# AFFORESTATION AS A MECHANISM FOR MITIGATING VIOLENT CONFLICTS BETWEEN FARMERS AND HERDERS IN NORTHERN NIGERIA

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***"Climate change is not a distant threat –it is happening now. It is causing displacement and migration, and we must act swiftly to address it*** "Ban Ki-Moon

**KEYWORDS**
*Afforestation, Conflict, Mitigation, Climate Change, Farmer, Herder*

**ABSTRACT**
*In the quest for sustainable peace against the spate of conflicts between Farmers and Herders in Northern Nigeria, this paper examined the viability of afforestation in taming the protracted violent embroil between the two land users which has claimed many lives and property across the region. The new thinking of using tree planting mechanism in ameliorating the causative agents of the conflicts is borne out of the capacity of trees in providing the desired vegetation for both Famers through its capacity to check climate change with its vulnerabilities such desertification, drought, erosion, erratic rainfall, heat waves etc. which often times trigger the South-Ward migration of herders in desperate search for greener pasture and water points which consciously or unconsciously leads to encroachment of famer lands and eventually sparks resentment, mistrust and violent conflicts. This study is obviously a shift from existing studies that pay little or no attention to applying the afforestation strategy in addressing the backgrounds to which conflict erupts between farmer and herders in Nigeria with specific reference to North-central region. The study relied on secondary sources of data collection mainly from newspapers, reports, published journals, and text books. The paper adopted Eco-Violence theory as a framework of analysis. Thus, the study discovered that, mass tree planting can go a long way in addressing our environmental condition through is natural ability to absorb Greenhouse Gases (GHG) which through emission deplete the ozone layer that over time caused change in climate condition,creat favorable vegetation that attract rainfall,etc To this end, the paper suggested greater collaboration of government with Non-Governmental Organizations (NGOs),*

*community heads, religious and traditional institution in achieving the renew thinking, inclusion of Climate Change Education in our schools curriculums and strengthening our legal frameworks for environmental protection against climate change among other policy recommendations.*

## Introduction

One of the major problems promoting unending discourse about the future of the world, is the issue of global warming. Today, Nigeria is a country whose majority of its federating units are confronted with the scorching impact of climate change in one form or the other. This confrontation is visible in different forms ranging from heat waves, extreme rains, flooding, land degradation, drought, fluctuating rainfall, desertification etc. What does this implies? The implication is that, the climate change variability is hitting hard on existing structures, lives and livelihoods causing violent conflicts, forced migration, and displacement with attendant effect on health, human security and food security across the world.

Nigeria is not an exception to the vulnerability of climate change especially in the Northern flank. This is manifested in the migratory trends of itinerary pastoralists. In the feasible manifestation of erratic rainfall, herders move to the Guinea Savannah and rain forest belts in search of grass and water which often times leads to encroachment of farmlands and water pollution.

In a study of climate change and global security, Okoye (2023) posits that, "at the moment, climate change constitutes one of the greatest challenges the world is battling with in the 21st century. He further clarifies that… Although climate change does not directly trigger violent conflicts, but its manifestations such as drought, erratic rainfall, desertification, water scarcity and shrinking of water bodies etc. contributes to the escalation of pre-existing conflicts and breeds new areas of conflicts, in other words posing what is called structural violence.

As a response to the consequences of shift in the climate, tree planting becomes imperative to tame the impending effects of the injured climate. As we speak, our ozone layer in the stratosphere that sits between 15km and 30km above the earth surface that shields us and other living things from the sun's harmful ultraviolet radiation is severely injured. The harm to the natural canopy (ozone layer) is caused by two major factors; (a) natural process (Biogeographical) (b) human activities (Anthropogenic).

Our focus therefore, in the paper, shall be on the imperatives for tree planting as a viable strategy for reducing violent conflicts among farmers and herders in Northern Nigeria. Focus shall also be put on the implications of deforestation which is one of the contributors to the Greenhouse Gases (GHG) emissions that continues to harm the climate to the disadvantage of human security in Northern Nigeria.

A departure from other previous studies lies on the fact that, this paper stretched and advanced the scanty scholarship on the subject matter within the perspective of leveraging afforestation in addressing the protracted conflict between sedentary farmers and pastoralists in Central Nigeria. Many exiting studies dwelled much on the causes, effects, historical background of climate change and farmer-herder conflicts and little attentions is given to utilization of mass tree planting as a strategy to addressing the root cause of the continued violent conflicts among farmers and herders in Northern Nigeria.

It is against the foregoing that, this paper attempts to establish the nexus between climate change and the prolonged farmer-herder violent conflicts and to further establish how afforestation serves as a panacea to the embroils between the two land users in Northern Nigeria.

## Conceptual Clarification

### Afforestation

Food and Agricultural Organization (2012), defined afforestation as the establishment of forest on land that is considered to not have been forest previously.

Afforestation also refers a deliberate act of converting land that has not been forested for a long period of time, is forested through planting of trees for a specific purpose. It also connotes the process of creating a forest through deliberate plating of trees with clear plans to preserve them for the purpose of preserving nature and other associated bio-diversities in it.

