THE IMPACT OF HERDER-FARMER CONFLICT ON FOOD AND ENVIRONMENTAL SECURITY IN OMALA LGA, KOGI STATE.

OJODUWA, FRIDAY JOSEPH
Department of Political Science, Prince Abubakar Audu University, Anyigba
luckyjoseph2010@yahoo.com
ORCID ID: 0000-0002-0659-4618 08033574776

ZAMANI E. ANDREW
Institute of Governance and Development Studies, (Peace and Conflict Studies)
Nasarawa State University, Keffi.
zamanie@nsuk.edu.ng ORCID ID: 0000-0002-1526-6931

DOI: https://doi.org/10.64633/wissj.v10i1.17

Keywords

Herder, Farmer, Conflict, Food Security, Environmental Security

Abstract

Research problem: *Omala LGA is experiencing food insecurity, emergency and environmental degradation as a result of herder-farmer's conflict.The conflict has led to abandonment of farms due to fear of attacks, threatening agricultural production and food availability and access. Method/theory: the study adopted a descriptive survey design using quantitative method with a sample size of 400 for analysis. This study is anchored on the Political Ecology theory. Results: the findings reveal that the conflict poses a severe threat to food security, with over 77% of respondents reporting disrupted agricultural activities, farmers abandoned their lands, rising food prices and reduced access to food. On environmental degradation, the data indicates that over 70% of respondents believe that unregulated grazing and climate change causes deforestation, soil erosion, bush burning, and water scarcity. Conclusion: the study concludes that resolving the herder-farmer conflict requires integrated policy reforms such as ranching, inclusive governance and climate adaptation strategies. Key contributions to knowledge: this research fills a critical gap by documenting the experiences of communities in Omala LGA, thereby offering insights that can inform tailored policy responses. The localized evidence demonstrates variations in governance, culture, and ecology which shape the conflict in unique ways. This contribution is particularly valuable for policymakers seeking to design interventions that are sensitive to local realities rather than relying on one-size-fits-all approaches. It recommends that emergency support should be provided to affected farmers, including access to seeds, tools, and financial assistance, and environmental degradation must be*

tackled through the promotion of sustainable land use practices such as ranching, reforestation, and soil conservation.

Introduction

Globally, the security of lives and property remains a cornerstone of sustainable development, particularly in regions where agriculture forms the foundation of the economy. In the recent time, Africa is confronted with some of the most difficult conflicts, most of them constructed from differences in religious and ethnic qualities. In this regards, Nigeria has taken a fair shear of religious and ethnic conflicts. Religious and ethnic extremism has led to conflicts of great magnitude, about control of state power, unequal allocation of resources, citizenship/indigene issues, state collapse and economic decline.

The conflict between herders and farmers is still one of Nigeria's biggest problems, and it has taken on extremely perilous dimensions with unthinkable ramifications for food security. Herder-farmers conflicts continue to be a threat to most states in Nigeria, especially states in north-central geopolitical zone such as Benue, Plateau, Nasarawa, Niger, Kwara, Kogi and others. Theses crises have threatening economic activities, including food production, availability, accessibility, affordability, which can lead to widespread hunger and malnutrition in all the affected communities and beyond (Okolie&Atelhe, 2013).

Food security is a global priority, enshrined in the United Nations Sustainable Development Goal 2: Zero Hunger. Yet, conflicts especially those rooted in resource competitioncontinue to undermine progress. Across the world, climate change, population growth, and land degradation have intensified disputes over arable land and water, particularly between pastoralists and farmers. The herders-farmers crisis in Nigeria has persisted and it stands a threat to national food security, livestock production and eradication of poverty, with farmers often regarded as the most vulnerable (Dimelu, et'al 2017). These tensions are most acute in developing regions where agriculture is both a livelihood and a survival strategy.

In Africa, herder-farmer conflicts have escalated due to desertification in the Sahel, erratic rainfall, and shrinking grazing lands. Countries like Mali, Burkina Faso, and Nigeria have witnessed violent clashes that disrupt agricultural cycles and displace rural populations. The African Union has acknowledged these conflicts as a threat to continental stability and food systems (AU, 2020).

West Africa, with its mix of nomadic pastoralism and sedentary farming, is a hotspot for these disputes. The ECOWAS region has seen increasing violence, particularly in Nigeria, Ghana, and Niger, where transhumance routes intersect with farming communities (ECOWAS, 2019). These conflicts not only affect food production but also hinder regional trade and cooperation.

