

## **CLIMATE CHANGE AND HERDERS/FARMERS CONFLICT IN NIGERIA: IMPLICATION ON FOOD SECURITY.**

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### **ABSTRACT**

The drastic change in weather conditions has increased the quest for limited resources and tension between herders and farmers in Nigeria. This study therefore, investigates the implications of climate-induced conflict on food security in Nigeria. This study adopted the secondary method of data collection and the content analysis approach. The study adopted the theoretical perspectives of the Eco-violence theory in order to carefully assess the climate-induced conflict between herders and farmers. In conclusion, the study established that Climate change is a major culprit in the conflict between Herders and Farmers in Nigeria. Scholars further agreed that drastic weather conditions such as low rainfall and high intensity of the sun have led to harsh conditions especially in northern Nigeria which have caused a wave of migration by herders to the southern Nigeria in search of pasture. The study recommends the need for conventional laws that will clearly stipulate the rights and boundaries between herders and farmers in order to avoid the incessant conflicts. Furthermore, the study recommends the adoption of Cattle Ranching, supported by the government. This method will put an end to the nomadic cattle grazing and the clash of interest between farmers and herders.

**Keywords:** Climate Change, Herders/Farmers, Food Security

### **1.0 INTRODUCTION:**

Various indigenous communities in Nigeria face threats to their lives, armed conflicts, and various human rights violations. (Akande et al., 2017). These conflicts are occasioned by the struggle for scarce resources between farmers and herdsmen. The conflict springing from limited resources have resulted to a distant and distrust relationship between the nomads and the farmers' communities playing host to them.

The drastic changes in the climate have perhaps, contributed to the high level of dry lands and low vegetation that have propelled the herders in search of vegetation for their livestock, hence the clash of interest between farmers and

herders. The situation has attracted global interest like never before on the activities of the herders, both locally and internationally. Their menace has prompted them to be labeled as the second most dangerous group in Nigeria after the dreaded Boko Haram (Oluwasuji et al, 2018). Cases of violent clashes between Herders and farmers are most evident in the middle belt region of Nigeria which has recorded loss of lives and wanton destruction of properties and farm produce. (Oluwasuji et al, 2018).

In Nigeria, there is a significant change in the climate, this is evident in the increase in temperature, variable rainfall; upward thrust in

sea level and flooding; drought and desertification; land degradation; greater common intense climate events; affected fresh water sources and loss of ecosystem (Elisha et al., 2017; Ebele and Emodi, 2016; Olaniyi et al., 2013). Nigeria has a tropical weather with two rainfall seasons: low rainfall in the North and high rainfall in parts of the Southwest and Southeast. This suggests aridity and desertification in the north; and flooding and erosion down south (Akande et al., 2017; Nkechi et al., 2016).

This also indicates that states in the north experience higher degrees of susceptibility to climate change than those in the south (Madu, 2016). This perhaps, explains the influx of herdsmen to the southern Nigeria in search of feed for their cattle. The high level of heat and low level of rainfall makes the north vulnerable and have hastened desert encroachment, with loss of the wetlands, and fast reduction in the amount of surface water, flora and fauna resources on land (Abdulkadir et al., 2017; Akande et al., 2017; Ebele and Emodi, 2016).

The Southwest and Southeast are relatively less vulnerable than other parts of the country. Within Southern Nigeria, the Niger Delta region is the most vulnerable, due to sea level rise, increased precipitation, coastal erosion and flooding – which has resulted in the displacement of many settlements (Matemilola, 2019; Sayne, 2011). The pattern of susceptibility to climate change also corresponds to the dominance of climate sensitive agricultural activities (Madu, 2016).

Therefore, the objectives of this paper are to investigate the effects of climate change on farmers/herders', food security and poverty in Nigeria.

### **1.1 Understanding Climate Change.**

Climate is the average weather, including temperature variances, precipitation and wind over a selected period of time (Odoh & Chilaka, 2012). This implies that for the state of the climate to be ascertained in a particular geographical region, the average state statistics

for a given time scale including all deviations from the mean are obtained from the ensemble of conditions recorded for many occurrences for the specified period (Azunna, D. E., Chukwu, G. U., Igboekwe, M. U., & Anyadiegwu, F. C. (2020)).

The earth's climate system evolves due to natural occurrences and human influences called anthropogenic. An example of this has led to climate change caused by increasing concentration of greenhouse gases (GHGs) in the atmosphere. Climate change is a global concern that affects existing continents and countries on planet earth. Climate change is not only a recipe for disaster, but also an existential threat to many species, including humanity. In Sub-Saharan Africa (SSA), Nigeria in particular, agriculture land-use supports the livelihoods of the majority of people. Land use for agricultural activity is an economic activity that is highly dependent on weather and climate to produce food and fiber necessary to sustain human and animal life. (Apata et al 2019).