More to that, afforestation is a process of recovering lost grounds through tree planting and strategies putting in place to protect existing ones. This implies that, afforestation does not only connote plating of trees, it also implies careful measures taken to provide care to nurture exiting ones.

What has always been a challenge in this regard is the sustainability plans to preserved trees for a long period of time to serve the purpose in which it was planted. More often than not, trees planted are not taken care of and most times left at the mercy of stray animals, given rise to orphan's trees.

### Conflict

The concept of violent conflict can better be appreciated after clear conceptualizations of conflict. Ezombi (2012), view conflict is an intrinsic and inevitable part of human existence. It is seen as the pursuit of incompatible interest and goals by different groups. In similar thought, Thomas (2006) asserts that, conflict represent disharmony, antagonism or hostility in a relationship which could arise due to incompatibility of the goals being pursued or incompatibility of the means used in pursuing the chosen goals.

In agreement to the above definitions, there is always a factor that sparks conflicts it is most time the process of achieving goals and objectives that is central to livelihoods or means to livelihoods that generates conflicts which can occur within a family, and between families, within communities, and between communities, within a country and between country, and within organization, and between organizations.

Coser (1956) cited in Hussein et al (2020),an American sociologist, defined conflict as the clash of values and interests, the tension between that is and what some groups feel ought to be. It is in the light of this that, conflict is seen to be either functional or dysfunctional

Therefore, what is central to this concept is that, conflict is a game of interest, although more often than not, it turns out to be violent, violent conflict and is when parties or a party uses arms or weapons to achieve their goals, resulting to loss of lives and property. It is in this context, this paper view the aged-long conflict between famers and herders as dysfunctional type of intergroup conflict given its destructive historical antecedents.

Thus, as a working definition, conflict is a situation in which different unacceptable interest, ideas or belief clashes against individual or group expectations, wishes, values, opinions, existence and survival.

## Theoretical Basis

### Eco-Violence Theory

The environmental resource scarcity theory is applicable in this research in attempting to equate the trends of farmers-herders upheaval across Nigeria. Thomas Homer-Dixon (1999) is one of the major proponents of the theory alongside; Baechler; Percival and Gleditsch.

Thomas Homer-Dixon (1999), adduces wide arrays of empirical work linking environmental degradation with violent outcomes, and articulates a preliminary theoretical framework to explain these linkages.

The Theory holds that:

> *Decreased in quality and quantity of resources, population growth, and resource access at singly or in various combinations to increase the scarcity, for certain population groups, of cropland, water, forests, and fish. This can reduce economic*

> *productivity, both for the local groups experiencing the scarcity ad for the larger regional and national economies. The affected people may migrate or be expelled to new lands. Migrating groups often trigger ethnic conflicts when they move to new area; while decreases in wealth can cause can cause deprivation conflicts (Homer-Doxon, 1999).*

The conflicts between the herders and crop growers on the transhumance corridors and routes of North-Central Nigeria typify ecological resources-conflict aggravated by the impacts of global climate change, what is at issue in the conflicts is livelihood struggles in a context of stiff ecological scarcity and competition. The desperation exhibited by the principal actors in the conflicts can only be properly conjectured by understanding the conflicts situation as a struggle for collective subsistence in an ecological domain fraught with resource-scarcity and do-or-die contestation. In this context, it becomes expedient for the parties to apply counter-group tactics in an attempt to live through the ecological struggle. This apparently explains the level of violence that has characterized such conflicts situation in contemporary time (Okoli, 2015).

The central thesis of the eco-violence theory is that, scarcity of renewable resource can, in combination with other social factors, contribute to macro-level violent outcomes such as ethnic clashes and insurgencies…. Violent outcomes are often the product of interactions between scarcity and a number of other factors, such as inequality, migration and the functioning of social institutions. He further presented an overview of intellectual currents over the last two centuries, first focusing the discussion around the broad trends of neo-Malthusian population-based ideas, economic theories of ingenuity and optimism, and resource distribution models. He then gives overviews of nine physical trends of global warming, ozone depletion, cropland scarcity, freshwater depletion, decline of fish stocks and biodiversity loss (Homer-Dixon, 1999).

Further advancement of the theory connotes that;

> *Decreases in the quality and quantity of renewable resources, population growth and unequal resource access act singly or in various combinations to increase the scarcity, for certain population groups, of cropland, water, forests and fish. This can reduce economic productivity, both for the local groups experiencing the scarcity and for the larger regional and national economics. The affected people may migrate or be expelled to new lands. Migrating groups often trigger ethnic conflicts when they move to new areas, while decreases in wealth can cause deprivation conflicts.*

According to Gleditsch and Blitt (1998) cited in Odoh and Chigozi (2012);