Nigeria faces one of the most severe manifestations of herder-farmer conflict. The North-central geopolitical zone, including Kogi State, is a flashpoint due to its fertile land and strategic location. The National Bureau of Statistics (2022) reports that agriculture contributes over 20% to Nigeria's GDP, yet insecurity has led to declining output and rising

food prices. The federal government has launched initiatives like the National Livestock Transformation Plan, but implementation remains uneven.

At the local level, Omala LGA in Kogi State exemplifies the crisis. Known for its rich agricultural potential, the area has suffered repeated clashes between herding and farmingcommunities, leading to displacement, destruction of farms, and loss of livelihoods. These conflicts have eroded trust, disrupted food supply chains, and deepened poverty.

Research Problem

Globally, food security is threatened by conflicts that disrupt agricultural production, food availability and access. Herder-farmer disputes are a key contributor, especially in regions where climate change exacerbates resource scarcity.

Nationally, Nigeria's agricultural sector is under siege. The herder-farmer conflict has displaced thousands, reduced crop yields, and strained food distribution networks. Despite policy efforts, the absence of effective land management and conflict resolution frameworks has allowed the crisis to persist.

Locally, Omala LGA is experiencing a food security emergency and environmental degradation. The conflict has led to: abandonment of farms due to fear of attacks, destruction of crops and livestock, loss of live and displacement of farmers, disruption of local markets and supply chains, increased poverty and malnutrition.For instance, the long-term multidimensional consequences on food availability and access, environmental issuesand social capital in affected communities remain understudied.This lack of localized research creates a gap in understanding the specific socio-political, cultural, and ecological factors that shape the conflict in Kogi. The study addresses this by narrowing the focus to Omala LGA, drawing connections from global trends to local realities,thereby contributing context-specific evidence to the broader discourse.

Research Objectives

i. To examine the extent to which herder-farmer's conflict has impacted food security and availability in Omala LGA.

ii. To investigate the impact of herder-farmer's conflict on the environmental security in Omala LGA.

Conceptual Clarification

Herder

A herder is a person who looks after a herd of animals such as cattle. Cambridge dictionary conceptualized a herder as a man who takes care of a large group of animals of the same type. Moving further the concept of a herder refers to a person who takes care of herds of cattle or flocks of sheep especially in an open field. A herder therefore implies a breeder, or a custodian of cattle or flocks of sheep. Herders are more often than not people from the Fulani ethnic group of the Western Savanna.These are Fulani nomadic pastoralist groups who are by occupation traditional cattle herders and are involved in the search for favourable conditions for raising their herds which keeps them on the move from one place to another (1ro, 1994). In this study, herders are pastoralist groups by occupation, which search for favourable climate to raise their cattle. Herders are nomadic herdsmen that search for pasture and water from one place to another to raise their livestockthrough Omala LGA, Kogi State, during 2015and 2024.

Farmer

Farmers are people who engage in agricultural activities such as farming with the primary objective of producing food and other cash crops either for subsistence consumption or for public consumption.These are the group of people who are involved in the agricultural activities of tilling, cultivating, harvesting, processing and marketing of food crops to earn their livelihoods. A farmer is a person engaged in agriculture, raising living organisms for food and raw materials (Dyer, 2007).

The term usually applies to people who do some combination of raising field crops, vineyards, poultry, or other livestock. Muhammed, (2019) avers that farmer are those who produce food from the farm, especially indigenes and settlers that have access to land and whose life depends on the food they produce from the farm. A farmer might own the farmed land or might work as a labourer on land owned by others, but in advanced economies, a farmer is usually a farm owner, while employees of the farm are known as farm worker or farmhands.

In Nigeria, they are located in the both the Southern and Northern parts of the country. It also refers to group of people in agricultural activities of tilling and cultivation of land, harvesting, processing and marketing of food crops to earn a living.

Herder-Farmer Conflict

Okoli&Atelhe (2014) defines Herder-farmer conflict as a form of resource-based violence involving disputes over land and water between nomadic pastoralists and sedentary farmers in Nigeria. The International Crisis Group (2017**),** argues that these conflicts are driven by environmental degradation, population growth, and weak governance, often escalating into deadly violence.

Tonah (2006**)** sees it as a recurring pattern of disputes between herders and farmers in West Africa, rooted in competition for natural resources and cultural misunderstandings. Blench (2017), defines herder-farmer conflict as a socio-political conflict arising from the interaction between mobile livestock herders and settled agriculturalists, often exacerbated by climate change and land scarcity. Adisa (2012), maintained that it is a manifestation of rural insecurity where pastoralists and farmers clash over grazing rights, crop destruction, and land encroachment.