The wave of Climate change has incurred unforeseen trajectory on both farmers and herdsmen which in many cases results to violent conflicts. Odjugo (2010) examined the trend in air temperature from year 1901 to 2005 and projected a temperature rise of 1.7°C during this period. He was of the opinion that if this trend continues, Nigeria will fall within the low or medium state of global warming with not less than 2.5°C temperature increase. This will be characterized by an increasing frequency and intensity rainfall pattern, flood and sea level rise among others (Odjugo and Osemwemkhae 2009; Umoh 2007).

These studies have confirmed an increase in total rainfall in the coastal areas since the 1970s, which may have been connected to increased flooding in areas such as Lagos, Port Harcourt and Calabar. Likewise, there is increasing temperature and decreasing rainfall in the continental interior and semi-arid regions such as Sokoto, Katsina, Kano, Maiduguri which may have resulted in increasing evapotranspiration, drought and desertification as reported by

Odjugo and Ikhouria (2003) and Adefolalu, (2007).

Furthermore, NEST (2003) reported a constant decrease in forest cover and a sea level rise of 0.2m in the coastal areas of Nigeria, which also suggests climate change and global warming. These are indications that there is a little chance of success for Nigeria's heavily rain-reliant agricultural production and entails there is need for urgent necessary steps employed to adapt to this changing climate. This variation in annual rainfall have led to drought in the northern region causing mass movement of nomads to the southern region in search of pastures for their livestock.

Nigeria as an integral part of the world is not immune to climate change hazards. Climate change in Nigeria has over time disrupted the normal functioning of the ecosystem that interacts with humans, and affects how they access certain vital resources for their survival (Odoh & Chilaka, 2012). When climate change threats such as heavy droughts and famine, unreliable weather seasons and, in some areas like in the north, protracted dry spells occur in Nigeria, it is normally viewed in relation to environmental degradation, natural resource scarcity, migration and food shortage.

### **1.2 Herders/Farmers Conflict in Nigeria**

A minimal attention is paid to how climate change can instigate conflicts as evident in herders/farmers conflicts in Nigeria. The term 'conflict' has been conceptualized by many scholars such as; Thompson, (1998) "Conflict is the perception of differences of interests among people." And Van (1999), "Conflict is the competition between interdependent parties who perceive that they have incompatible needs, goals, desires, or ideas." However, the various definitions have always pointed at one fact: that conflict is an enduring aspect of social existence. It is believed that wherever a community of individuals is found, conflict is basically a part of their experiences.

Thus, most conflicts are social in character and usually arise as human beings pursue their survival and security needs. However, whenever

there is conflict between sedentary farmers and herdsmen or pastorals, it is normally viewed by scholars such as Adisa and Adekunle (2010); Onuoha (2021), among others within the context of resource scarcity. Much as we believe that it is lack of natural resources that can cause this kind of conflict, it is our position that resource scarcity is the immediate cause of conflict between these two groups while climate change creates resource scarcity and reinforces the conflict

The existing rapport between farmers, host communities in their various settlement and herdsmen in Nigeria over a period of time, is best characterized by violence. It is a recurrent situation that is no longer new, leaving lives, properties and farms destroyed. The periods between 2013 and 2016 recorded above 1799 deaths accruing from these conflicts (Okwor, 2016). Cases of violent attacks on farmers in their host communities, who are violently killed by nomadic herdsmen mostly occur in the north central Nigeria, and also affected other regions of the country specifically in Ekiti, Oyo, Ondo States of the South West region; Enugu, Imo States of the South East region and Cross River State in South South region of Nigeria (Adisa and Adekunle, 2010; Oluwasuji et al, 2018).

The movement down south by the herdsmen is partly due to the unfavorable weather conditions in the north, however, this movement has resulted to the struggle for the available resources, with the local farmers, thus, a clash of interest. Conflicts often arise when grazing is not controlled (Oluwasuji et al 2018), leading to destruction of crops in the farm, and the aftermath is a communal conflict with the farmers/host communities and a reprisal attack.

Oluwasuji et al (2018) highlighted on the activities of herdsmen in Nigeria, they emphasized on the brutal killing of natives and invasion of farming communities. Their activities are on the rise, women and children are not exempted in their brutality. In their work, Benue, Nasarawa, Plateau, Taraba, Kaduna, Adamawa, Zamfara, Oyo, Imo, Enugu and Cross River are the most affected States in Nigeria.

Oluwasuji et al (2018) emphasized that climate change is a trigger of communal conflicts, state failure, drought, flood, salinity/acidity of soil which all negatively impact the land and result in food scarcity, and then migration. They went further to say that “Drought and desertification experienced in Northern Nigeria have pushed Fulani herdsmen southwards to graze their cattle”. A movement Nte (2016) agreed to be a conflict-causing factor between the herders and farmers/host communities. This further indicates that the harsh climate conditions in Africa's Sahel region (including northern Nigeria) have resulted in the degradation of arable lands and a decrease in available resources, increasing competition for scarce resources.