> *"The fundamental theoretical assumption of the theory is that resource scarcity is the product of an insufficient supply; too much demand and an unequal distribution of resources as a result of environmental hazards that forces some sector of a society into a condition of deprivation and violence. These four sources of scarcity are in turn caused by variables such as population growth, economic development, pollution and obviously climate change. Thus, environmental, pollution and obviously climate change. Thus, environmental resource, scarcity will constrain agricultural and economic productivity, further inducing the disruption of economic livelihoods, poverty and migration. Migration can occur either because of environmental quality of a habitat has become unlivable or, more commonly, because the migrants economic outcome is likely to strengthen the segmentation around already existing religious, class, ethnic or linguistic cleavages in a society".*

Accordingly, the environmental scarcity theory has three main dimensions: supply-induced scarcity, demand-induced scarcity and

structural scarcity. Supply-induced scarcity emerges when resources are reduced and degraded faster than they are replenished. Demand-induced scarcity arises out of population growth as against its source of livelihood, while structural scarcity exists because of inequitable distribution of resources due to their concentration in the hands of a few, while the rest of the population suffers from resource inadequacy (Homer-Dixion, 1999).

In agreement with that, Haugh and Ellingsen (1998) cited in Eje *et al* (2014), state;

> *"Increased environmental scarcity caused by one or more of these factors is assumed to have several consequences, which in turn may lead to domestic armed conflicts", with intervening variables such as decreased agricultural production, decreased economic activity, migration and a weakened state helping to build up the environmental scarcity and violent conflict. As people's quality of life diminishes due to decrease in environmental resources such as fertile land, there is the tendency that competition may ensue over the scare resources, such competition if unchecked could turned fierce, may result into violent conflict. This theory is adapted in this to provide support to structural conflict theory because of diverse meanings and explanations it brings to environmentally linked-resource conflicts. Unlike ecological balance which is linked directly to ecological degradation, resulting to human degradation as structural violence. Environmental scarcity in the case connotes the limited supply of grazing land, farmland and water".*

It is pertinent to note that one of the key strategies of adapting the effect of climate change and its environmental effects by the pastoralists is migration. Equating the violent conflict phenomenon between the Fulani herders and the agrarian communities within the framework of eco-violence theory, the four environmental resources (fresh water, cropland, forests and fish) are all vulnerable to climate change. Basically, the shrinking speed of Lake Chad basin has continued to exacerbate hardship of many dependents for farming purposes, fishing and cattle rearing.

Similarly, expansion of farmlands due to population growth and capitalists involvement in farming business, fast degradation of soil nutrients have constituted a serious concern and exacerbated worries and frustration among huge population across the Sahel region and Nigeria inclusive. With little or no attention to address the shrinking Lake Chad Basin, there is likelihood of increase in insecurity as migration increases, violence becomes inevitable. Homer-Dixon (1999) argues that, with environmental degradation comes increasing scarcity and that is likely to become more acute as time goes on, and so violent outcomes are likely to increase in the future.

Moreover, it is an established fact that climate change has huge consequences on livelihoods, especially on agriculture practices. From the background of the literature reviewed, this theory establishes the link between climate change, migration and insecurity across Nigeria. Poor attention in addressing this situation has continued to threaten the corporate existence of Nigeria as a political entity. As a result, insecurity, poor farm produces, frequent migration have become a symbol of North-central Nigeria.

## Contextualizing the Manifestations of Climate Change in Nigeria

Climate change manifestation in Nigeria is in different phases, this can be seen through infrequent rainfall pattern, heat waves, short rainy reasons duration, erosion, desertification, sand dust etc. While human and industrial activities have contributed significantly to the act of provoking the climate, industrialized countries over the years in different international conventions failed in meeting their pledges in controlling gas emissions, neither are they active enough in supporting less industrialized countries that have less technological capacity to cushioned the effects of change in climate. Supporting this argument, (Ati, Agubamah & Abaje, 2018),submitted that While the activities of the developed countries are mostly responsible for the changing climate, the

developing nations are those suffering more of the impacts due to inability to cope as a result of poverty and low technological development

Ishaku (2018) expanded the argument:

> *The culprits of this gaseous emission were the industrialized countries of the world; the US, for example accounted for 5.7 billion tons of gaseous emission, representing 23% of the global total ;Africa ,in contrast, accounts for only a meagerly 920.000 tons (i.e 4%).However, the fact is that Africa is the most vulnerable to the effects of the climate change because about 40% of its Gross Domestic Product (GDP) is generated through agriculture, an activity that is most at risk from global warming.*

In addition, lack of awareness and inability of Nigerian government to enforce existing legal frameworks for environmental protection also exacerbated the worsening condition of climate vulnerability in Nigeria.

