Climate-Induced Migration and the Challenges of Food Insecurity in Nigeria

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Ramon Odunayo Odebunmi [1] and Bright Adesida [2]

Abstract

This study aims to examine climate-induced migration and the challenges of food insecurity in Nigeria. It also seeks to analyse further how climate-induced migration leads to food insecurity. Climate change has severe impacts on human survival and natural habitats, causing loss of soil fertility, habitat destruction, and natural disasters such as wildfires, cyclones, landslides, flooding, rising sea levels, and earthquakes. One negative effect of climate change is migration, which occurs as people flee extreme weather conditions. The main point of this paper is that climate-induced migration does not always result in food insecurity. However, this relationship is influenced by conflicts between farmers and pastoralists and by the limited capacity of the government to implement effective policies and programmes to resolve ongoing disputes between migrants and host communities. Persistent clashes between pastoralists and

1. Department of Political Science, Faculty of Social Science, University of Lagos; funmilayodebunmi58@gmail.com; https://orcid.org/0009-0009-0659-3808.
2. Nigeria Ports Authority; princebright7777@yahoo.com; https://orcid.org/0009-0004-3186-0836.

local communities continue to threaten food production in Nigeria, driven by recurring herdsmen attacks, kidnappings, and the victimisation of farmers. This study used a qualitative approach, relying on existing literature and datasets. It employs the Environmental Scarcity Theory and Securitisation Theory as its theoretical framework. The conclusion is that while food insecurity can be a consequence of climate-induced migration, this link is intensified by conflicts between pastoralists and farmers and the Nigerian government's failure to address these disputes through effective policies that prevent resource conflicts between host communities and pastoralists.

Keywords: Climate Change, Climate-Induced Migration, Resource Scarcity, Securitisation, Food Insecurity

Introduction

Nigeria has a diverse ethnic population, with over 250 ethnic groups that include Yoruba, Fulani, Igbo and Hausa, which constitute the majority (Ekoh et al., 2023). Geographically, the landmass of Nigeria is 923,768km^2 which makes it the 14th largest country in Africa (Statista, 2024). The country is bordered to the west by Benin Republic, to the east by Cameroon and Chad, to the North by Niger, while the Southern coastline meets with Atlantic Ocean. The Benue and Niger Rivers converge near Lokoja, which forms a key geographical feature that shapes transportation and agriculture (Adejuwon, 2023). Nigeria has a tropical climate with a rainy season that runs from April to October and a dry season from November to March. The Southern region of Nigeria experiences heavy rainfall, while the Northern part of Nigeria is semi-arid, experiencing higher temperatures and occasional droughts (Sasu, 2023). Nigeria is Africa's largest economy with a GDP of $477 billion in 2022 (Statista, 2025).

The economy is primarily driven by gas exports, agriculture, and services. The petroleum sector accounts for about 85% of its net export earnings, but diversification efforts are seen in the services sector, with banking and fintech, contributing substantially. Nigeria has 70.8 million hectares of arable land with cassava, maize, guinea corn, yam, beans, and millet being major

crops (Adjei and Oyebanji, 2024). Nigeria is the largest producer of cassava and yam in the world as it accounts for 20 percent of the world's cassava production and 34 percent of Africa's cassava production (Food and Agriculture Organisation, 2024). Agriculture accounts for 24 percent of Nigeria's GDP (National Bureau of Statistics, 2024). Nigeria is also a leader in the production of various types of agricultural produce (Statista, 2024).

Climate change has become one of the biggest threats to human civilisation (Xu et al., 2023). This is as a result of continuous concentration of greenhouse gases and carbon emissions, which have imposed significant pressure on global temperature (Lian et al., 2019). Climate change is now a global pandemic that has transcended national borders (United Nations, 2023). Climate change has devastating impacts on human survival and natural habitat, such as loss of soil fertility, loss of habitat, and natural disasters such as wildfires, cyclones, landslides, flooding, rising sea level, and earthquakes (Shen et al., 2019).

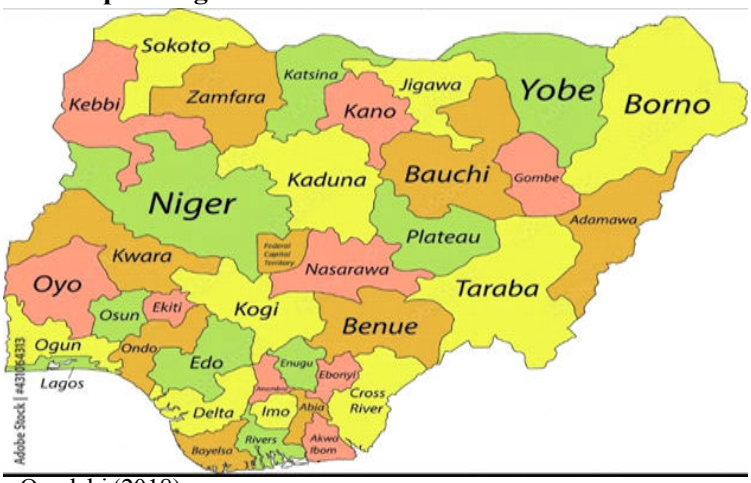
IPCC (2023) reports that the impact of climate on human survival includes food shortage, inland flooding, infrastructural damage, reduction in physical water availability, and induced damage in coastal areas. According to Armstrong (2023), the economic losses of climate change and water extremes, apart from human and ecological damage, were $184 billion in the 70's and have risen to $1.5 trillion in the last ten years. Conte (2022) claimed that climate change has resulted in the displacement of about 12 percent of the total population in Sub-Saharan Africa, which has significantly worsened the development trajectory in the region. One of the effects of climate change is migration– climate change increases the incidence of extreme weather conditions and disasters, which jeopardise livelihoods and survival (Tarif, 2022).

