Insecurity in the World 2015. Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress. Food and Agriculture Organization Publications, Rome.
- _____ (2016b). Meeting our Goals, FAOs Programme for Gender Equality in