It is on the strength of the above assertions that Nigeria is experiencing the following climate change effects:

a) **Increased climate variability:** The climate variability here refers to the ways our climate condition (e.g., temperature, rainfall,) fluctuates from year to year. It is the excessive climatic change that created unbearable environmental condition that withers the green vegetation and dried up water points, which eventually leads to forced migration that serves as a recipe for violent conflicts. According to Bashir (2018), high temperature has dried up most of the rivers and streams along with the lofty vegetation in their valleys .The combined effect of these twin forces produced a drastic decline in the pasture-livestock ratio thus igniting a destructive struggle on how to access these resources among humans and animals alike.

b) **Changing rainfall pattern:** The Nigerian rainfall pattern is sessional, with two main seasons; rainy and dry season. Usually, the rainy season commences early in the Southern parts of Nigeria around late February and April to October. But from recent experience in Northern Nigeria with specific reference to North-East, rainfall pattern has changed significantly with rainfall majorly starting around late May and ends mid-September**.** According to Bdliya (2018), rainfall amount has declined by 30% in Nigeria during the Sahel drought (late 1960s to 1990s).Other associated effects of drought include but not limited to heat waves, thunder storm, rise in sea level etc. Drought largely manifests in northern parts of Nigeria with ,35% of previously cultivated land in 11 northern states of Nigeria has been overran by desertification due to short duration of rainfall (Badru,2020).This further accentuate violent conflicts as resources become scares for both farmers and herders in many parts of Northern Nigeria such as Benue, Plateau,etc.

c) **Erosion:** This is another current issue due to climate change resulting to heavy rainfall pattern particularly in the Eastern part of Nigeria. According to Bashir (2018), in Anambra State alone, there are about one hundred and fifty devastating erosion sites, destroying physical infrastructural facilities, farmlands, etc. Similarly, destruction by wind erosion is seen all over Northern especially Kano, Kebbi, Adamawa, Borno, Gombe, Zamfara, Sokoto, Jigawa, Benue amongst other affected stats in Northern Nigeria.

d) Evidence from violent massive flooding across the length and breadth of Nigeria suggests how violent rainfall causes erosion taking away people's houses, farmlands and other structures leading to loss of lives and property on yearly basis.

e) **Drought:** The environmental challenges resulting from climate change has many divergent components. It should be noted that, deforestation which is the excessive falling of trees for animal feeds, energy purpose, local bridge and house construction etc. gave birth to drought. Similarly, drought gives rise to desertification, while desertification gives rise to increase in temperature resulting to undesirable and unbearable ecosystem which subsequently becomes harmful to inhabitants. Drought can also be seen as a product of erratic rainfall especially in the Northern parts of Nigeria with adverse

consequences on losing biodiversity, intense flooding, degradation of land and increase in varying weather events, forced migration, displacement and increased diseases etc. These drought scenarios, more often than not, serve as a push factor in the perennial conflicts between sedentary crop farmers and Fulani pastoralists Northern Nigeria (Vahyala & Diah,2024)

Empathically, Abbass (2018), comprehensively posits that, The continuing violent clashes that ensured between Fulani pastoralists and farmers have usually been manipulated and thus taken as typical ethnic/tribal and religions/cultural conflict…He viewed the prolonged breach in security across the rural communities of North-Central Nigeria as a contest for survival…Since the occasional drought of the 1970s and 1980s, nomadic pastoralists have continued to increase pressures on farmers by penetrating the semi-arid and humid regions with their herds. This penetration has been much deeper, longer and with much greater intensity and numbers unprecedented in pastoralist nomadism in Nigeria.

Although Abbas is largely correct that, the prolonged conflicts is caused by context over scares resources useful to both the farmer and herder, but one aspect that cant not to completely over ruled is the religious connotation of the conflicts and the strong perceived agenda for land grabbing of ancestral land of the natives who are largely of the Christian faith.

## Climate Change and Farmer-Herder Crisis: A Nexus

The farmer-herder crisis in Nigeria and across Africa has become one of the most pressing socio-economic and political challenges on the continent rooted in historical land –use conflicts. This has been exacerbated by the increasing impact of climate change, which has disrupted traditional livelihoods, fueled resource competition, and heightened tensions between farming and pastoral communities (Tobi, 2025).

This is evident from the myriad of violent conflict recorded in recent time across the North-central states of Nigeria.Thus,supporting the assertion, it is clear that land space for grazing is drastically shrinking due to farmland expansion, urbanization and population increase while water points are increasingly drying up due to advance effects of erratic rainfall and other associated issues.

Adding to the previous assertions, it is imperative to note that, the magnitude at which human lives and material resources are wasted as a result of farmers-herders conflicts in Nigeria is worrisome. Emphatically. Mohanty et al (2021) further posits that, around 4,000 people died in Nigeria as a result of farmers-herders conflicts between 2016 and 2019. The dryness of the Lake Chad basin led to poor livelihood and lack of income generation opportunities in the region, hence compels young people to join rebel groups and engage in anti-social activities through extremist organizations.

Corroborating Mohanty submission, there are many assertions, including the position of this paper that, the shrinking of the Lake Chad basin has undoubtedly displaced large population of people who are before now surviving at the existence and flourishing of the water point.Soem of the former occupiers of the shores of the Lake are irrigation farmers, fisher men and women, herders among others. This suggest the economic viability and live sustainility potential of the large water deposit before its sudden reduction in volume e and size decades before now.