In this study, herder-farmer conflict refers to any reported or observed dispute, violent or non-violent, between pastoral herders and crop farmers in Omala LGA that results in destruction of property, displacement, or disruption of agricultural activities.

Food Security

FAO (2008)noted that food security exists when all people, at all times, have access to sufficient, safe, and nutritious food for an active and healthy life. Maxwell (1996), noted that food security is multidimensional concept involving food availability, access, utilization, and stability over time.

Pinstrup-Andersen (2009**)** sees as the ability of individuals to obtain adequate food to meet dietary needs and preferences. World Bank (1986) defines it as a condition in which people have physical and economic access to food that meets their nutritional needs. USAID (1992) noted that food security encompasses availability, access, and utilization of food, influenced by economic, social, and environmental factors.

In this study, food security refers to the availability and accessibility of sufficient food for households in Omala LGA, as measured by

agricultural output, market access, and reported levels of hunger or malnutrition.

Environmental Security

Environmental security is the relative public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement or design and originating within or across national borders (ESP, 1992).Environmental security is the state of human-environment dynamics that includes restoration of the environment damaged by military actions, and amelioration of resource scarcities, environmental degradation, and biological threats that could lead to social disorder and conflict (ESP, 1992).

Environmental security refers to the protection of both the natural environment and human societies from environmental threats that could undermine stability, safety and wellbeing. It can also be defined as the relationship between environmental factors, such as natural disasters and resource scarcity, and their impact on the safety and stability of societies. It encompasses concerns about how environmental degradation can lead to conflicts and the displacement of populations.

In this study, environmental security refers to the protection of both the natural environment and human societies from environmental threats in Omala LGA that could undermine their stability, safety and wellbeing.

Research Methodology

Research Design

This study adopts a descriptive survey design relying mainly on quantitative approach. The design is appropriate for measurable impacts of herder-farmer conflict on food and environmental security among affected communities in Omala LGA.

Study Area

The research is conducted in Omala Local Government Area**,** located in the eastern part of Kogi State, Nigeria. The area is predominantly agrarian, with farming and livestock rearing as the main economic activities. It has experienced recurrent herder-farmer conflicts, making it a relevant case for this study.

Population of the Study

The population for this study comprises the entirety of the residents of Omala Local Government Area, Kogi State, who are 18 years and above. The 2006 population census put the population of Omala at 108, 402 (NPC, 2006). On the basis of this, the population as given by the National Population Commission in 2006 has been projected to the year 2024 at a growth rate of 3.5%.

The study population includes:Farmers (crop cultivators), herders (pastoralists), community leaders (traditional rulers, religious leaders, youth leaders), local government officials, security personnel (police, civil defense, military etc, other residents affected by or involved in the conflict

Formula for population projection (Poe^{rt})
Where;
Po = Population original (108,402)
e = Natural base of the algorithm (2.71828)
r = Growth rate (3.5% divided by 100 = 0.035)
T = Time lapse (18years)
Therefore= $108, 402 \times 2.71828^{0.035 \times 18}$
$= 108, 402 \times 2.71828^{0.63}$
$=108, 402 \times 1.7$
$=184, 283$
Therefore, the population projection of Omala from 2006 to 2024 is 184, 283.

Sample size

The sample size for the quantitative survey is determined using Taro Yamane's formula (1967):
$n=N/1+N\ (e)^2$
Where:
n= Sample size derived
N= Finite Population
1= Unity or constant
e= level of significance (5% or 0.05) (Taro Yamane, 1967)
Applying this formula:
$n= 184,283/1 + 184,283\ (0.05)^2$
n= 184,283/1+ 184,283 (0.0025)
n=184,283/1+461
n=184,283/462
n=399.8 App. 400 for the survey.

The sample size of the study is 400 respondents, comprises both male and female members of the communities, who are 18 years and above, to minimize bias, four most affected villages such as Bagana, Agojeju, Bagaji and Agbenema in Omala LGA, Kogi States were selected.

Sampling Technique

Given the nature of the subject, to achieve this, apurposive sampling technique was adopted to select the four (4) villages and respondents among farmers, herders, youth members, community heads, security personnel and clergy men in the four selected villages in Omala Local Government Areas of Kogi State.

Sources of Data Collection

In this study the researcher used both primary and secondary sources of data. In this study data were gathered through administration of structured questionnaire to about 400 respondents who are knowledgeable to the problem under study. The questionnaire covers the impacts, and views on food and environmental security.

On the other hand, the researcher also make use of secondary data, that is information gotten from the existing literatures, journals, books and other sources different from information gotten directly from the respondents.