However, while it is understood that sudden disasters can cause displacement, the impact of climate change on migration is gradual and widespread, reminiscent of economic migration—movement of people towards better income opportunities and rural-to-urban migration. Therefore, migration serves as an adaptation strategy for climate-affected groups to counteract the adverse effects of climate change (Tarif, 2022 & Adjei and Oyebanji, 2024). However, Vinke et al. (2022) emphasised that although migration is an adaptation strategy, it is sometimes a weak one because it

primarily benefits people who lack other coping mechanisms. Conversely, those unable to migrate face issues such as food scarcity, malnutrition, unemployment, and high levels of poverty (Adjei and Oyebanji, 2024).

In Nigeria, climate change poses a significant threat to food security and migration patterns, with Nigeria being one of the most affected countries in Sub-Saharan Africa due to its ecological fragility and socio-economic vulnerabilities. Nigeria's agrarian-based economy is particularly susceptible to climatic variability, especially in the Northern and Middle Belt regions, which have suffered an increasing incidence of drought, floods, desertification, and erratic rainfall. These environmental challenges have not only resulted in a decline in agricultural productivity but have also triggered large-scale internal migration, thereby compounding food insecurity in rural and urban settlements. Recent studies indicate that climate-induced migration is increasingly prevalent in Nigeria. The Northern part of Nigeria, especially the Sahelian states such as Borno, Yobe, and Adamawa, is grappling with prolonged dry spells and shrinking water bodies such as Lake Chad (United Nations Development Programme, 2022). The degradation of arable land and loss of pastoral routes have displaced thousands of farmers and herders, which has led to armed conflicts and mass movement of people towards Southern Nigeria and urban centres.

Figure 1: Map of Nigeria



Source: Owolabi (2018)

In 2022, Nigeria had over 2.6 million internally displaced persons (IDPs), a significant proportion of which were displaced by climate-related disasters– such as drought and flooding (United Nations, 2025). This migration has a critical implication for food security in the sense that as displaced populations settle in host communities, pressure mounts on local food systems, agricultural lands, and water resources. Moreover, many migrants have abandoned farming as a means of livelihood due to a lack of access to land, capital, and skills suitable to urban settings, which further leads to a reduction in national food production capacity. Despite growing evidence of the climate-migration-food insecurity nexus, previous studies have treated these challenges in isolation. Existing literature tends to examine climate change as an environmental phenomenon, migration as a socio-political issue, and food insecurity as a key development concern. In an era characterised by unprecedented global challenges, it becomes important to explore the intersectionality between climate change, migration, and food insecurity. This study adopts a qualitative method of inquiry, a literature-based approach grounded in the Environmental Scarcity Theory and Securitisation Theory. The study adopted thematic analysis as its method of data analysis. This paper argues that climate-induced migration, exacerbated by weak state capacity and farmer-herder conflicts, is a key driver of food insecurity in Nigeria and that only an integrated and multi-level stakeholder governance approach can address this feedback loop.

Literature Review

Climate-Induced Migration

Climate-induced migration has been defined as "the movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border". (IOM, 2019:31). While this definition offers a broad conceptualisation of environmentally induced displacement, there is no clear distinction between "obliged" and "choosing". In many cases, environmental migration occurs under conditions of constrained choices, where individuals may appear to migrate voluntarily but are, in reality, compelled by deteriorating

environmental and socio-economic conditions. The decision to migrate in the face of climate change can be influenced by changing environmental conditions and migration drivers, such as political, social, economic, demographic, household, individual factors, and migrants' characteristics. "The movement of people from one place to another can be voluntary or involuntary, which can be triggered by a slow-onset or rapid-onset climatic process informed by political factors and human intentionality" (McAdam, 2014:17).

Climate-induced migration is complex, dynamic, and transformative because it results from a combination of various causal factors, including political, social, economic, demographic, household, and individual factors, as well as migrants' characteristics. Osei-Amponsah et al. (2023) argued that while migration can be a response to climate risks, not every household affected by climate change is willing to migrate as a coping strategy. Therefore, Castles et al. (2015) suggested that the link between climate change and migration is not linear but dynamic and can only be understood as part of a broader social transformational process.

Doevenspeck (2011) argued that climate change is not a major driver of migration in Benin Republic, because despite increased environmental change, not all affected households migrated. Other studies, such as Renaud et al. (2011) and Teye (2017), argued that while 'rapid onset' of climate change is causal factor of population mobility, it is quite difficult to directly link large scale migration to slow onset, such as reduced rainfall and rising temperatures. Other studies, such as Hugo (2011) and van der Gest et al. (2010), contend that migrants may follow environmental degradation, such as drought. Hugo (2011) explained that environmental factors can be key drivers of migration, with their degree of significance located along a continuum. Zickgraf et al. (2016) argued that the debates about environment-migration nexus are not so much about the role climate change plays in migration but the degree of influence, knowing that several factors act together to trigger migration.

Food Insecurity

"Food security exists when all people, at all times, have physical and economic access to sufficient, nutritious, and safe food that meets their dietary needs and dietary preferences for an active and healthy lifestyle"

(FAO, 2002). Hence, food insecurity occurs when there is a lack of sufficient access to safe and nutritious food required for average human growth and development as well as an active and healthy life (World Food Programme, 2020). Su and Amrit (2024) divide food insecurity into acute food insecurity and chronic food insecurity. Acute food insecurity is any manifestation of food insecurity at a specific time of severity that threatens lives, livelihoods, or both, irrespective of contexts, causes, or duration, while chronic food insecurity is undernourishment, a long-term or persistent inability to meet dietary energy requirements, which may last for a significant period (World Food Programme, 2020).