Aside that, the conflicts exacerbated climate change more often exposed tens of thousands into violent clashes with horrendous consequences on humanitarian displacement and resource destruction. Corroborating this assertion, Tobi (2025) put that, the farmer-herder crisis is not just an environmental issues but also a significant threat to national and regional stability. In Nigeria, thousands of people have been displaced due to recurring conflicts. The conflict has disrupted food production, increased poverty, and undermined agricultural productivity, contributing to food insecurity across the country.Additonally,extremist groups such as Boko Haram and other armed militias have agendas, complicating peace-building efforts.Neigboring African countries, including

Mali, Chad, and Sudan, have faced similar challenges, with climate-induced migration and resource competition straining already fragile state. (Tobi, 2025)

The conflict nature of most part of northern Nigeria, and central Nigeria to be specific can be imaged within the context of farmer-herder contestation for scarce resources such as water, flora and fauna. Adekunle and Adisa (2010) notes that, conflict arising from herders' search for resources such as water, forest and land in host communities have remained a "most important" problem faced by Fulani pastoralists in the course of tending their herds.

Of course, water scarcity is one of the reflection of the climate change variability. Water is a primary commodity for both the famer and the herder. The farmer uses the water for irrigation and domestics use while the herder takes his cattle water point among other uses. Thus, the conflicting point has always been that, while the herder who are mostly natives uses the water for drinking, the herder largely used the water for animal feeds. In this point the natives most times sees sharing water points with animals have a way of contaminating the water and thereby compromising the hygiene of the water and on the other hand ,the herders have the sense of entitlement to use the water for whatever purpose. It is this situation that, more often than not, serves as recipe to violent clashes between farmer and herder as far as water scarcity is concern.

According to Blench (2004);

> *As farmers take up more of the river-bank for farm, they come into conflict with the other users, especially the herders. The herders have been coming to the river for many years, for the grasses and tend to consider they have ownership rights when they arrive and find their grazing site now covered by plants they may become very angry. The farmers often desperate to feed their families in a situation where the old rain-fed system no longer work regards the herders as dangerous and intrusive. Too often, there are fights and people are sometimes killed.*

The above quotation underscores the arguments and assertions that, the protracted violent conflicts between the two land users is basically instigated by scarce resources occasioned by climate change. These violent communal reprisals have for long inundated many parts of northern Nigeria particularly north-central and north-eastern parts of Nigeria.

Buttressing the facts of this submission; Abbass (2015) pungently argued that;

> *"Clashes between farmers and pastoralists in northern Nigeria are ubiquitous and on the increase. These clashes generally centered on access to and competition for grazing land and water. As a pasture land shrinks, sequel to taking over of such land by farmers, conflicts become inevitable.*

According to International Crisis Group (ICG) (2017), herders migrating into the Savannah and rain forest of the central and southern states are moving into regions where high population growth over the last four decades has heightened pressure on farmland, increasing the frequency of disputes over crop damage, water pollution and cattle theft. Similarly, urbanization, mechanized farming, excessive grazing and bush burning also exacerbated the environmental degradation aid the sustained violent conflicts between farmers and herders in Northern Nigeria. In the absence of mutually accepted moderation mechanism, these disagreements increasingly turn into violence.

Environmental degradation through indiscriminate falling of trees for animal feeds is rampant and on the increase. This is one aspect in which open gazing is contributing to environmental disaster that culminates to worsening climate change in Nigeria. This is also one aspect to which herders contributes to increasing violent conflicts with other land users as falling down tree has a long time impact on the environment and its resources that is increasingly becoming scare by the day.

In our discourse about perennial conflicts between farmers and herders; the paper discovered that, water is central and formed the center stage of our analysis. This is borne out of the fact that both farmers and herders

depends largely on availability of water for domestic irrigation purposes and feeding herds respectively. Unfortunately, rainfall amount has significantly declined in already desert prone areas in Northern Nigeria with its negative effect on millions of people. The main cause of all these impending danger is the changing climate.

Central to the analysis is also the obvious and alarming receding of the Lake Chad Basin, one of the African largest freshwater bodies. According to Mohanty, Rotson, Ngueping and Nanda (2021), the Lake Chad Basin has shrunk by 90 per cent. Over 10 million people across the basin countries of Niger, Nigeria, Chad and Cameroon are in need of emergency assistance…the Lake in the Sahel straddled Niger, Nigeria, Chad and Cameroon is home to million people, it is blessed with rich aquatic and terrestrial biodiversity…for years, the Lake has been supporting drinking water, irrigation, fishing, livestock and livelihoods of over 30million people in the region. Sad enough, the lake has shrunk by 90 percent over the last 60 years, since the chronic drought surged at the beginning of 1970s. The surface area of the Lake was 26,000 square kilometers in 1963; it has now significantly reduced to less than 1,500 square kilometers. (Mohanty,et al,2021).

It is therefore, germane at this point, to establish that the depleting natural resources and grazing space in the region has exacerbated violent conflicts between Fulani pastoralists who are desperately searching for water and greeneries, and farmers who are constantly increasing their farm lands and in search of water for domestic purposes.