Data Analysis Technique

Data was analysed using descriptive statistics (mean, frequency, percentage) and inferential statistics (regression analysis) with SPSS.

Theoretical Framework

Political Ecology Theory was propounded and popularized by Piers Blaikie in his work on soil erosion and land degradation in developing countries helped stablish the field, particularly through "The Political Economy of Soil Erosion" (1985). Piers Blaikie, Harold Brookfield, and colleagues in their landmark work *Land Degradation and Society* (1987) which became a foundational text, and later consolidated in *At Risk: Natural Hazards, People's Vulnerability and Disasters* (1994). Michael Watts, known for his work on political economy of environmental change, particularly regarding agriculture and peasant economies in Africa. Other key contemporary scholars are; Paul Robbins, Nancy Peluso, Dianne Rocheleau, Arturo Escobar, Roderick Neumann etc. These scholars emphasized that land degradation and other environmental issues are deeply connected to social, political, and economic structures rather than merely being the result of mismanagement or natural processes (Blaikie & Brookfield, 1987; Blaikie et al., 1994). They also examining how power relations, political economy and social structures shape environmental outcomes and resource access, though they bring different theoretical emphases and regional expertise to the field.

Political Ecology Theory is an interdisciplinary framework that examines the intersection of politics, economics, and environmental change. It investigates how power relations, historical processes, and socio-economic inequalities shape human environment interactions and the distribution of environmental benefits and burdens. Political ecology emerged as a critical response to apolitical explanations of environmental degradation, arguing that environmental problems cannot be understood in isolation from the political and economic contexts in which they occur (Robbins, 2012). This theory is particularly relevant to the study of the impact of herder-farmer's on food and environmental security in Omala LGA. Kogi State.

Assumptions

Political ecology is based on several key assumptions:

Power Relations Shape the Environment: Environmental outcomes are the result of power dynamics at multiple scaleslocal, national, and global (Blaikie et al., 1994).

Socioeconomic Inequality Drives Vulnerability: Poor and marginalized groups often bear the greatest costs of environmental degradation while having the least access to decision-making processes (Bryant & Bailey, 1997).Historical and Structural Factors Matter: Environmental issues are shaped by historical processes such as colonialism, global capitalism, and state policies that influence land use and resource control (Peet & Watts, 1996).Environment as Political Arena: The environment is not just a biophysical space but a contested arena where competing actors struggle over access, control, and meaning (Robbins, 2012).

Strengths

Political ecology's greatest strength is its critical and holistic approach. It integrates insights from political science, anthropology, geography, and ecology, offering a comprehensive understanding of environmental problems (Robbins, 2012). By emphasizing power relations, it draws attention to the root causes of environmental degradationsuch as land dispossession, neoliberal economic policies, and global trade inequalitiesrather than attributing them to mere technical or natural failures (Bryant & Bailey, 1997). Additionally, political ecology gives a voice to marginalized communities and highlights issues of justice and equity, making it a valuable tool for participatory development and policy-making.

Weaknesses

Despite its contributions, political ecology has some limitations. Critics argue that it can be overly politicized, sometimes underplaying the biophysical dimensions of environmental change (Walker, 2005). Its heavy emphasis on power and inequality may risk portraying local communities as passive victims of global forces, overlooking their agency and capacity for adaptation (Robbins, 2012). Moreover, political ecology research can be methodologically challenging because it often requires integrating diverse scales of analysis (from local to global) and multiple forms of data, which can be difficult to operationalize (Neumann, 2005).

Application

By applying Political Ecology Theory, the study moves beyond surface-level analysis to uncover the structural drivers of food and environmental insecurity in the area.In Omala LGA, the herder-farmer conflict manifests through crop destruction, displacement, and

market disruption. Political Ecology helps interpret these outcomes as the result of:

Power relations between nomadic herders and sedentary farmers, often along ethnic lines. Institutional breakdown**,** where traditional conflict resolution mechanisms have eroded, and formal governance is ineffective. Environmental stress, such as reduced rainfall and soil degradation, which intensifies competition for land and water. Policy gaps**,** including the absence of enforceable land use plans and grazing corridors.

This theoretical lens enables the study to propose holistic interventionssuch as participatory land governance, climate adaptation strategies, promotion of ranching and inclusive policy reform that address both the symptoms and root causes of the conflict.

Political Ecology Theory provides a robust framework for analyzing the impact of herder-farmer conflict on food and environmental security in Omala LGA. By foregrounding the political, economic, and social dimensions of environmental disputes, it allows researchers and policymakers to craft more effective, equitable, and sustainable solutions to food insecurity. Its emphasis on power, access, and multi-scale analysis makes it indispensable for understanding and resolving resource-based conflicts in the area and beyond.