Desertification forces herders to migrate south, particularly to the middle belt region, and to other parts of Nigeria for pasture. It is worth noting that the herdsmen rely heavily on the natural environment for survival, which exposes them to resistance, which they counter by attacking their perceived enemy.

Michelle Bachelel, The United Nations High Commissioner for Human Rights was of the same opinion that Nigeria's savannah planes and other fertile parts of the country are bound to experience conflicts between herdsmen and farmers in search of water and hay for their cattle, a condition she concluded to have a political, economic and socio-cultural impact not only on the country, but the world (Sahara Reporters September, 9 2019). Other follow up causes of conflicts between herdsmen, farmers/host communities as outlined by Bello (2013) are the destruction of farm crops by cattle, blockage of grazing routes by farmers, cattle theft, and perception on both sides.

Ajibefun (2018) in research he conducted on the social and economic effect of the menace of Fulani herdsmen crises in Nigeria came up with the findings that the major causes of Fulani herdsmen and farmers clashes on the side of farmers were the destruction of their crops, sexual harassment of their women by the herdsmen, indiscriminate bush burning. The herders on their own side insisted on cattle theft, harassment of nomads by the youths of host

communities as the causes of their clashes with farmers. The implication is that most of the problems-causing factors remain unattended to, especially the root factor which is climate change and more conflicts are bound to be experienced. This corroborates Michele Bachelel's submission,

“With the government within West and Central Africa unwilling to find a solution to nomadic cattle breeding, Nigeria's fertile Savannah planes and other scarce fertile parts of the two sub regions are bound to experience escalating feuds between cattle breeders and farmers searching for water and hay for their animals.”

In summary, most of the scholarly research reviewed acknowledged the effects of climate change as it affects livestock and food productivity as well as how the change in climate have ensued a near intractable crisis between farmers and herders, however, none of the papers reviewed were able to properly demonstrate solutions that will unanimously address the effects of climate change. Therefore, this study aims fill in the gap in literature by analyzing the effects of climate change on food security, struggle for limited resources and rate of poverty in Nigeria.

## 2.0 REVIEW OF RELATED LITERATURE.

Experts have used ‘eco-violence’ to refer to conflicts between groups over land, water and vegetation, amongst other things (Homer-Dixon and Blitt 1999; de Soysa 2002; Stoett and Omrow, 2012). Etymologically, the term eco-violence has been used to describe the harm done to the environment and humans through conflict between social groups and other actors who compete for access to and control over water and other agricultural resources (Homer-Dixon and Blitt 1999; Stoett and Omrow 2021).

Eco-violence comprises deliberate killing of people, ecocide and ecological disruption (Stoett and Omrow 2021). Eco-violence has been defined as a conflict that describes a situation ‘where people fight for survival due to environmental pressure stemming from a denuded resource base’ (de Soysa 2002). It

therefore refers to struggles over scarce resources, and this standpoint characterizes causality to environmental factors.

Within the Sahel region, the term eco-violence is often used, theoretically to elucidate conflicts over water and agricultural resources. According to Okpaleke and Abraham-Dukuma (2020), Eco-violence theory is a belief that environmental degradation resulting from extractive activities contributes to the emergence of conflict. Some scholars opined that the 'eco-violence' thesis infers that alterations in socio-ecological and demographic features, when combined with harsh climatic conditions, facilitate violence (Okoli and Ogayi 2018).

However, the conflicts that these frameworks – 'eco-violence theory' or 'eco-violence thesis' – tries to expound on, are not yet widely referred to as 'eco-violence'. Nonetheless, eco-violence has been used to explain violent conflicts resulting from the scarcity of renewable resources such as water and agricultural land in the Sahel region (Ogu, 2020) – particularly, the intractable and violent clashes between herders and arable farmers in Nigeria (Ogu, 2020).

This theory attributes the conflict between herders and farmers to the changes in the climate which have adversely limited natural vegetation and rainfall in the Sahara leading to migration and encroachment of the southern region by the herders.

This study adopted the qualitative research methods; data used in this study are from secondary sources such as documents, academic

journals, scholarly inputs and press release. This is done in order to carefully analyze and conduct a critical study on the research objectives. The study further adopted the content analysis which is the best approach in analyzing secondary data.