Ashley (2016) identified four components of food security: stability of food, availability, accessibility, and use. It has been argued that food insecurity is a multi-dimensional concept that involves food availability, stability, access, and effective utilisation (Barrett, 2010). While this definition helps explain food insecurity, it does not fully capture the cultural and psychological aspects, which can differ from one community to another. Accessibility includes both physical and economic accessibility (Baer et al., 2017). Food availability is closely linked to food accessibility. Food utilisation refers to the outcomes of food use, including healthy living (Jafri et al., 2021). The last component of food security is the stability of the source over a given period (Ashley et al., 2016).

The Nexus Between Climate-Induced Migration, Resource Conflict, and Food Insecurity

The intersectionality between climate change, migration, and food insecurity is complex, non-linear, and heterogeneous. Studies have argued that the nexus between climate-induced migration, resource conflict, and food insecurity has been subject to much contestation as the relationship is complex, multi-causal, and confusing (Ghimire et al. 2015; Koubi et al., 2020; Freeman et al., 2017; Thalheimer et al., 2021). Recent political and academic debates from an environmental security perspective have portrayed environmental and climate-induced migration as one of the emerging security challenges. Studies such as Homer-Dixon (1994), Grundstrom (2010), and Arnall (2023) have argued along a neo-Malthusian perspective that environmental migration has a high risk of leading to conflict

in receiving areas, such that scarcity of natural resources has a very high likelihood of leading to conflict in general.

Ghimire et al. (2015), Koubi et al. (2020), and Freeman et al. (2017) demonstrated a link between climate-induced migration and the outbreak of conflict. Burrows and Kinney (2016) argued that the tension between migrants and host communities may lead to conflict as locals and authorities may subject migrants to a process of othering, which leads to socioeconomic tensions over ethnic or national identity. This led Koubi (2019) and Thalheimer et al. (2021) to argue that the nexus between climate-induced migration, conflict, and food insecurity is indirect and context-specific, as this relationship is mediated through social, economic, and political variables. In the same vein, Savelli et al. (2023) argued that while climate change plays an influential role in the nexus between migration and food insecurity, it is likely to be an indirect one, with climate factors exacerbating political, economic, demographic, or environmental drivers of conflict. There are three key pathways in the nexus: conflict, which arises due to climate-related disasters; conflict, which arises due to scarcity-related mobility; and conflict, which arises due to abundance-related migration.

While Raleigh and Urdal (2017) and Reuveny (2007) have argued that inward migration can induce socio-economic and political tensions by putting resources under pressure, Abel et al. (2019) noted that there is little empirical evidence to support this conclusion. Slettbak (2012) argued that other factors are more significant than migration in determining if conflict will occur. He found out that most disasters, such as climate-related disasters, produce a greater increase in solidarity and social cohesion, which reduces the possibility of incidence of social and personal pathology. This suggests that even when migration heightens social and ethnic tension, a natural disaster might not increase the risk of conflict but might actually result in a more unified population. As environmental stressors such as droughts, floods, and rising temperatures intensify, millions are forced to leave their homes in search of more habitable conditions (Black et al., 2011). However, migration often leads to increased pressure on already scarce resources in host communities, setting the stage for potential conflict. Migration induced by environmental changes is rarely a solitary phenomenon—it interacts with and amplifies existing challenges, particularly food insecurity and competition

over natural resources (Rigaud et al., 2018). For example, in sub-Saharan Africa, pastoralists displaced by prolonged drought often clash with sedentary farmers over grazing lands and water sources (Ide et al., 2020). These conflicts are not simply environmental or economic but are deeply rooted in issues of governance, access, and inequality. Thus, the nexus between climate-induced migration, resource conflict, and food insecurity represents a complex, multi-layered challenge demanding interdisciplinary solutions.

Resource scarcity acts as a powerful intermediary between climate-induced migration and conflict. Climate change significantly alters hydrological cycles, leading to more frequent and severe droughts in vulnerable regions like the Sahel and the Middle East (Kelley et al., 2015). As water sources dwindle and agricultural productivity declines, communities dependent on rain-fed agriculture face existential threats to their livelihoods. In such circumstances, displacement becomes a survival strategy, but it often results in new pressures on limited resources in receiving areas. The Lake Chad Basin is a striking example, where environmental degradation has converged with population growth and poor governance, leading to violence between farming, herding, and fishing communities (Okpara et al., 2016). With shrinking access to fertile land and water, competition escalates into organised conflict, especially where institutions are too weak to mediate disputes effectively. These dynamics highlight how environmental change, the absence of robust governance, and adaptive capacity can transform scarcity into strife.

Food insecurity is both a driver and a consequence of climate-induced displacement and resource conflict. As agricultural systems struggle to cope with climate extremes, crop yields and livestock productivity plummet, particularly in low-income regions (FAO, 2022). Households unable to secure food locally may be forced to migrate, leading to demographic shifts that further strain food systems elsewhere. For instance, in Guatemala's Dry Corridor, erratic rainfall and prolonged droughts have devastated maize and bean harvests, compelling rural families to migrate to cities or attempt to cross international borders (Castañeda et al., 2021). These migrations, in turn, burden urban infrastructure and food distribution systems, increasing food prices and deepening hunger among host communities. Food insecurity also fuels social unrest, as demonstrated in the Arab Spring, where spikes in food prices contributed to widespread political protests and violence

(Johnstone & Mazo, 2011). Thus, food insecurity not only motivates migration but also intensifies the likelihood of conflict in already fragile settings.