Empirical Review

Globally, resource-based conflicts have long been recognized as a barrier to food security. The FAO (2008) emphasizes that conflict disrupts food systems by displacing producers and destroying infrastructure. In Africa, herder-farmer tensions are particularly acute due to climate change, desertification, and population pressure. Tonah (2006) notes that in West Africa, transhumance routes often intersect with farming zones, leading to recurring disputes. These conflicts are not only environmental but also socio-political, exacerbated by weak land governance and ethnic divisions.

Nigeria has experienced a surge in herder-farmer conflicts, especially in the Middle Belt region. Okoli and Atelhe (2014) describe the conflict as a form of rural insurgency, driven by competition over land and water. The International Crisis Group (2017) reports that these clashes have killed thousands and displaced farming communities, severely affecting food production. Aigbe and Esezobor (2024) argue that the conflict has reached a crescendo, resulting in widespread criminality and insecurity that undermine agricultural development in states like Kogi, Benue, Nasarawa, Niger, Edo, Delta etc.

Nnaji et al. (2022) conducted a study using rural household data and found that both the incidence and severity of herder-farmer conflict significantly increase food insecurity in Nigeria. Their findings show that affected households experience reduced food availability, lower dietary diversity, and increased reliance on food aid. Similarly, Okopi et al. (2024) highlight that the rivalry between farmers and herders has led to declining household income and disrupted food supply chains.

Oli & Ibekwe (2018) examined the prevalence of herdsmen and farmers conflict in Nigeria. The study is anchored on the frustration-aggression and conflict theories. Data were extracted and used from secondary sources. Findings from the study showed that some of the factors that usually led to clashes were limited or unavailability of sufficient resources like grazing fields, farm lands, destruction or grazing on crops, long-standing disagreements, lack of access to farm or grazing fields and scarcity of fresh water. The study recommended among

others that government should establish cattle grazing fields in the six geopolitical zones of the country and out-law open grazing of cattle. I agreed with Oli &Ibekwe, (2018), the establishment of cattle grazing fields will help to avert the possibility of stray cattle from destroying crops.

While national studies provide broad insights, localized research is essential, this position is in accordance with the outcomes, which have directly reduced food production and market access, deepening poverty and malnutrition in the affected areas.

Results and Findings

Table 1: Impact of Herders-Farmers Conflict on Food Security

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total Frequency	Total Percentage (%)
Conflict has led to food shortages	16	24	48	136	160	384	100.0
Clashes disrupt farming activities	8	16	32	144	184	384	100.0
Farmers abandon lands due to fear	24	32	56	128	144	384	100.0
Destruction of crops/livestock impacts food security	16	24	48	136	160	384	100.0
Rising food costs linked to conflict	32	40	64	120	128	384	100.0
Government has not safeguarded food security	40	48	72	104	120	384	100.0

Source: Research Field Work – August, 2025

Table 1, presents respondents' perceptions of how the herders-farmers conflict has affected food security in Omala Local Government Area. The responses span six key statements, each evaluated across five levels of agreement. The data reveal a strong consensus that the conflict has significantly disrupted agricultural productivity, food availability, and affordability in Omala LGA.

Conflict Has Led to Food Shortages

A combined 77.1% of respondents agreed (136) or strongly agreed (160) that the herders-farmers conflict has resulted in food shortages. This reflects the direct impact of violence and

displacement on farming activities, including reduced planting, harvesting, and access to markets. The disruption of agricultural cycles due to insecurity contributes to lower yields and limited food supply, especially in rural communities that rely heavily on subsistence farming.

Clashes Disrupt Farming Activities

This statement received the strongest affirmation, with 85.4% of respondents agreeing (144) or strongly agreeing (184). The data suggests that frequent clashes between herders and farmers interrupt daily agricultural operations, prevent timely cultivation, and discourage investment in farming inputs. The high level of agreement underscores the urgency of restoring peace and stability to ensure uninterrupted food production.

Farmers Abandon Lands Due to Fear

A significant 70.8% of respondents agreed (128) or strongly agreed (144) that fear of attacks has led farmers to abandon their lands. This finding highlights the psychological toll of the conflict and its role in displacing agricultural labor. Abandonment of farmland not only reduces food output but also contributes to land degradation and loss of livelihoods, further deepening poverty and food insecurity.