Thus, as the struggle for survival continues, the present reality of the Lake Chad keeps hitting hard as succinctly observed:

> *Up till today, the shrinkage of Chad Hydrological Basin has continued to attract migratory waves from far and near, especially from the countries ravaged by the Sahara Desert to the north, Mali, Burkina Faso, Chad and Niger. This has compounded the land resource and deficiency, both for human and animal needs in Nigeria and thus intensifying the struggle for land among farmers and pasture among herders (Bashir, 2018).*

The sudden disappearance of our forests as a result of human activities and neglects of supervising authorities, has continues to worsen the food and human security situations in Northern Nigeria .This is not peculiar to Northern Nigeria or Africa. United Nation Food and Agriculture Organization (2020) estimated that, 100 billion square meters of forest were cut down each year over the last decade, while tropical deforestation has contributed 8% of global emissions.

Relating this scenario to Nigeria, it is in the public domain that, our forests in Northern Nigeria are under intense pressure due to excessive abuse from people either for energy, building construction or grazing purposes. Equally, it is a known fact that, our forest are severely under attacks as a result of the ongoing fight against Boko-Haram insurgency in Sambisa Forest (North East Nigeria), fight against banditry in Zamfara State (Dan Sadau Forest, Dan-Gulbi forest, Bagega forest and Shububu forest) in North-west Nigeria.

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This is evident from the myriad of violent conflict recorded in recent time across the North-central states of Nigeria.Thus,supporting the assertion, it is clear that land space for grazing is drastically shrinking due to farmland expansion, urbanization and population increase while water points are increasingly drying up due to advance effects of erratic rainfall and other associated issues.

Adding to the previous assertions, it is imperative to note that, the magnitude at

which human lives and material resources are wasted as a result of farmers-herders conflicts in Nigeria is worrisome. Emphatically. Mohanty et al (2021) further posits that, around 4,000 people died in Nigeria as a result of farmers-herders conflicts between 2016 and 2019. The dryness of the Lake Chad basin led to poor livelihood and lack of income generation opportunities in the region, hence compels young people to join rebel groups and engage in anti-social activities through extremist organizations.

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According to Blench (2004);

> *It is therefore, established by this paper that, the sustained combat against insurgency and banditry has further exacerbated Nigeria environmental condition with its attendant implications on global warming. Corroborating this assertion, in a high powered delegation to New York, at a United Nations (UN's) High level segment roundtable on: Forest based solutions to the triple planetory crisis, Governor of Borno State, Zulum (2024) expressed that, "Borno state has been, significantly impacted by the crisis of insecurity caused by Boko-Haram insurgency… The loss of forest has resulted in soil erosion, reduced water availability, loss of biodiversity and increased vulnerability of climate change impacts".*

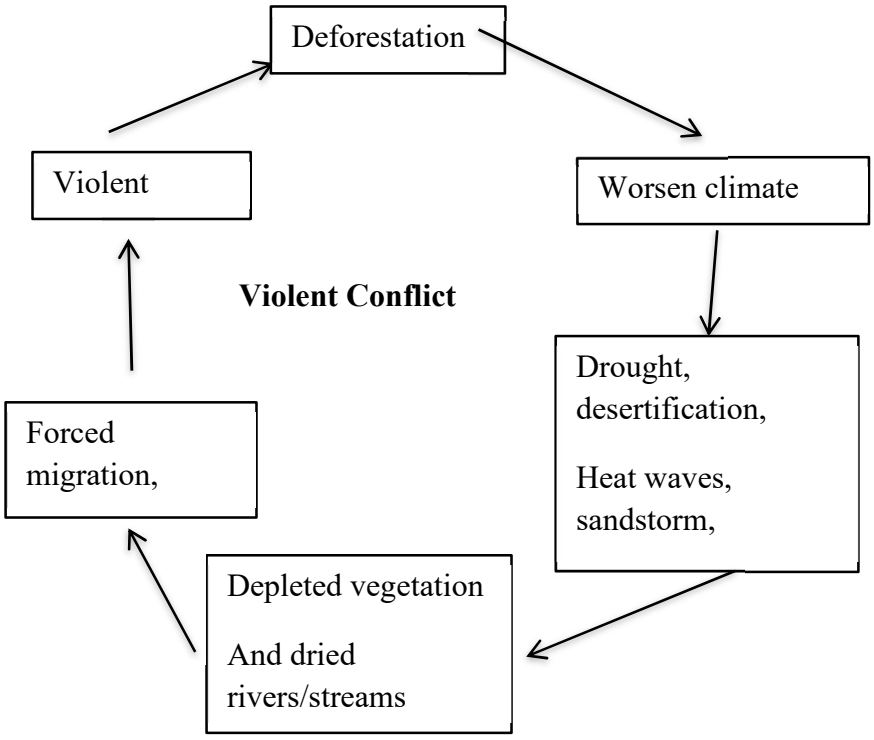



**Fig 1:** Vicious circle of conflict due to poor afforestation and reforestation, **Designed by the Author.**

**Statistics of Lives Lost to Farmer-Herder Conflict in Recent Attacks**

| S/N | Nature of Attack | No. of Casualties/ Deaths | Year | Location/State | Source |
|---|---|---|---|---|---|
| 1. | Farmer/Herder Clash | 2,600 | 2021 | Benue, Plateau, Nassarawa and Taraba States | Armed Conflict Locations and Events, 2023. |
| 2. | Farmer/Herder Clash | 1,868 deaths, 300,000 displaced | 2018, 2019, 2020 | Benue, Plateau, Nassarawa, Niger and Taraba States | International Center for Investigation Reporting, 2021. |