The nexus between climate migration, conflict, and food is sustained by a series of reinforcing feedback loops. Displacement, caused by climate change, leads to increased demand for resources in new areas, which, if poorly managed, can trigger social tensions and violence (Brzoska & Fröhlich, 2016). These conflicts often disrupt local economies, obstruct agricultural activities, and diminish humanitarian access, thereby exacerbating food insecurity. As hunger rises, so too does the propensity for additional migration, completing a vicious cycle. Syria presents a poignant case study: a severe drought from 2006 to 2011 displaced over 1.5 million rural workers to urban peripheries, where socio-economic dislocation and political marginalisation laid the groundwork for conflict (Kelley et al., 2015). Similarly, the displacement of farmers and herders around Lake Chad has escalated tensions and fueled the rise of insurgent groups exploiting local grievances (Adelphi, 2019).

Ogun (2019) conducted a study on climate change and farmer-herder conflict in Plateau State. The seasonality of grass often forces herders to move to destination areas with high crop yields and better climatic conditions. The findings of the study showed that an increase in desertification/drought in the Sahel Region induced migration of herders towards Plateau State of North Central, Nigeria, in the last seventeen years, which makes herdsmen wander outside their normal grazing routes and, in the process, results in conflict with sedentary crop farmers. The severity of climate change has forced herders to migrate to the South of the Sahara, which results in competition for scarce resources, including cross-border conflict between herders and farmers over grazing lands (Issifu et al., 2022). This competition often precipitates into violent conflicts and attacks on farmers who have accused herders of murder, rape, stealing, and destruction of farmlands.

Theoretical Framework

Environmental Scarcity Theory

This study adopts the Environmental Scarcity Theory developed by Homer-Dixon (1999). This theory argues that environmental stress is a key driver of conflict, displacement, and social instability, particularly in fragile states

(Homer-Dixon, 1999). This theory categorises resource scarcity into three types: supply-induced, demand-induced, and structural scarcity (Homer-Dixon, 1999). According to this theory, environmental degradation, population growth, and unequal resource distribution interact to produce "environmental scarcity," which in turn fuels migration, economic decline, weakened states, and violent conflict. This theoretical lens is particularly relevant to Nigeria, where climate change has intensified food insecurity and internal displacement, particularly in the Northern and Middle Belt Regions. As rising temperatures, desertification, and erratic rainfall disrupt agricultural systems, millions are pushed to migrate, generating competition over land and resources in already tense socio-political environments.

Nigeria is highly vulnerable to supply-induced scarcity, a key component of Homer-Dixon's framework, which refers to the degradation or depletion of renewable resources such as arable land and freshwater (Homer-Dixon, 1999). Northern Nigeria, especially the Sahel states, like Borno, Yobe, and Adamawa, has experienced significant desertification and soil erosion due to changing rainfall patterns and rising temperatures (Ibrahim et al., 2019). This environmental stress has led to a collapse in crop yields and livestock productivity, leaving rural populations with few viable livelihood options. As arable land becomes increasingly scarce, communities are forced to migrate southward in search of better conditions. These migratory patterns often result in conflict with settled populations in the Middle Belt, such as in Benue and Plateau States, where land tenure systems are already complex and contested (Adamu & Ben, 2019). As predicted by Homer-Dixon (1999), environmental scarcity in the form of degraded land directly contributes to forced migration and heightens the risk of communal violence.

Demand-induced scarcity, which Homer-Dixon (1999) attributes to population pressure on limited resources, is also evident in Nigeria's demographic landscape. Nigeria's population has exceeded 220 million, with projections estimating over 400 million by 2050 (UN DESA, 2022). This rapid growth exerts enormous pressure on food systems, water sources, and land. As farming populations expand while land becomes less fertile, more people are competing for fewer resources, intensifying local tensions. In Northern Nigeria, increased pressure on grazing routes and water points has led to repeated clashes between nomadic pastoralists and sedentary

farmers. The deadly farmer-herder conflict, which has claimed thousands of lives over the past decade, illustrates Homer-Dixon's (1999) assertion that environmental pressures can lead to "diffuse but persistent" forms of violence (Homer-Dixon, 1994). Demand-induced scarcity in Nigeria not only worsens food insecurity but also fractures social cohesion, particularly in ethnically and religiously diverse communities.

A third form of scarcity is structural scarcity, which refers to unequal access to resources, often shaped by political, economic, and social inequalities. In Nigeria, regional disparities in development and governance exacerbate the impact of environmental stress. The northern region, where climate-induced stress is most severe, also suffers from high levels of poverty, unemployment, and poor infrastructure (NBS, 2020). This marginalisation limits communities' ability to adapt to climate change, access social services, or participate in political processes. Structural scarcity thus compounds the vulnerability of northern populations, reinforcing cycles of migration, exclusion, and resentment. Homer-Dixon contends that such forms of inequality increase the risk of social fragmentation and state failure, particularly when governments are unable or unwilling to address the grievances of marginalised groups (Homer-Dixon, 1999). In Nigeria, this structural neglect has fed into the rise of violent non-state actors such as Boko Haram, which exploit environmental despair and food insecurity to recruit followers.

Food insecurity is both a consequence and driver of environmental scarcity. It is a critical part of the migration-conflict nexus in Nigeria. According to the FAO (2023), more than 26 million Nigerians are projected to face acute food insecurity in 2024, primarily in the conflict-affected northeast and the drought-prone northwest. Climate shocks such as floods, droughts, and heatwaves have undermined food production, while insecurity has prevented farmers from cultivating their lands. The shrinking of Lake Chad, formerly one of Africa's largest freshwater bodies, has disrupted the livelihoods of over 30 million people who depend on it for fishing, farming, and herding (Okpara et al., 2016). As hunger intensifies, so too migration, creating a feedback loop in which displaced people strain food systems in receiving areas. This aligns with Homer-Dixon's (1999) argument that environmental scarcity, when combined with weak institutions and socio-economic stress, produces violent outcomes, particularly in agrarian societies.