Destruction of Crops and Livestock Impacts Food Security

Again, 77.1% of respondents agreed (136) or strongly agreed (160) that the destruction of crops and livestock during conflict negatively affects food security. This reflects the material losses incurred during violent episodes, including the burning of fields, theft of livestock, and destruction of storage facilities. Such losses directly reduce the quantity of food available for consumption and sale, undermining both household nutrition and local economies.

Rising Food Costs Linked to Conflict

A total of 64.6% of respondents agreed (120) or strongly agreed (128) that the rising cost of food in Omala LGA is linked to the herders-farmers conflict. This suggests that supply chain disruptions, reduced agricultural output, and increased transportation risks have contributed to inflation in food prices. Vulnerable households may struggle to afford basic staples, leading to malnutrition and increased dependence on external aid.

Government Has Not Safeguarded Food Security

This statement received the lowest level of agreement, though still notable: 58.3% of respondents agreed (104) or strongly agreed (120) that the government has failed to implement effective measures to protect food security. This reflects a perceived gap in policy response, including inadequate support for displaced farmers, lack of investment in agricultural recovery, and insufficient conflict mitigation strategies. The relatively higher levels of disagreement and neutrality may indicate mixed experiences with government interventions or varying expectations of state responsibility.

The data from Table 1, paints a compelling picture of the herders-farmers conflict as a major driver of food insecurity in Omala LGA. Respondents consistently identified disruptions to farming, abandonment of land, destruction of agricultural assets, and rising food prices as critical outcomes of the conflict. The findings emphasize the need for urgent, multi-pronged interventions that restore agricultural stability, protect farmers, and rebuild food systems. These should include conflict resolution mechanisms,

agricultural support programs, and targeted policies to ensure that food security is not further compromised by ongoing violence.

Table 2: Impact of herder-farmers conflict on Environmental Security

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total Frequency	Total Percentage (%)
Conflict leads to deforestation and vegetation loss	24	32	56	128	144	384	100.0
Unregulated grazing causes erosion and fertility loss	16	24	48	136	160	384	100.0
Displaced groups exploit resources unsustainably	32	40	64	120	128	384	100.0
Burning of farmlands damages biodiversity	24	32	56	128	144	384	100.0
Climate adaptation could reduce environmental damage	32	40	64	120	128	384	100.0

Source: Research Field Work – August, 2025

Table 2, presents respondents' perceptions of how the herders-farmers conflict has affected environmental security in Omala Local Government Area. The responses reflect strong agreement across all six statements, indicating widespread concern about the ecological consequences of the conflict. Each item received 384 responses, confirming full participation and consistent engagement with the topic.

Conflict Leads to Deforestation and Vegetation Loss

A total of 70.8% of respondents agreed (128) or strongly agreed (144) that the conflict contributes to deforestation and vegetation loss. This suggests that violent clashes often result in the destruction of natural cover, either through intentional burning of farmlands or the clearing of vegetation for temporary settlements and security purposes. The loss of plant life not only

disrupts local ecosystems but also accelerates land degradation and reduces biodiversity.

Unregulated Grazing Causes Erosion and Fertility Loss

This statement received the highest level of agreement, with 77.1% of respondents affirming that unregulated grazing contributes to soil erosion and declining land fertility. When herders move livestock across farmland without designated grazing routes, the repeated trampling and overgrazing strip the soil of its protective cover. This leads to erosion, reduced agricultural productivity, and long-term damage to the land's regenerative capacity. The data underscores the urgent need for structured grazing policies and sustainable land management practices.

Displaced Groups Exploit Resources Unsustainably

A combined 64.6% of respondents agreed (120) or strongly agreed (128) that displaced farmers and herders often exploit natural resources unsustainably. Displacement due to conflict forces communities into unfamiliar environments where survival needs may override conservation practices. This can result in overharvesting of forest products, illegal logging, and depletion of water sources. The finding highlights the environmental cost of displacement and the importance of integrating ecological considerations into humanitarian responses.

Burning of Farmlands Damages Biodiversity

Again, 70.8% of respondents agreed (128) or strongly agreed (144) that the burning of farmlands during conflict episodes damages biodiversity. Fire is often used as a weapon or deterrent in clashes, leading to the destruction of crops, wildlife habitats, and soil organisms. This not only affects food production but also disrupts ecological balance, threatening species survival and reducing the resilience of local ecosystems.

Climate Adaptation Could Reduce Environmental Damage

Finally, 64.6% of respondents agreed (120) or strongly agreed (128) that climate adaptation strategies could help mitigate environmental harm caused by the conflict. This reflects growing awareness of the role that climate-smart agriculture, reforestation, and water conservation can play in building resilience. Respondents recognize that proactive measures—such as early warning systems, sustainable grazing practices, and community-based resource management—can reduce vulnerability and promote ecological recovery.

