



ASSESSMENT OF EMERGENCY FOOD SECURITY OF ADAMAWA STATE

A.G.John¹, A.A.Ibrahim², Mary Julius Lkama³

¹Department of Disaster Risk Management, Adamawa State Polytechnic Yola
¹gdwin54@gmail.com

²Department of Disaster Risk Management, Adamawa State Polytechnic Yola
²Hbinimam247@gmail.com

³Department Business Management Education, Adamawa State Polytechnic Yola
³Lkamamary@gmail.com

ABSTRACT

This research is an assessment of emergency food security of Adamawa State. A descriptive design was used to sample 40 respondents. The instrument of data collection used in this study comprises of semi structure questionnaire developed based on stated objectives. The collected data through the administering questionnaire was subjected to analysis using simple percentage. Based on the data analysis the study revealed that most of the respondents had to change their food consumption over the course of last years, because of unavailability and high cost of foods. The research also discovered that most of the respondents eat less than they should, because of inability to access food may be due to high cost outright unavailability to certain food stuffs. The paper recommends that government and non-governmental organization should be in vanguard of promoting food crop cultivation in order to reduce issues of lack of enough food for consumption.

KEYWORD: Food, Emergency, Security and Stability

INTRODUCTION

Food security in Nigeria is a burning issue that has been necessitated due partly to the many conflicts. These conflicts have caused displacement and mass movement of people from their places of regular income and farming activities which as a consequence threaten food availability, especially in Adamawa state.

Food and Agricultural organization (2010) opined that food security exists when all people, at all times have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Also according to Dewael (1990), Macrae and Zwi (1994) they said that from recent experiences especially in Africa, the association between violence and famine is so close that no widely applicable famine theory can disregard the role of violence illegally acquired by some groups, at the expense of others this now prompt deeper understanding of the severity of food insecurity which is essential for determining the best type of response.

The severity of food insecurity is gauged by its impacts on people's ability to feed themselves in the short terms and its impacts on livelihoods and self sufficiency in the longer term. Therefore, with the recent situation face by the Northern parts of the country as a result of the activities of Boko Haram threatening food supply from Northern parts of Adamawa state and the influx of the internally displaced persons to urban town cities thereby creating more security challenge.

In Adamawa state, particularly which has been witnessing influx of displaced persons occasioned by the ongoing attacks by the terrorist group. This problem necessitated food insecurity in the state which required urgent if not emergency approach in tackling the current situation of Famine and hunger, Chronic hunger and malnutrition, Increase in food price and other problems to mention but few among many. It is against this problem that this paper examined emergency food security assessment in Adamawa state.

Concept of Food Security

Food security is a condition related to the ongoing availability of foods (Malucelli et al 2014). Concerns over food security have existed throughout history. There is evidence of granaries being in use over 10,000 years ago with central authorities in civilizations including Ancient China and Ancient Egypt being known to release food from storage in times of famine (FAO, 2013). Yet it was only at the 1974 world food summit that food security was established as a formal concept. Originally, food security was understood to apply at the national level, with a state of being food secure when there was sufficient food to sustain a steady expansion of food consumption and to offset fluctuation in production and prices (FAO, 2006). A new definition of food security emerged at 1996 world food summit, this time with the emphasis being on individual enjoying food security, rather than the nation. According to food and agricultural Organization (FAO), food security "Exists when all people, at all time have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and healthy life"

Household food security exists when all members at all times have access to enough food for an active, healthy life (FAO 2006). Individual who are food secure do not live in hunger or fear of starvation.

Food Insecurity

Food insecurity, on the other hand, is a situation of “limited or uncertain availability of nutrition adequate and safe foods or limited or uncertain ability to require acceptable foods in socially acceptable ways” (Harvey 2011). Food insecurity incorporates a measure of unavailability of critical food supply due to various risk factors including droughts, shipping disrupting, fuel shortages, economic instability, and wars in the years 2011-2013, an estimated 842 million people were suffering from chronic hunger. The United Nations (UN) recognized the right to food in the Declaration of Human Rights in 1948, and has since noted that it is vital for the enjoyment of all other rights. The International Centre for Trade and Sustainable Development (1996), noted that food should not be used as an instrument for political and economic pressure but should be used for Agricultural market regulation.