As migration continues to rise due to environmental degradation, it places pressure on urban areas and stretches state capacities, leading to deteriorating public services and growing political dissatisfaction. Host communities often perceive migrants as threats to their livelihoods, resulting in xenophobic attitudes and violent outbursts. In places like Kaduna and Nasarawa States, conflicts between indigenous farming communities and Fulani herders have taken on religious and ethnic dimensions, transforming resource competition into identity-based violence (International Crisis Group, 2018). Such conditions increase the likelihood of state failure, especially when political elites exploit these divisions for electoral gains. Homer-Dixon (1999) warns that environmental scarcity can become a "threat multiplier," aggravating existing social cleavages and eroding state legitimacy (Homer-Dixon, 1999). If Nigeria fails to address the root causes of climate-induced migration and food insecurity, it risks descending into prolonged instability and a humanitarian crisis.

Securitisation Theory

To support the structural analysis of the Environmental Scarcity Theory, this study adopted the Securitisation Theory to examine how political actors frame climate-induced migration and food insecurity as existential threats (Waever, 1995; Buzan et al., 1998). The security framing was initially employed in climate politics to encourage countries to address climate change through mitigation and adaptation. The securitisation theory challenges the traditional narrow military aspects of security to include political, economic, social, and environmental issues. This theory argues that security threats are socially constructed through intersubjective process between securitising actors and the audience (Waever, 1995; Buzan et al., 1998). The Copenhagen School of Securitisation initially views the state as a referent object and places securitised issues beyond normal politics through discursive practices limited to state actors in authority. Buzan et al. (1998) viewed securitisation as a speech act where a securitising actor designates a threat to a specified referent object and declares it as an existential threat, which implies a right to use extraordinary means to fend it off. They argued that an issue can be securitised if the relevant audience accepts its claim, which grants the securitising actors the right to use emergency measures they deem appropriate.

Guzzini (2000) suggests that intersubjective rules and norms guide how actors designate security threats. Intersubjective belief is often activated through language, which operates as a mediating and communicative instrument (Côté, 2016), and established through social and group interaction with such power as to be able to facilitate interpretation, create social reality, and inform behaviour (Guzzini, 2000). Hence, Guzzini (2011) warns against the mistake of assuming what securitising actors present as security is, in fact, a geopolitical reality.

The securitisation approach outlined above has attracted some criticism that raises an important dilemma of securitisation. From a sociological standpoint, Balzaq *et al*. (2016) argue that securitisation should not be reduced to speech acts only, as one must consider other conditions. One condition is the textual meaning as well as the constitutive language through which the plot of security is constructed successfully. Another condition is the social capital that may be cited as supporting evidence of a threat, the context in which meaning is socially produced and understood, as well as the audience, which can contribute to the success or failure of the securitisation process.

Floyd (2015) argued that the requirement for securitisation success is not solely on security practice. Securitising actors might consider their responses as a security policy even without addressing a threat with extraordinary measures. Others argue that securitisation often takes place behind closed doors (Neal 2009), and in more common routinised day-to-day practice rather than through specific exceptional speech acts and events (Booth, 2005, Bigo, 2008, McDonald, 2008, Salter, 2008). However, other scholars have warned against the performative role of security, mostly when it is employed as a political technology to re(order) society, preserve power relations, and oppress or exclude some groups or opposition (Booth, 2005, Huysmans 2006). This is because securitising actors often define threats with legitimate authority, following a circular logic of defining a threat to counter such threat politically and practically (Warner and Boas, 2017).

Actors mobilising against climate change as an existential threat tend to advocate relatively modest response measures rather than more extraordinary ones, relying on solutions rooted in current geopolitics and power dynamics (Arnall, 2023). Environmental conflict discourses argue that climate change alters and reduces the availability of resources like

food, water, and land, which can trigger violent conflicts as a result of migration (Mai, 2022). Framing climate-induced migration as a security threat creates an overlap between environmental security and immigration security (Brzoka and Frohlich, 2016).

Climate-induced migration in Nigeria is a growing phenomenon, primarily driven by desertification, erratic rainfall, and the shrinking of natural resources. Northern Nigeria, part of the Sahel region, has witnessed increased displacement of pastoralist communities as grazing land disappears due to prolonged drought and desertification (Okpara et al., 2016). These environmental migrants often move southward into Nigeria's Middle Belt, where they encounter farming communities, leading to land-use disputes and communal violence. In this context, political elites and security agencies have increasingly framed migration as a threat to national security, aligning with the securitisation framework (Ide, 2020). The Nigerian government has deployed military forces under operations such as "Operation Whirl Stroke" and "Operation Safe Haven" to quell violent clashes between herders and farmers (International Crisis Group, 2018). While these actions highlight the securitisation of climate-induced migration, they also risk oversimplifying complex socio-environmental dynamics and legitimising militarised responses over long-term policy solutions. This framing often excludes the voices and needs of affected communities, reducing their plight to a security liability.

Food insecurity has been constructed as a security issue in Nigeria, particularly in the conflict-affected Northeast. According to the FAO (2023), over 26 million Nigerians face acute food insecurity, largely due to climate variability and armed conflict. As subsistence agriculture collapses in many parts of the country due to drought, floods, and violence, food scarcity becomes a source of instability and a driver of migration. Political leaders and international agencies have increasingly used securitised language, referring to hunger as a threat multiplier that exacerbates radicalisation and undermines national cohesion (Brown et al., 2007). The Boko Haram insurgency, which began in the Northeast, has capitalised on these dynamics by offering food and security in exchange for loyalty, turning food scarcity into a weapon of influence (Koren & Bapat, 2013). In securitisation terms, hunger is not just a humanitarian issue—it is presented as a critical security threat, allowing the state to justify emergency interventions such as food

blockades, curfews, or counterinsurgency operations. However, this framing risks marginalising long-term agricultural development and resilience-building efforts.