### **3.0 DATA PRESENTATION**

#### **3.1 Impacts of Climate-induced Conflicts between Farmers and Herders on Food Security in Nigeria**

Agriculture is a significant economic activity and has the highest contribution of 22.86% to Nigeria Gross Domestic Product (GDP) compared with other economic activities according to the 2018 Quarter 2 GDP report (NBS, 2018). It also provides employment for over 80% of the population. Furthermore, crop production represents 94 % of these agricultural activities (Ebele and Emordi, 2016) and any exposure of the sector to any unfavorable shock is capable of impacting heavily on the welfare of those whose livelihood depend on the sector, particularly if the personal and institutional capacities to adequately respond are lacking. In the last four decades, agriculture has been linked with shocks such as climate change, financial crisis, oil discovery etc. and of these shocks, climate change consequences seem to have lingered and its concern heightened, given the strong connection of agriculture with poverty (Ebele and Emordi, 2016)

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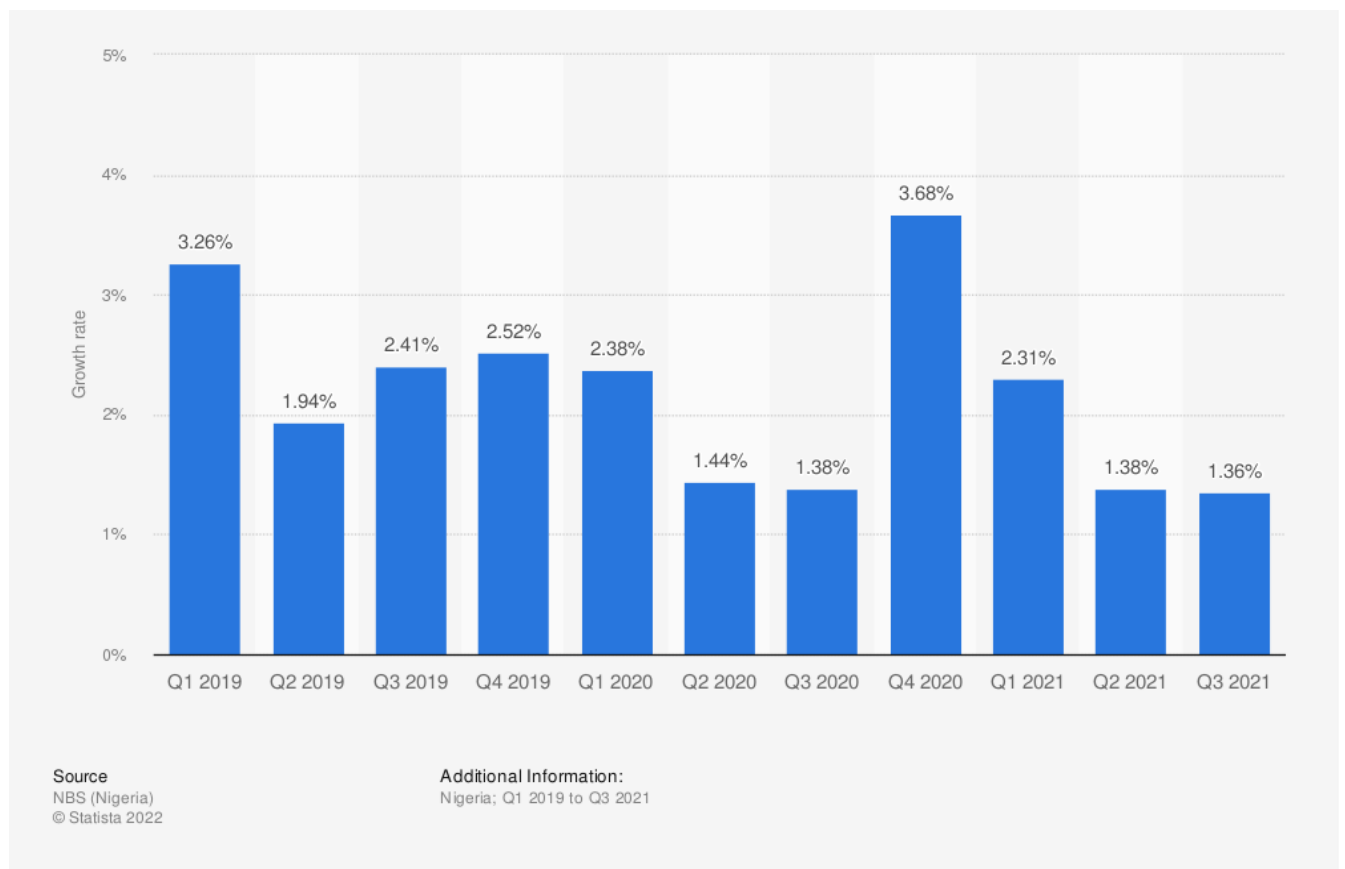
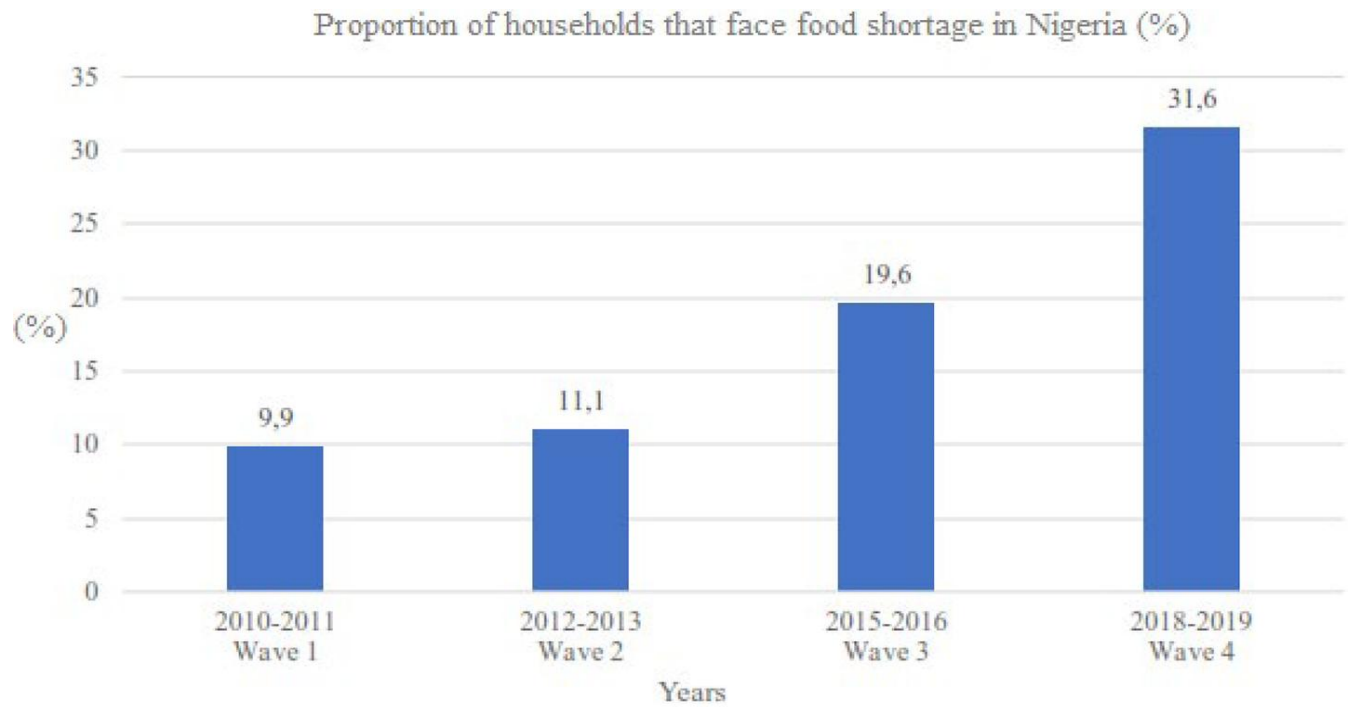