Food Availability

Food availability relates to the supply of food through production, distribution, and exchange. Food production is determined by a variety of factors including land ownership and use, soil management, livestock breeding (Fraser 2013). Crop production can be impacted by changes in rainfall and temperature (Pollan 2001). The use of land, water, and energy to grow food often competes with other uses, which affect food production. Land used for agriculture can be used for urbanization or lost to desertification, salinization, and soil erosion due to unsustainable agricultural practices, which can lead to inadequate food supply.

Food Access

Food access refers to the affordability and allocation of food, as a preference of individuals and households (Deschutter 2010). The UN Committee on Economic, Social and Cultural Rights noted that the cause of hunger and malnutrition are often not a scarcity of food but an inability to access available food, usually due to poverty (Helen 2005). Poverty can limit access to food, and can also increase how vulnerable an individual or household is to food price spikes. Access depends on whether the household has enough income to purchase food at prevailing prices or has sufficient land and other resources to grow its own food (Molden 2007). Households with enough resources can overcome unstable harvest and local food shortages and maintain their access to food. There are two distinct types of access to food: direct access, which a household produces food using human and material resources, and economic access, which a household purchases food produced elsewhere (Claudio 2006). Location can affect access to food and which type of access a family will rely on. The assets of a household—income, land, products of labor, inheritances, and gifts—can determine a household's access to food (Claudio 2006). Crop production is not required for a country to achieve food security (FAO, 2013). A nation doesn't have to have the national resources required to produce crops in order to achieve food security, as seen in the example of Japan and Singapore (Borlaug, 2000). Because food consumers outnumber producers in every country, food must be distributed to different regions or nations. Food distribution involves the storage, processing, transport, packaging, and marketing of food (Toth, 2012). Food chain infrastructure and storage technologies on farms can also impact the amount of food wasted in the distribution process. Poor transport infrastructure can increase the price of supplying water and fertilizer as well as the price of moving food to national and global markets (Malucelli, 2014). Around the world few individuals or households are continuously self-reliant for food. This creates the need for a bartering exchange of food requires efficiencies

trading systems and market institutions, which can have an impact on food security (Claudio 2006). Per Capita world food supplies are more than adequate to provide food security to all and thus food accessibility is a greater barrier to achieving food security. However, the ability to access to sufficient food may not lead to the purchase of food over other materials and services. Demographic and education levels of members of the household as well as the gender of the household head determine the preference of the households which influence the type of food that are purchased (FAO 2011). A household's access to enough and nutritious food may not assure adequate food intake of all household members, as intra-household food allocation may not sufficiently meet the requirement of each member of the household. The USDA adds that access to food must be available in socially acceptable ways, without for example, resorting to emergency food supplies, scavenging, stealing, or other coping strategies.

Food Utilization

The final pillar of food security is food utilization which refers to the metabolism of food by individuals (Hellen, 2005). Once food is obtained by a household, a variety of factors impact the quantity and quality of food that reaches members of the household. In order to achieve food security the food ingested must meet the physiological requirements of each individual (UNICEF 2008). Food safety impacts food utilization, and can be impacted by the preparation, processing and cooking of food in the community and household. Nutrition values of the household determine food choice (Mark, 2003). Access to healthcare is another determinant of food utilization, since the health of individual controls how food is metabolized. For example, intestine parasites can take nutrition from the body and decrease food utilization (Malucelli, 2014). Sanitation can also decrease the occurrence and spread of disease that can affect food utilization. Education can impact food utilization and improve this pillar of food security (Toth 2012).

Food Stability

Food stability refers to the ability to obtain food over time. Food security can be transitory, seasonal, or chronic (Larson 2014). In transitory food insecurity, food may be unavailable during certain periods of time, (Rozwadowski, 2014). At the food production level, natural disasters decrease food availability (Pollan 2001). Civil conflicts can also decrease access in food price spikes can cause transitory food insecurity. Other factors that can temporarily cause food insecurity are loss of employment or productivity, which can be caused by illness (Borlaug 2000). Seasonal food insecurity can result from the regular pattern of growing season in food production (Rozwadowski, 2014). Chronic food insecurity is defined as the long term, persistent lack of adequate food (Borlaug 2000). In this case, households are constantly at risk of being unable to acquire food to meet the needs of all members. Chronic and transitory food insecurity are linked, since the reoccurrence of transitory food security can make households more vulnerable to chronic food insecurity.