Speech acts, central to securitisation theory, serve as the lens through which issues are framed as existential threats, and they are evident in Nigerian political discourse. Government officials, military leaders, and media outlets have repeatedly described environmental challenges as causes of "national insecurity," "existential danger," or "ungovernable spaces" (Abrahams, 2020). For instance, former President Muhammadu Buhari frequently linked desertification and shrinking livelihoods to terrorism and instability in his speeches to both domestic and international audiences. These speech acts elevate environmental stress from a technical problem to a threat that justifies militarised and centralised policy responses. In securitisation theory, the success of these speech acts depends on their acceptance by the relevant audience, typically the public and political institutions. In Nigeria's case, widespread public anxiety about farmer-herder conflicts and hunger allows political actors to securitise these issues effectively, securing public support for exceptional measures. However, critics argue that this process can deflect attention from root causes and lead to the criminalisation of vulnerable populations, particularly migrants and pastoralists.

Climate-Induced Migration and Food Insecurity in Nigeria

Building upon the theoretical underpinnings and empirical contexts of this study, this section analyses how these dynamics manifest in Nigeria. Climate change is one of the key drivers of migration in Nigeria. This is largely due to increased extreme weather conditions, such as floods and droughts, which often lead to the displacement of rural dwellers who seek new locations with abundant resources. This study identifies two pathways by which climate-induced migration results in food insecurity in Nigeria, which are the conflict between pastoralists and farmers and state capacity. These two key pathways shall be discussed in this section.

Pathway 1: Farmer-Herder Conflicts

Farmer-herder conflict is a key pathway through which climate-induced migration leads to food insecurity in Nigeria. The ongoing struggle between herders and farmers over land and grazing rights is a serious and growing conflict that has caused significant casualties and increasing tension, especially in Nigeria's Middlebelt region (Mbih, 2020). Drought and desertification have driven herders from the northern core regions to seek grazing lands in the South, resulting in resource competition and clashes with settled farmers (George et al., 2022). This often happens when nomadic herders graze their animals, such as cattle, in farmers' croplands, leading to crop destruction and income losses for farmers. In response, farmers may retaliate by poisoning cattle, maiming them, or forcibly driving herders out of their communities (Chah et al., 2017).

In response, herders fight back, leading to violent conflicts. This can be understood through the lens of environmental scarcity, which explains how limited resources in host communities may cause conflict between herders and farmers competing over scarce environmental resources. These conflicts impact households' food security because they directly affect the ability to cultivate land, which herders want to access (Salifu et al., 2017). The rapid rise in farmer-herder conflicts in Nigeria can be linked to increasing temperatures, resulting in droughts and desertification, which have forced herders to migrate from the Northern region to the Central and Southern parts of Nigeria (Buhang et al., 2015). These environmental pressures have pushed herders further south and away from traditional grazing routes. Consequently, resource competition between farmers and herders in central and southern regions has intensified, leading to disagreements and clashes between farmers and nomadic herders (Eke, 2020).

Most of these Fulani herders are Muslims, and sedentary farming communities, being Christians, also include ethno-religious hostility in their interactions (Usman, 2019). Recently, the situation has worsened due to collective conflicts between sedentary farming communities (mostly Christian and non-Fulani groups) and non-sedentary herders (mostly Muslim Fulani) over land claims, resource distribution, and control of local authorities (George et al., 2022). The current land tenure system, characterised by communal land access, insecure private property rights, high land

administrative costs, and the lack of formal land titles, further worsens the situation (Vanger and Nwosu, 2020). Additionally, the rising terrorist insurgency of Boko Haram in the northeast has caused forced displacement and increased migration toward the south (George et al., 2022).

Invariably, this places increased pressure on scarce resources, resulting in inadequate land resources. This leads to conflicts between farming communities and nomadic herders in the central and southern regions of the country (Ojo 2020). Finally, ineffective implementation of existing land policies on open grazing and grazing routes fosters nomadic pastoralists' relegation. In 1965, the grazing reserve law was passed to assign land resources to herders. Yet, some of the land allotted under this law have been commandeered by non-herders for non-grazing activities (Ojo 2020), often expedited by the failure of the government to enforce the law. Fewer than a quarter of the grazing reserves initially allocated for herders are currently being used for grazing purposes (ICG 2017).

The occurrence of farmer-herder conflicts can impact the four main pillars of food security, as reported by the Food and Agriculture Organisation (2006), including (i) food availability, (ii) food accessibility, (iii) food utilisation, and (iv) food stabilisation. For the food availability dimension, the existing literature concludes that conflicts reduce food security through their adverse impacts on agricultural labour supply (Blattman and Miguel, 2010; Verwimp and Munoz-Mora 2018), production decisions (Arias, Ibánez, and Zambrano, 2019), and outputs (Adelaja, and Awokuse, 2021). Conflicts affect the food accessibility dimension of food security through their harmful impacts on physical and economic access to food. For example, conflicts may lead to the destruction of infrastructure like roads, markets, and farms (Kah, 2017). For the food utilisation dimension, the adverse impacts of conflicts are usually captured through anthropometric outcomes (Martin-Shields and Stojetz, 2019). Finally, for the food stabilisation dimension, the adverse effects of conflicts appear to be captured through their impact on the variability of food prices and the value of food imports (George, Adelaja, and Weatherspoon 2020).

The persistent attacks on farmers have forced farmers to flee from their farms. The worst-hit states in Nigeria include Benue, Kaduna, Plateau, Ondo, Cross River, Taraba, Zamfara, Ebonyi, Adamawa, and Enugu States.