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|---|---|---|---|---|---|
| 3. | Farmer/Herder Clash | 1,300 | 2018 | Benue, Plateau, Adamawa and Taraba States | Relief Web International, 2018 |
| 4. | Farmer/Herder Clash | 3,641 | 2018 | Benue, Plateau, Adamawa, Taraba, Kaduna and Nassarawa States | Amnesty International, 2018 |
| 5. | Farmer/Herder Clash | 261 | 2024 | Plateau State | Directorate of Research, Planning and Documentation, Plateau State Government, 2024. |
| 6. | Farmer/Herder Clash | 3087 | 2014-2019 | Benue, Taraba and Kaduna States. | Nigerian Security Tracker (NST) in Olalekan, 2022. |

**Source:** Compilation by the author from different reports, 2024.

## Taming Famer-Herder Conflicts through Afforestation

Series of efforts have been made by various stakeholders in ending farmer-herder crises. But many do not recognize the potency of afforestation in addressing the problem. Therefore, against the foregoing life threatening capacity of climate change variability in Nigeria, sustainable measures are urgently needed in the right place and time to arrest the scorching effect of the new environmental phenomenon confronting the existence of living things and non-living things on the earth surface. Thus, the first action in this regard is to plant sufficient number of drought-tolerant trees to cushion the effect of climate change. This action becomes imperative in lieu of the fact that climate change is now a reality that we must acknowledged. Beyond acknowledging its presence and manifestations, we should all see it as a common "new" enemy to fiercely fight with all arsenals at our disposal.

Therefore, we should begin to see trees as viable tool for combating climate change variability in our society thereby preventing the trigger of conflicts most especially between famers and herders. This can be achieved through massive afforestation and reforestation (to recover lost forest). This is because indiscriminate cutting down of trees and destruction of forest can indeed be damaging to the environment and invariably worsen climate change effects. Trees and forests play a crucial role in absorbing carbon dioxide and regulating the earth's climate.

Scientifically, when trees are cut down, it releases stored carbon dioxide back into the atmosphere contributing to greenhouse gases emissions. Additionally, deforestation can disrupt ecosystem, leading to loss of biodiversity and affect local communities who depend on forest for their survival. Thus, promoting sustainable tree planting and nurturing the existing ones are important measures in mitigating the reality effects of climate change in our society.

Other associated value of trees includes but not limited to the followings;

a. They help to ameliorate the effect of climate change; trees naturally absorb carbon dioxide from the atmosphere and releases oxygen, helping in reducing the effects of global warming.

b. Trees improve air quality because they naturally absorb pollutants and other injurious gases that are inimical to our health.

c. Trees prevent soil erosion as they help to maintain soil nutrients and protects the land against slides and other natural phenomenon.

d. Trees provides home for wildlife like birds, insects and other living things, helping to aid biological diversity and promote sustainable ecosystem.

e. Trees provide canopy and coolers, making our environmental climatic condition more comfortable and habitable for living things.

f. Trees serve as sources of pharmaceutical drugs and provide herbs for local medicine.

g. Trees serve as good and healthy sources of food to human beings and animals.

h. Trees serve as a reliable wind tracker which helped in prolonging lifespan of buildings and prevent them from violent destructions.

i. Trees serve as a source of building construction materials which eased the housing challenges for million population in our societies.

It is the position of this paper that, the natural climate solution and a mitigation strategy to reducing the impact of desertification, refreshers ecosystem, eliminate $C2^0$ from the atmosphere and mitigate violent conflict between farmers and herders lies on afforestation.