Challenges to Achieving Food Security

Water deficits, which are already spurring heavy grain imports in numerous smaller countries, may soon do the same to large countries, such as China or India. The water tables are falling in scores of countries due to widespread over pumping using powerful diesel and electric pumps. Other affected include Pakistan, Afghanistan, and Iran. This will eventually lead to water scarcity and outbreak in grain harvest. Even with the over pumping of its aquifers, China is

developing a grain deficits. When this happen its will almost certainly drive grain Prices upward. Most of three billion people projected to be born worldwide by mid-century will be born in countries already experiencing water shortage. After china and India, there is a second tier of smaller countries with large water deficient Afghanistan, Algeria, Egypt, Iran, Mexico, and Pakistan. Four of those already import a large share of their grain. Only Pakistan remains self-suffering. But with a population expanding by 4 million a year, it will likely soon turn to the world market for grain. Regionally, sub Saharan African has the largest number of water stressed countries of any other place on the global and as of an estimated 800 million people who live in Africa; 300 million live in a water stressed environment. It is estimated that by 2030, 75 million to 250 million people in Africa will be living in area of high water stress, which will likely displace anywhere between 24 million and 700 million people as condition become increasingly unlivable. Because the majority of Africa remains dependent on an agricultural lifestyle and 80% to 90% of all families in rural Africa rely upon producing their own food hence water scarcity translates to a loss of food security Intensive farming leads to a vicious cycle of exhaustion of soil fertility and decline of agricultural yields. Approximately 40% of the worlds agricultural land is seriously degradation in Africa, if current trends of soil degradation continue the continent might be able to feed just 25% of its population by 2025, according to UNU's Ghana – based institute for natural resources in Africa (2012).

Climate Change

Extreme events, such as droughts and floods are forecast to increase as climate change takes hold. Ranging from overnight floods to gradually worsening droughts these will have a range of impact on the agricultural sector (Larson 2014). Tweenten (1998) said by 2020, almost the entire Nite region, which once included large area of irrigated agricultural land, is expected to become hot desert where cultivation is impossible due to water limitation. In other part of the world, a big effect will be low yields of grain according to the world food trade model, especially in the low latitude regions where much of the developing world is located from this the price of grain will rise, a along with the developing nations trying to grow the grain. Due to this every 2.5% price like will increase the number of hungry people by 1% low crop yields are just one of the problem facing farmers in the latitude and tropical regions. The timing and length of the growing seasons, when farmers plant their crops, are going to be changing dramatically, per the USDA, due to unknown changes in soil temperature and moisture condition.

Agricultural Disease

Disease affecting livestock or crops can have devastating effects on food availability especially if there are no contingency plants in place for example, UG99, a lineage of wheat stem rust which can cause up to 100% crop lessees in present in wheat field in several countries in Africa and the Middle East and is predicted to spread rapidly through these regions and possibly further afield, potentially causing a wheat production disease that worldwide (FAO 2003). The genetic diversity of the crop wild relatives of wheat can be used to improved modern varieties to be more resistance to rush (UNICEF, 2008). In their centers of origin wild wheat plants are screened for resistance to rush, then their genetic information is studied and finally wild plants and modern varieties are crossed through in order to transfer the resistance genes from wild plants to the modern varieties (Akpenior and James 2013).

Emergency

An emergency is a situation that poses an immediate risk to health, life, property, or environment. Most emergencies require urgent intervention to prevent a worsening of the situation, although in some situation mitigation may only be able to offer palliative care for the aftermath while some emergencies are self-evident (such as a natural disaster that threaten many lives) many smaller incident require that an observed (or affected party) decide whether is qualifies as an emergency. The precise definition of an emergency the agencies involved and the procedure used vary by jurisdiction and this is usually set by the government, whose agencies (emergency service) are responsible for planning and management.

Table 3: Occupation of the Respondents

Qualification	Number of Respondents	Percentage %
Farming	20	35%
Trading	4	24%
Civil servants	6	9%
Others	10	32%
Total	40	100%

Source: Field Survey, 2015

Table 3 shows that 35% of the respondents are farmers, while 24% of the respondents are civil servants whereas 2% formed other occupation. The occupation of the respondents is significant to this analysis because it tells about the earning capacity and the agricultural activities of the community. Majority of respondents being civil servants means that farming is not on their agenda most of the time and their purchasing power is limited because of their limited income as salary earners.