Most of these states are known for agriculture (Obikaeze et al., 2023). However, with the persistent attacks from herdsmen who graze on croplands of farmers, there has been a significant decrease in food availability and price increase in Nigeria. Farmers no longer go to their farms because of the fear of attacks from herdsmen. An examination of these states showed that they have a history of ethno-religious conflicts and are prone to climate volatility (Abba and Usman, 2008). Even though some of these states have passed laws banning open grazing, this policy is fraught with poor implementation by the government, and hence, open grazing of animals continues. This is also not to argue that the migration of herders due to climate change is the only factor responsible for incessant killings of farmers in these states. Most of these attacks have ethno-political undertone (Njoku, 2018). They are fueled by politicians who want to destabilise the peace of the state they target.

While some of these attacks are labelled herdsmen attacks, they are originally orchestrated by selfish politicians to settle political scores and destabilise the ruling government. This is also not to argue that there are no herdsmen attacks. However, these attacks have taken political, religious, and ethnic dimensions (Chukwuemeka et al., 2018). The displacements of farmers, especially women and youths, who make up substantial numbers of farmers in these communities, especially in Taraba and Benue, Plateau, Nasarawa, and Kaduna States, have led to food shortages (Ewoh et al., 2025). The reason for this is borne out of the fear of attacks from armed herdsmen who subject farmers to horrific experiences such as torture, gruesome murder, and rape. Women farmers no longer go to farms due to fear of being raped, killed, and sexually abused. This brings to the fore of this analysis the gendered dimension of the farmer-herder conflict in Nigeria. On the other hand, herdsmen have also accused farmers of encroaching on their grazing routes, which resulted in violent clashes. Abughyder (2016) stated that a total of 664.4 hectares of land has been destroyed in Benue States, between 2000 and 2014 in three local government areas, such as Guma, Agatu and Logo, due to farmer-herder crises. This situation has worsened agricultural productivity and availability of labour due to threats and violent attacks from armed herdsmen on their farms or on the way to their farmlands (Okoli and Addo, 2018).

Pathway II: State Capacity

Another pathway identified by this study is state capacity. State capacity plays a critical role in reducing persistent farmer-herder clashes in Nigeria. Climate-induced migration may not necessarily result in conflicts in the presence of high state capacity. However, the Nigerian state suffers from declining state capacity– which is the ability of the state to perform the basic tasks of governance such as providing a modern ranching system, provision of basic amenities, provision of state security, and environmental protection (Babajide, Ahmad and Coleman, 2021). This suggests that high state capacity is fundamental to preventing persistent farmer-herder conflicts. Farmer-herder attack occurs where the Nigerian government is too incompetent, poor, and distant to hold on to its monopoly of violence (Fearon and Laitin, 2003). This explains why there have been persistent armed conflicts between herders and farmers, which have continued to threaten food security in Nigeria. Homer-Dixon (1999) contends that such forms of inequality increase the risk of social fragmentation and state failure, particularly when governments are unable or unwilling to address the grievances of marginalised groups.

One basic manifestation of a weak state capacity is limited monopoly over the use of force, particularly in rural areas. This is because security operations are often reactive, biased, and underfunded. For example, in Benue and Plateau States, the hotspots of farmer-herder conflicts, local communities have accused security forces of taking sides in the conflict or being absent during the attack (Kwaja and Ademola-Adelehin, 2018). This vacuum gives ethnic militias and armed herders opportunities to operate freely. The persistent conflict between farmers and herders is worsened by the lack of social control on the part of the Nigerian state. Ayoob (1995) and Herbst (2000) argued that most African states lack social control, which is the root cause of their security predicament. This explains why the Nigerian state cannot exert some social control over rural communities where these conflicts take place. This is similar to the method of European colonialisation in which British colonialists adopted an indirect rule policy, which left administrators with weak social control over their provinces. In the case of Nigeria, the argument is that the Nigerian state faces the challenge of fragmented social control, which resides in formal and informal institutions.

Social control in Nigeria is often organised along ethnic lines, which gives room for the emergence of armed groups who constantly attack farmers over resource scarcity and control over land.

Another basic manifestation of declining state capacity is the lack of political will on the part of state governors to ban open grazing in their states. States that have passed anti-grazing laws include Ondo, Oyo, Osun, Abia, Bayelsa, Rivers, Ekiti, Ogun, Enugu, Edo, Imo, Delta, Akwa Ibom and Anambra States. While some of these state governors have passed laws banning open grazing, the challenge is the poor implementation of these laws. Despite existing anti-open grazing laws, herders walk freely with their herds to farmlands, defying grazing routes to feed on crops planted by the farmers. There are reports of constant attacks and clashes between herdsmen and farmers in these states. The problem lies in weak enforcement by the state governments. Anderson (2011:6) defines public policy as "stable relatively, stable, purposive course of action or inaction followed by an actor or set of actors in addressing a problem or matter of concern." This definition suggests that immediately a law is passed or a policy programme is formulated, the next thing is to ensure implementation or execution of these policy programmes to achieve their designated goals (Anderson, 2011).

Beyond a lack of political will and proper enforcement mechanisms, anti-grazing policies in Nigeria have failed due to corruption, poor human resources, inadequate data, unrealistic goals, and tribal sentiments (Okoro, 2020; Nnajiofor et al., 2013). For instance, even though Benue State passed an anti-grazing law in 2017, there have been reports of persistent herdsmen attacks on villagers. Recently, over 100 people were killed in Yelwata Community in Benue State on June 14th, 2025 (BBC News, 2025). This is one out of several attacks by Fulani herders on farmers in different states such as Plateau, Oyo, Ogun, and Enugu States. These states are central to food production in Nigeria. The attacks on farmers in these states are a threat to food production and availability in Nigeria. While these attacks have continued, efforts, on the part of various state governments, have been tainted by a lack of political will and poor enforcement of anti-grazing policies.