Figure 1: Crop Production Growth from 1st Quarter 2019 – 3rd Quarter 2021. Source: Statista 2022.

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**Source:** GHS Indicators (2010-2011; 2012–2013; 2015-2016; 2018–2019)

Figure, 2. Proportion of households that face food shortage in Nigeria 2010-2019

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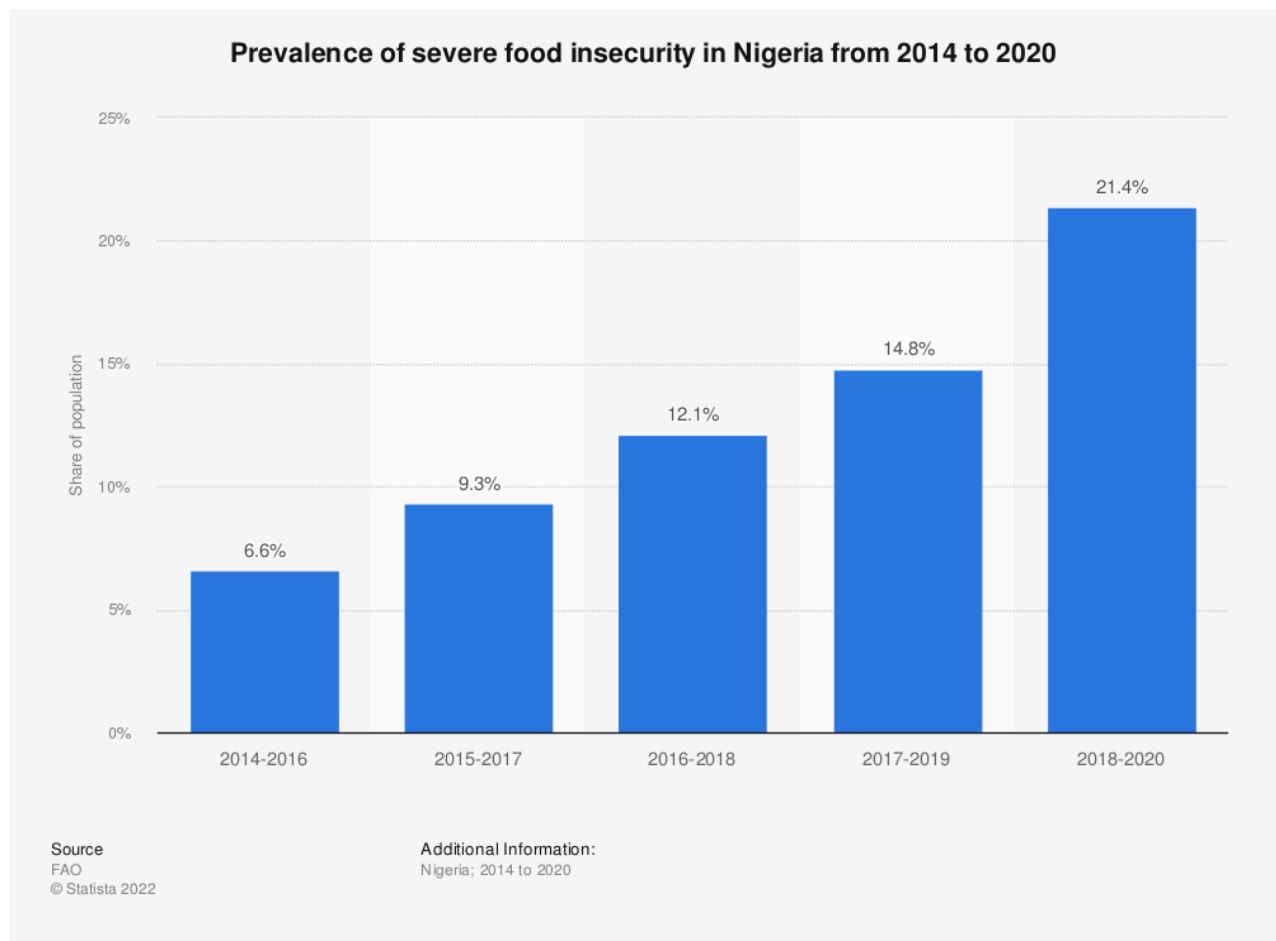