Table 6: Income Per Month

Responses	Number of Respondents	Percentage %
10,000-30,000	30	60%
30,000-100,000	10	40%
Total	40	100%

Source: Field Survey, 2015

Table 6 shows that 60% were of the opinion that their income bracket falls between 10,000-30,000, whereas 40% of the respondents have earnings between 30,000-100,000. This suggests that majority of the respondents are low income earners in Yola North who face the issues of food insecurity.

Table 8: Food Shortage

Responses	Number of Responses	Percentage %
Yes	35	90%
No	5	10%
Total	40	100%

Source: Field Survey, 2015

Table 8 indicates that 90 of the respondents believe that people in the state faced food shortages. While 10% of the respondents opined that people in Area do not faced food shortages. This suggests that most of the respondents face food security issues.

Table 9: Downward Review of Food Consumption

Responses	Number of Respondents	Percentage %
Yes	29	85%
No	11	15%
Total	40	100%

Source: Field Survey, 2015

Table 9 shows that 85% of the respondents believed that people review the food consumption of their families downwards because of cost food stuff, while 15% of the respondents opined that they don't review their food consumption because of cost of food stuff. This shows that a vast majority of people review downward their food consumption due to inability to cope with the rising cost of staple food stuff.

Table 10: Unavailability of Food Stuff

Responses	Number of Respondents	Percentage %
Yes	25	75%
No	15	25%
Total	40	100%

Source: Field Survey, 2015

Table 10 indicates that 75% were of the opinion that they had to change their food consumption over the course of last year because of unavailability of foods, while the remaining 25% opined that they did not have to change their food consumption over the course of last year because of unavailability of foods. This implies that most of the respondents had to change their food consumption over the course of last year because of unavailability and high cost of foods.

Table11: Lack of Accessibility to Food

Responses	Number of Responses	Percentage %
Yes	25	80%
No	15	40%
Total	40	100%

Source: Field Survey, 2015

Table 11 shows that 80% of the respondent stated that they eat less they should because of inability to access food, while 40% of respondents do not believe that they eat less they should because of inability to access food. This suggests that most respondent eat less than they should because of inability to access food might be due to high costs or outright unavailability to certain food stuff.

Table 12: Number of Meals Per Day

Responses	Number of Responses	Percentage %
3 times	5	15%
2 times	20	65%
1 times	15	40%
Total	40	100%

Source: Field Survey, 2015

Table 12 shows that 15% of the respondents were of the opinion that they can only afford meals 3 times per day. 65% of the respondents do not believe they can only afford 2 times per day and 10% of the respondents were of the opinion that they eat only once a day. This indicates that most people in the study area eat only 2 times a day, because of limited income levels and scarcity of food stuff.

Table 13: Feeding on Less Nutritious Meals

Responses	Number of Responses	Percentage %
Yes	35	90%
No	5	10%
Total	40	100%

Source: Field Survey, 2015

Table 13 shows that 90% of the respondents believed that people in Yola North Local Government Area feed on less nutritious meals due to limited food stuff. While some 10% of the respondents do not believe people in Yola North Local Government Area feed on less nutritious meals due to limited food stuff. This suggests that most people eat less than balance diet because of their inability to afford good meals due to cost or unavailability.

Table 17: Inadequate Rainfall

Responses	Number of Respondents	Percentage %
Yes	35	85%
No	5	15%
Total	40	100%

Source: Field Survey, 2015

Table 17 shows that 85% of the respondents believed that inadequate rainfall causes food shortages in Adamawa state, while 15% of the respondents believed that inadequate rainfall do not cause food shortages in. Those means that a major cause of food shortages is lack of regular rainfall.