The creation of grazing reserves by expropriating communal and private lands for herdsmen may worsen the current conflicts, which may lead to broader conflagration (Ewoh et al., 2025). This will not only lead to protests

but tensions between farming communities and herders. For example, in 2019, the Federal Government introduced the National Livestock Transformation Plan (NLTP), a hierarchical programme with a steering committee at the centre under the supervision of the Vice President of Nigeria. Based on the resolution at the National Economic Council (NEC), it was held that the Federal Government was to fund 80 percent of the project, while states and private investors were to fund the remaining 20 percent. The participating states were to commit 5 percent out of the 20 percent for the work of their secretariats, staff assignment, project development, and land demarcation (International Crisis Group, 2021:5). The NLTP programme has significant benefits over previous anti-grazing policies aimed at addressing conflicts between farmers and herders. One of the significant benefits is its decentralisation of power, allowing for the active participation of multi-stakeholders. However, the NLTP failed to account for a number of critical issues, such as trans-local and trans-national migratory patterns (Ewoh, et al., 2025).

In 2014, former president Goodluck Jonathan attempted to reinvigorate and manage the 415 grazing reserves and livestock routes that were offshoots of the Northern Region Grazing Law, but could not implement the policy before the end of his tenure in 2015. President Muhammadu Buhari also attempted to introduce the Rural Grazing Area (RUGA) settlement programme without paying attention to state and local land laws. This was met with stiff opposition by various quarters, especially southerners who felt that the president sought to give their lands to his ethnic group. This also forms part of the argument of the environmental scarcity theory, which explains how members of host communities are opposed to the sharing of scarce resources with herders. This also explains why the Federal Government finds it difficult in confining herders to ranches, due to ethnicity and tribal sentiments among members of the host community. This is further exacerbated by Nigeria's weak land tenure system, which exacerbates conflicts. The Land Use Act 1978 vest the control of all lands in state governors, however, widespread corruption and lack of land registration systems often hinder accountability and transparency (Akinyemi et al., 2019). In rural communities, land ownership is largely informal, and there are conflicts over land due to climate change, population growth, and resource scarcity.

Conclusion and Recommendations

Conclusion

This study has critically examined the interrelationship between climate-induced migration, farmer-herder conflict, and food insecurity in Nigeria through the lens of Environmental Scarcity Theory and Securitisation Theory. It has been demonstrated that climate change, manifested in rising temperatures, erratic rainfall, desertification, and shrinking water bodies, significantly disrupts agricultural livelihoods, especially in the northern and middle-belt regions. As herders are forced to migrate from drought-prone areas in the north to more fertile lands in the south, their movements intersect with sedentary farming communities, resulting in fierce competition over land, water, and food resources. The consequences of these interactions are often violent and destructive, leading to widespread displacement, destruction of crops, and the undermining of food systems. Migration, while theoretically a form of climate adaptation, becomes maladaptive in contexts where host communities lack the infrastructure, governance, or socio-political stability to absorb new populations. The escalation of conflict between migrants and locals not only undermines social cohesion but also disrupts the capacity of affected communities to produce, distribute, and access sufficient food.

Furthermore, the failure of the Nigerian state to manage these dynamics effectively highlights the role of weak institutional capacity in exacerbating the crisis. Poor enforcement of land policies, inadequate security measures, and politicisation of conflict have allowed the situation to persist and deteriorate. The state's limited capacity to respond proactively to environmental stressors has transformed migration and food insecurity from development issues into existential threats framed within national security discourses. While the securitisation of these issues may generate urgency, it often results in militarised responses that fail to address the root structural and environmental causes. This reactive approach has contributed to the marginalisation of vulnerable groups, particularly pastoralists and internally displaced persons, and has undermined the legitimacy of state institutions. As a result, affected populations increasingly rely on informal mechanisms for survival, which further weakens social order and long-term resilience.

The complex feedback loop between climate change, displacement, conflict, and food insecurity presents a serious challenge to Nigeria's development and stability. Without integrated policy responses that address both immediate needs and long-term structural drivers, the country risks entrenching cycles of violence, poverty, and hunger. Climate-induced migration and food insecurity are not isolated phenomena but interconnected outcomes of ecological degradation and governance failure. Breaking this cycle requires a multi-dimensional strategy that combines environmental adaptation, conflict resolution, institutional reform, and inclusive development. The urgency of this task cannot be overstated, as the future of Nigeria's socio-economic wellbeing and national cohesion hinges on its ability to manage the human consequences of climate change effectively.

Recommendations

i. To address the escalating farmer-herder conflict and climate-related displacement, Nigeria must invest in rebuilding and reforming its institutional frameworks. Strengthening the rule of law, enhancing the neutrality and capacity of security forces, and ensuring effective land governance are critical steps. The Land Use Act of 1978 should be revised to clarify land ownership, promote transparency, and reduce the manipulation of land rights by political elites. State governments must be empowered to implement anti-open grazing laws effectively through improved funding, training of enforcement agents, and political backing.

ii. The government must prioritise a sustainable transition from open grazing to sedentary livestock management systems such as ranching and agro-pastoralism. This transition should be supported by significant investments in infrastructure, training, veterinary services, and credit facilities for pastoral communities. Simultaneously, the agricultural sector should be modernised through the adoption of climate-resilient techniques such as conservation agriculture, improved irrigation, and the use of drought-resistant crop varieties.

iii. Addressing the ethno-religious and socio-economic dimensions of the conflict requires institutionalised community-based peacebuilding

mechanisms. Traditional rulers, religious leaders, civil society organisations, and youth groups must be included in structured dialogues that focus on conflict prevention, resource sharing, and communal coexistence. These dialogues should be supported by neutral facilitators and backed by legal frameworks that ensure compliance with agreed outcomes. State governments should fund and support Local Peace Committees (LPCs) and establish early warning and early response (EWER) systems to monitor and respond to tensions. Women and marginalised groups should be given a platform to contribute to these processes, as they often bear the brunt of food insecurity and displacement.

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