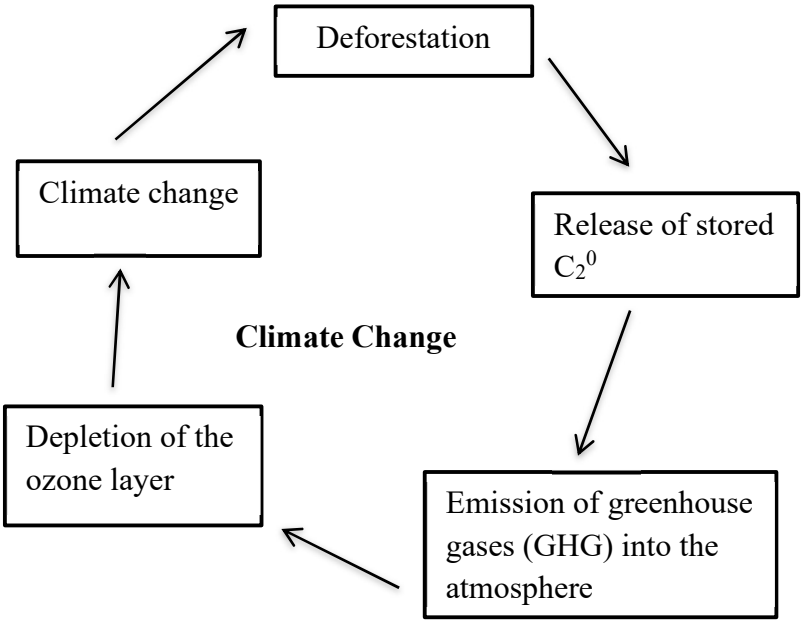



**Fig 2:** Relationship between Deforestation and Climate Change: **Designed by the author**

**Thrust of the Paper**

The security crisis between famers and herders have far reaching consequences that have contributed negatively to the agricultural and security development of the Northern Nigeria it is on this premise paper basically examined the protracted violent conflict between farmer and herders and how climate change mitigation through afforestation could be utilized in addressing the fundamental causes of the perennial disharmony in Northern Nigeria. Although, there exist numerous scholarly work around climate change phenomenon, farmer-herder conflicts, notable among the groundbreaking research include but not limited to, Abbass (2024) .No Retreat, no Surrender: Conflicts for Survival between Fulani pastoralists and Farmers in Northern Nigeria Bdliya,(2018).Climate change ,Receding Lake Chad and the challenges of Farmers/Herders in Nigeria., Bashir,(2018).*The Exploits of Yesteryears and the Price of Today: Environmental Degradation and Development Challenges in Contemporary Nigeria (An Environmental History),,*Chris-Kwaja, and Bukola,*(2018).Responses to conflicts between farmers and herders in the Middle Belt:* Mapping Past Efforts and Opportunities for Violence Prevention. Okoli, Edward, & Suleiman ,M.A. (2023) Climate Change and Rural Violence in Northern Nigeria: A discursive reflection etc Among all the references, none of the them clearly explode the potentials of mass tree planting as a strategy to mitigating the phenomenon of climate change viz-a-viz addressing the violent conflicts between the two land users occasioned by diminishing resources (green grass and water) in Northern Nigeria.

Therefore, the argument of this paper lies on the fact that, deliberate environmental rebirth through afforestation can go a long way in resuscitating the lost grounds to desert encroachment thereby creating a habitable and favorable environment with abundant resources for all to strive.

Additionally, this paper scientifically established the natural abilities of trees in

refreshing our environment and also how its absence can translate to conflict. This is where many previous studies differ from the position of the paper.

## Conclusion

This paper examines the efficacy of afforestation in curtailing the disturbing resource based conflict between farmers and Fulani pastoralists in Northern Nigeria. It is on record that, northern Nigeria particularly, north-central and north-east have been noted for violent conflicts between the two land users for decades. It is on this premise, that, the paper identifies climate change as a push factor to the protracted conflicts between farmers and herders and therefore, advocates for afforestation as a viable strategy for ameliorating the effects of climate change which invariably would mitigate the occurrence of violent conflicts between farmers and herders in northern Nigeria.

The paper unequivocally advocates for aggressive trees planting to tackle the menace of desertification and drought in the interest of securing sustainable environment for all living things on the surface of the earth.

## Specific Policy Recommendations

**a.** The government in collaboration with Non-governmental organizations (NGOs), civil society organizations (CSOs) community heads, religious institutions should be deliberate in reversing the acceleration of desertification through massive and aggressive tree planting in the region.

b. In the obvious reality of climate change today, federal, state and local authorities, including the private sectors, should invest more in institutions and agencies that are essential to responding to the challenges of climate change to invent and produced improved drought-tolerant seedlings to fight the new phenomenon.

c. In search of a sustainable, resilient and endearing environment and lasting peace between sedentary agrarian communities and Fulani pastoralists against violent competition for scares resources, we should as a government and citizens embarked on environmental rebirth by claiming our lost forests through massive afforestation and reforestation.

d. We need a sustained climate campaign through sponsored media (old and new) awareness with a transparent reward - driven policies to individuals or group that promotes and practices tree plantings with a clear frameworks to nurture the tree(s) to maturity.

e. Our education curriculum at all levels should be tinkered with, to accommodate contents that promotes teaching and understanding to what I called Climate Change Education, its effects on human existence, and viable ways of mitigating its impacts.

f. Nigeria's legal frameworks for combating climate change should be strengthen and international protocols and convention against climate change be adequately domesticated in adherence to global best practices.

g. Government must should invest in climate adaptation strategies, such as reforestation programs, and water conservation projects, and development of drought -resistant seeds to keep both the farmer and the herder on the job and also boast food sufficiency and productivity.

h. Critical to the subject matter is, government should strengthened traditional conflict resolution mechanisms and promote consistent dialogue between farming and pastoral communities.

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