Table 18: Lack of Farming Activities

Responses	Number of Responses	Percentage %
Yes	25	75
No	15	25%
Total	40	100%

Source: Field Survey, 2015

Table 18 indicates that 75% of the respondents were of the opinion that food vulnerability is caused by lack of farming activities, while the remaining 25% think that food vulnerability is caused by lack of farming activities. This implies that food vulnerability is mainly caused lack of farming activities. If there is serious investment and participation in agriculture there is bound to be positive change in the food security situation

Table 40: Hording of Food Stuff

Responses	Number of Responses	Percentage %
Yes	28	65%
No	12	35%
Total	40	100%

Source: Field Survey, 2015

Table 40 shows that 65% of the respondents were of the opinion that hording of food stuff cause shortages. While 35% of the respondents do not believed that hording of foodstuff causes food shortage . This indicate that hording of food stuff causes food shortage. Therefore, hording of food stuff must be discouraged.

SUMMARY

The study revealed that most of the respondents had to change their food consumption over the course of last year because of unavailability to food stuff. This indicates that most people eat only 2 times a day; because of limited income levels and scarcity of food stuff. The research revealed that there is problem of food crop cultivation due largely to the problem of violence and insurgency which scare people from their farms; as a result most of people suffer food shortages.

CONCLUSION

It is obvious that food security is a serious issue in Adamawa state as most of the people lives below the poverty line. The percentage of people who can afford decent meals are very negligible compared to the masses that eat.

RECOMMENDATION

In view of the foregoing finding obtained, the following recommendations are suggested.

1. Government and non-governmental organizations should be in the vanguard of promoting food crop cultivation in order to reduce issue of lack of enough food for consumption.
2. People in Adamawa state should be encourage to engage in agriculture. And farm implement should be made available and affordable
3. Government should help to build food storage facilities for farmers for both long and short term purpose
4. Farmers should be assisting with soft loans and credit facilities to help them expand their food production.
5. Government should help to provide agricultural lands for massive food cultivation and production; because if that is done a large scale, the price of food stuff would go down and everyone will be able to afford it.

REFERENCES

- Akpeninor, James (2013). Modern concepts of food security. Author house. ISBN 9781481782326.
- Borlaug, N.E. (2000), Ending world hunger: the promise of biotechnology and the threat of antiscience zealotry, *plants physiology* 124: 487: 490: doi :10 . 114/pp. 124.2.478
- Claudio O (2016). " The role of wild food plants in poverty and alleviation and biodiversity conservation in tropical countries, *Progress in development studies* 6 (4) 275. 286. Doi: 10:1191 / 1464993406ps1430a.
- FOA (2006). Agricultural development Economics Division, Food Security.
- FAO, WFP and IFAD (2013). " The state of food insecurity in the world, the multiple dimensions of food security.
- FAO (2017). "the food system and factors affecting household food security and nutrition" agriculture, food and nutrition for Africa: a resources book for teaches of agriculture Rome: agricultural and consumer protection department. Retrieved 4th august 4015.
- FAO (2018). The state of food and agriculture: closing the gender gap for development (2010-11ed.) rome. FAO.
- FAO (2015). " the state of food security in the world 4003" the state of food security in the world 4003." FAO. Retrieved 4th august 4015.
- Food and agricultural organization (2016) " Rome declaration on food security and world food summit plan of action."
- Felicity Lawrence (2010). " how peru's wells are being sucked dry by British love of asparagus environment" the guardian (UK). Retrieved 2nd august 4015.
- Fraser, E (2018). Travelling in antique lands: using past famines to develop an adaptability/ resilience framework to identify food system vulnerable to climate change 83:495-514.
- Harvey, Fiona (2019). Extreme weather will strike as climate change take hold, IPCC warns.
- James R. (2018). Science correspondent. Food crises will take hold before climate change. Warns chief scientist."
- Malcucelli, F.; certini, G., scalenghe, (2014)." Soil is brown gold in the emilia-romagna region. *Landuse policy*. Doi:10.1016/j.landuse pol.4014.01.019.
- Molden, D. (2007). Water for food, water for life: a comprehensive assessment of water management in agriculture. Earthscan/IWMI.
- Oldewage, T (2016)." Poverty, household food insecurity and nutrition: coping strategies in an informal settlement in the vaal triangle, south Africa." *Public health* 140 (a): 795-804. doi:10.1016/j. pube.4006.02.009.
- Toth, G. (2012). Impact of land- take on the land resources base for crop production in the European Union science of the total environment. 435-436:402-214. Doi: 10.1016/j. Scitoeny. 4012.06.103.