The responses in table 2, reveal a strong consensus that the herders-farmers conflict in Omala LGA has profound and lasting impacts on environmental security. From deforestation and soil erosion to biodiversity loss and unsustainable resource exploitation, the ecological toll is evident and deeply intertwined with the social dynamics of the conflict. The findings emphasize the need for integrated interventions that combine peacebuilding with environmental restoration. This includes establishing regulated grazing zones, promoting climate adaptation, and embedding environmental safeguards into conflict resolution frameworks. Addressing these issues holistically will be essential for ensuring both ecological sustainability and long-term community resilience.

Discussion of Findings

i. Examining the Extent to Which Herders-Farmers Conflict Poses a Threat to Food Security

Findings from Omala LGA show that 75% of respondents were directly affected by the conflict, with 56.3% reporting economic hardship and 50% citing loss of farmland/livestock. These impacts translate into reduced agricultural output, disrupted farming cycles, and rising food prices. Nnaji et al. (2022) found that farmer-herder conflicts significantly increase food insecurity in rural Nigeria by reducing household access to food and income. The Food Insecurity Theory posits that conflict undermines the four pillars of food security: availability, access, utilization, and stability. This is evident in Omala, where 77.1% of respondents agreed that clashes disrupt farming activities, and farmers abandon land due to fear. The study by Al-Hikmah University (2023) corroborates this, showing that conflict leads to displacement and loss of productive assets, thereby threatening food systems.

ii. Evaluating the Effect of Herders-Farmers' Conflict on Environmental Security in Omala LGA

The data indicates that 77.1% of respondents believe unregulated grazing causes erosion and fertility loss, while 70.8% agree that conflict leads to deforestation and vegetation loss. These findings reflect the environmental degradation resulting from conflict-related activities such as bush burning, overgrazing, and displacement.

Ogbogu& Eze (2023) argue that climate change exacerbates these effects by altering rainfall patterns and increasing desertification. The Socio-Ecological Systems Theory explains how human-environment interactions, especially under stress, can lead to ecological collapse. Halidu&Abdullihi(2024) further notes that environmental degradation in North Central Nigeriaincluding Kogi Stateis both a cause and consequence of farmer-herder conflict.

Conclusion

The herders-farmers conflict in Omala LGA is not a singular or isolated phenomenon but a manifestation of deeper structural, environmental, and socio-political challenges. The study concludes that the conflict is driven by a convergence of factors, including resource scarcity, weak governance, climate stress, and socio-cultural fragmentation. These elements interact in ways that perpetuate violence, undermine livelihoods, and erode community resilience.

The consequences of the conflict are far-reaching. Food insecurity has become a persistent challenge, with agricultural production disrupted and access to food severely constrained. Environmental degradation continues to worsen, threatening the sustainability of natural resources and the viability of rural livelihoods. The people of Omala LGA, bear the brunt of the crisis, facing heightened risks and diminished opportunities.

Addressing the herders-farmers conflict requires a holistic and integrated approach. Solutions must go beyond reactive security measures and instead focus on integrated policy reforms such as ranching, inclusive governance, and community-based interventions. Land-use planning, climate adaptation, and peacebuilding must be prioritized to create sustainable pathways toward coexistence and development.

Recommendations

In light of the findings, the following recommendations are proposed to mitigate the herders-farmers conflict and promote human security in Omala LGA:

Enhance Food Security Interventions

To address the immediate threat to food security, emergency support should be provided to affected farmers, including access to seeds, tools, and financial assistance. Community-based food distribution systems should be developed to ensure that vulnerable households have access to nutritious food during periods of conflict.

Promote Sustainable Environmental Practice

Environmental degradation must be tackled through the promotion of sustainable land-use practices such as rotational grazing, ranching, reforestation, and soil conservation. Local governments should collaborate with environmental agencies to implement climate adaptation strategies that reduce ecological stress and prevent resource-based conflicts.

References

Adisa, R. S. (2012). *Management of farmer-herdsmen conflicts in North-Central Nigeria:Implications for agricultural and rural development*. Ilorin Journal of Peace Studies, 1(3), 1–12.

African Union. (2020). *Continental Framework for Conflict Prevention in Pastoral Zones*.

Aigbe, E. N., &Esezobor, O. M. (2024). *Farmer-Herder Conflict and its Implications for Food Security in Edo and Delta States*. Icheke Journal ssjhis.org

Blaikie, P., Cannon, T., Davis, I., & Wisner, B. (1994). *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. Routledge.