Figure 3: Prevalence of food Insecurity in Nigeria from 2014 – 2020. Source: Statista 2022



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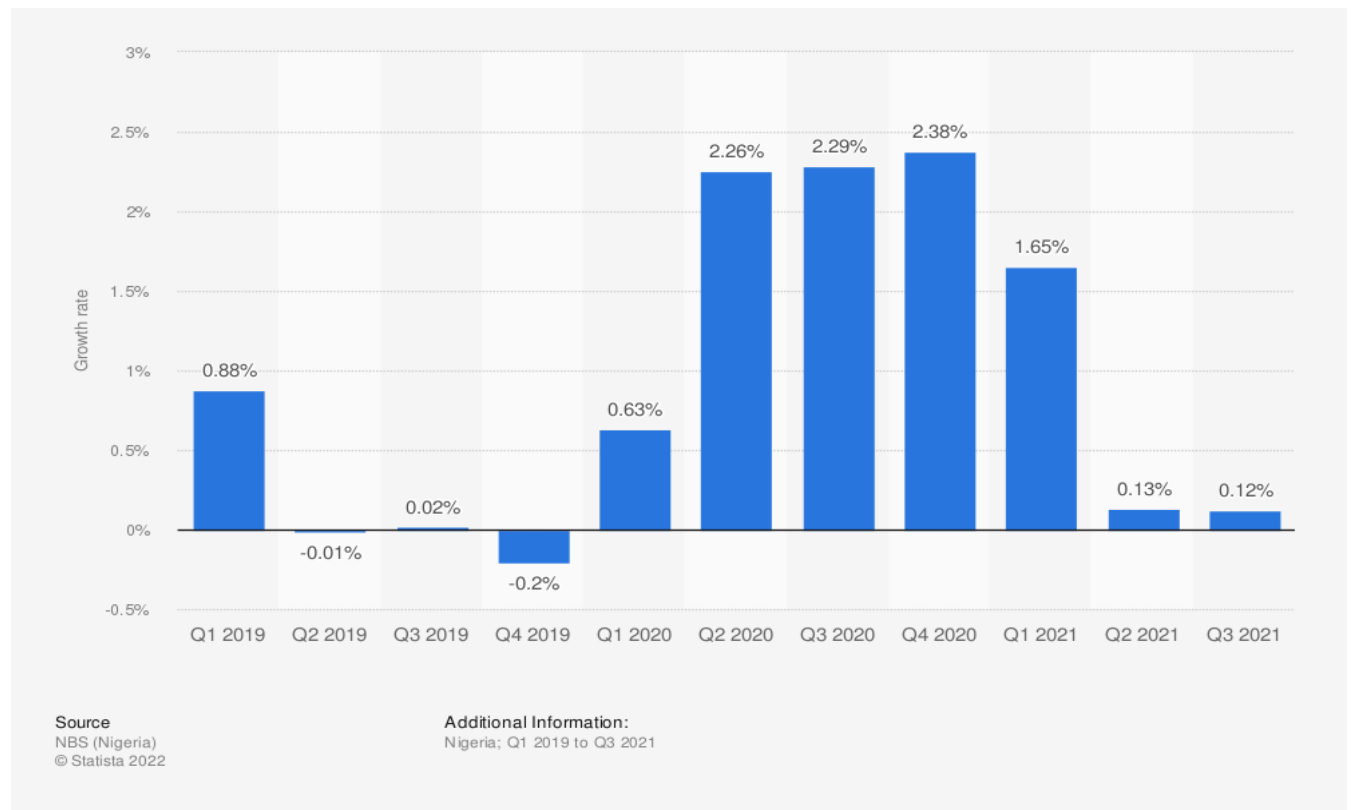
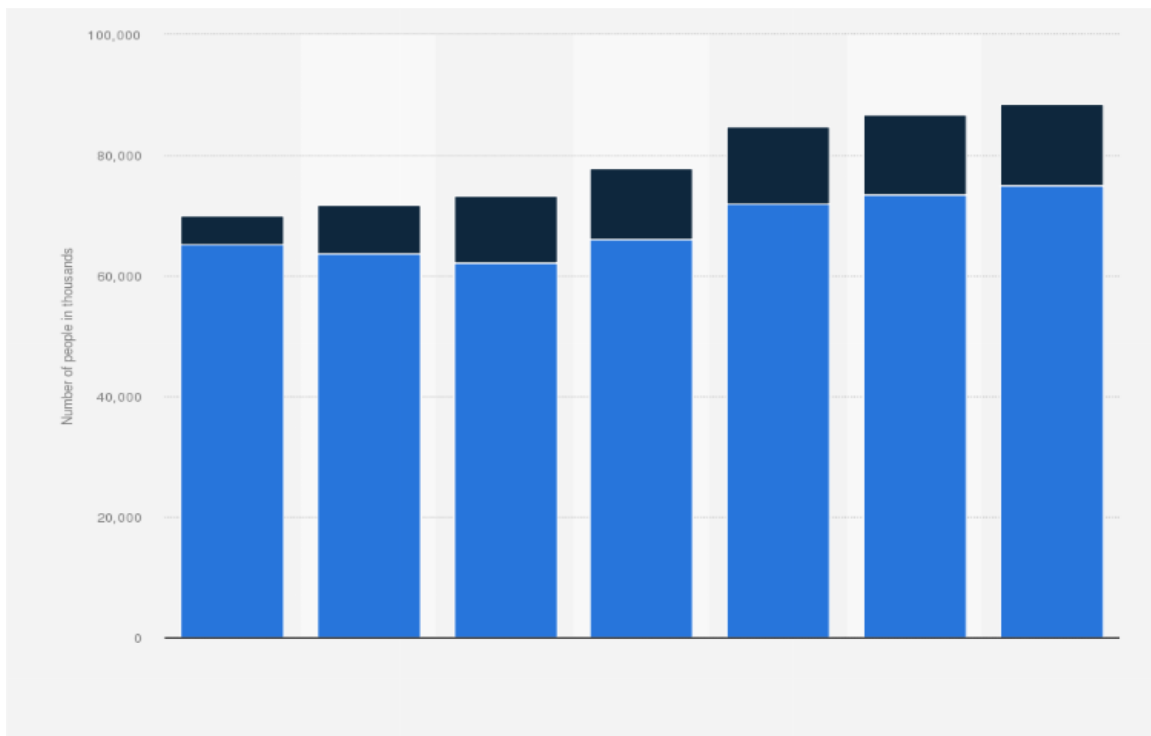


Figure 4: Livestock Contribution Growth to GDP in Nigeria from 1st quarter 2019 – 3<sup>rd</sup> quarter 2021. Source NBS (2022)

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**Figure 5: Increase in poverty level between 2016-2022 Source: Statista, 2022**

The data from Figure 1, clearly demonstrates the sudden decline of crop production. Crop production fluctuating growths. The first quarter of 2019 witnessed a relative increase in production followed by a decline that lasted to the 4<sup>th</sup> quarter of year 2020. Subsequently, production has been on the decrease in the first and second quarter of 2021. The figure also demonstrates the declining nature of crop production following a reverse in climate.

Figure 2, highlights the level of food shortage faced by many Nigerians. This also explains the continuous food shortage which has grown significantly from 2010 to 2019. These figures further demonstrate that the change in climate has started for a long time before its effects began to take place. These effects have successfully increased the high cost of living due to food insecurity. Figure 2 further shows the constant rise of food insecurity beginning from 2014 to 2020. This further explains the

migration of nomadic farmers to the south in search of pastures to feed their livestock and in turn have become a major source of conflict between farmers and herders. The activities of nomadic herders have impacted the political, economic and socio-cultural fabrics of Nigeria, which have evidently affected food production in Nigeria. Ajibefun (2018) highlighted the impacts of the clashes to be; loss of human lives, reduction in the quality of social relationship, reduction of social support and high cases of rape... reduction in output and income of farmers/nomads, loss of produce in storage, displacement of farmers, scarcity of agricultural products, loss of houses and properties and infrastructural damage.”

Figure 4 point to economic impacts of livestock production in Nigeria which remarkably increased in 2020 but took a sharp and continuous decline in later months of 2021 which saw the highlights of major crisis between

herders and farmers. In essence the decline of livestock production has further contributed to food insecurity in the country due to harsh climate to sustain the livestock and the struggle for available land between herders and farmers.

The contrasting nature of eco-violence became apparent among scholars when it became evident, the effect of synergy between some of the actors engaged in Islamic belligerency and eco-violence (Cline 2021; Nnorom, 2021); Climate change became an issue, due to its severity and frequency, in the Sahel region especially in Nigeria because of this new trend. According to Nnorom (2021), the founders of Boko Haram in Nigeria were linked to the Fulani ethnic group, pastoralists that can be found all over the West African sub-region and beyond. This rapport amongst some of these non-state actors has evolved into one in which armed Fulani herders and their militia have gained access to military-grade arsenal and operational techniques similar to those employed by the Taliban or al-Qaeda (Nnorom 2021; Zenn and Weiss 2021).

Level of food production in the south has drastically decreased due to fear of attack by these herders. Bello (2013) and Oluwasuji et al (2018) argued that poor crop output and income due to destruction and burning of farms, displacement of farmers and families into internally displaced persons (IDP)/refugees, land degradation due to over grazing, loss of lives to include women, children and the aged, severe bodily injury and loss of the spirit of unity constitute the impacts of the conflicts. Going by the unfolding events, it is clear that positive peace is yet to be achieved, an indication of recurring attacks and reprisals.

The data in Figure 5, critically showcases the dramatic increase of poverty, this increase is following a vicious cycle that draws from harsh climate that affects arable lands, struggle for limited arable land due to climate-based violence and food shortage which have increased poverty. Scarcity of food is continuously going up on daily basis. Akinyentun (2016) highlighted the effects of Fulani herdsmen as the, routinisation of

violence, intensification of ethnicization, increased kidnapping, destruction of farm and farmers. The impact of these clashes clearly amounts to a violation of the right to life as enshrined in Section 33 (1) of Nigeria's 1999 constitution and Article 3 of the 1948 Universal Declaration of Human Rights, as well as other criminal acts such as arson, assault, terrorism, genocide, and crimes against humanity as outlined by Ebeku (2018). The effrontery of herdsmen to cause brutality calls for alarm.

This was reiterated by Human Rights Watch in their 2019 report on Nigeria which concluded that, "Uncoordinated and inadequate responses by States and Federal authorities deepened mistrust and perception of authorities bias and complicity in the violence". If the government has taken a necessary step in handling the issue, positive peace could have been witnessed. As opined by Ebeku (2018), "The recurrent killings of innocent Nigerians across Nigeria by the herdsmen, their attacks on communities and villages, and their kidnapping activities are all within the purview of the terrorism (Prevention) Act 2011 (as amended). Yet the Federal Government has not intensified efforts to arrest and prosecute the perpetrators;

One could see ethnicity playing out, with ethnic radicalization on the move. This best explains why impunity grows within the activities of nomadic herdsmen in Nigeria and also corroborates Akinyentun (2016) on the "Routinization of violence" where he believes that the attacks and killings by Fulani herdsmen becomes a 'habit, internalized, patterned, conventionalized' and graduates into a norm/custom. This conflict boils down to the struggle for limited resources and clash of interest which have unruly affected food production and security in Nigeria.

#### 4.0 CONCLUSION

The near intractable conflict between the farmers and the nomadic herders could be attributed to the variations in the climate. This study established that Climate change is a major factor in the conflict between Herders and Farmers in Nigeria. Scholars further agreed that

drastic weather conditions such as low rainfall and high intensity of the sun have led to harsh conditions especially in northern Nigeria which have caused a wave of migration by herders to the southern Nigeria in search of pastures.

The struggle for available resources has led to series of confrontations between herders and farmers which have led to destructions of lives and property and farmlands. Farmers are reluctant to farm out of fear thus causing a sharp decline in the level of food production in Nigeria. Data used in this study clearly indicate the low level of production and high cost of demand which have further increase the poverty level and heightened food insecurity in Nigeria.

## 5.0 RECOMMENDATIONS

This study recommends strong government intervention between the herders and farmers. On the other hand, there is a need for conventional laws that will clearly stipulate the rights and boundaries between herders and farmers in order to avoid the incessant conflicts. Furthermore, the study recommends the adoption of cattle ranching, with efficient support by the government, this method will put an end to the nomadic cattle grazing and the clash of interest between farmers and herders. Perhaps the application of these suggestions would increase food productivity and food security in Nigeria.

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