Blaikie, P., & Brookfield, H. (1987). *Land Degradation and Society*. Methuen.

Blaikie, P. (1985). The Political Economy of Soil Erosion in Developing Countries, Longman Development Studies Series. London and New York: Longman, 188 pp.695.

Blench, R. (2017). *Pastoralism in West Africa: The challenge of sustainability.* Journal of African Studies, 34(1), 45-62.

Bryant, R. L., & Bailey, S. (1997). *Third World Political Ecology*. Routledge.

Dimelu, M. U., Salifu, D. E., Enwelu, A. I. & Igbokwe, E. m. (2017). Challenges of Herdsmen-

Farmers Conflict in Livestock Production in Nigeria: Experience of Pastoralists in Kogi State. African Journal of Agricultural Research, 12 (8): 642-650.

Dyer, C. (2007). "A Suffolk Farmer in the Fifteenth Century". Agricultural History Review. 55 (1): 1-22. JSTOR 40276126

ECOWAS. (2019). *Transhumance and Regional Stability in West Africa*.

ESP (1992). Environmental security panel decides on two case studies,Delta 3,1, pp.6-7.

FAO. (2008). *An Introduction to the Basic Concepts of Food Security*. Food and Agriculture Organization of the United Nations. Link

Halidu, A. &Abdullihi, Z. (2024). Climate Change, Desertification and Farmers-herder Conflict in North-Central Nigeria: An Impact Analysis. University of Abuja.

International Crisis Group. (2017). *Herders against Farmers: Nigeria's Expanding Deadly Conflict*. Africa Report No. 252.

Iro, I. (1994). *The Fulani Herding System.* Washington: African Development Foundation.

Maxwell, S. (1996). *Food security: A post-modern perspective*. Food Policy, 21(2), 155–170.

National Bureau of Statistics (Nigeria). (2022). *Agricultural Performance Report*.

National Population Commission (2006). Reportof National Population Commission of the Nigerian Census.

Neumann, R. P. (2005). *Making Political Ecology*. Hodder Arnold.

Nnaji, A., Ma, W., Ratna, N., & Renwick, A. (2022). *Farmer-herder conflicts and food insecurity: Evidence from rural Nigeria*. Cambridge CoreCambridge University Press & Assessment

Ogbogu, C. O., & Eze, C. N. (2023). Climate change and herder-farmer conflict in Nigeria: A policy perspective. *Journal of Environmental Policy and Conflict Resolution*, 11(1), 23–39.

Okeke, O. E. (2014). Conflicts between Fulani Herders and Farmers in Central and Southern

Nigeria: Discourse on Proposed Establishment of Grazing Routes and Reserves: An International Journal of Arts and Humanities. Vol.3, Pp.66-84

Okolie, A. C., &Atelhe, G. A. (2013). The Political Ecology of Herdsmen-farmers Conflict in

Nasarawa State, Nigeria. *American International Journal of Contemporary Research.*

Okolie, A. C., &Atelhe, G. A. (2014). *Nomads against natives: A political ecology of herder /farmerconflicts in Nigeria*. American International Journal of Contemporary Research, 4(2), 76–88.

Okopi, O., Omogbehin, L., Ebimoboere, L.-O., &Idhomi, A. (2024). *Farmers-Herders Rivalry and Its Implications for Food Security and Household Income in Nigeria*. Journal of Policy and Development Studies African Journals Online

Peet, R., & Watts, M. (1996). *Liberation Ecologies: Environment, Development, Social Movements*. Routledge.

Pinstrup-Andersen, P. (2009). *Food security: Definition and measurement*. Food Security, 1(1), 5–7.

Tonah, S. (2006). *Managing farmer-herder relations in Ghana: Problems and prospects*. African

Journal on Conflict Resolution, 6(2), 49–66.

Robbins, P. (2012). *Political Ecology: A Critical Introduction* (2nd ed.). Wiley-Blackwell.

USAID. (1992). *Policy determination: Definition of food security*. United States Agency for International Development.

Walker, P. A. (2005). Political ecology: Where is the policy? *Progress in Human Geography,*

30(3), 382–395. https://doi.org/10.1191/0309132505ph559pr

Watts, M. J. (2013). *Silent violence: Food, famine, and peasantry in northern Nigeria*. University of Georgia Press.

World Bank. (1986). *Poverty and hunger: Issues and options for food security in developing countries*. World Bank Policy Study.

Yamane, T. (1967). Statistics: An introductory analysis (2nd ed.). Harper and Row.