Rural Land Use Planning Approach to Communal Clashes between Fulani Herdsmen and Yoruba Indigenous Farmers in Shaki, Oyo State, Nigeria

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Abstract

Communal clashes between herders and farmers are prevalent in Central and West Africa. Factors of climate variability, environmental degradation and socio-political upheaval have shifted pastoralist migration patterns and increased tensions between herders and farmers. This paper examined residents' perception of communal clashes between Fulani herdsmen and Yoruba indigenous farmers in Shaki with a view to improving rural land use governance in the region. Rural land management was conceptualised while primary and secondary data were sourced using a structured questionnaire and key informant interviews. The purposive sampling technique was used in selecting 161 hamlets from 491 for the household survey, while five chairmen of the landlords' association, one police district command officer and one local government chairman were interviewed. The study revealed that 61 per cent of the respondents are farmers, 63.3 per cent affirmed that the incidence of communal clashes, conflict of interest (80.8%) and lack of physical planning regulations (61.5%) are major causes of communal clashes. Loss of lives and properties (65.8%) is a major implication of communal clashes, while community-based organised security (67.7%) is used as a measure against herdsmen's attack. However, rural land use planning is required to reduce the incessant communal clashes between the Fulani herdsmen and Yoruba indigenous farmers in Shaki environs.

Keywords: Fulani herdsmen; Yoruba indigenous farmers; communal clashes; rural land use regulations; Shaki

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Introduction

According to Aver (2020), communal clashes between farmers and herders are prevalent and pervasive in Central and West Africa. From Mali to South Sudan, the Democratic Republic of Congo (DRC) to Nigeria. Climate variability, environmental degradation, and socio-political upheaval have shifted pastoralist migratory patterns and increased tensions between farmers and herders (Aremu and Abraham 2020). These changes have increased confrontations between farmers and herders, leading to violent conflicts, deaths, forced displacement and migration, erosion of inter-communal relationships, as well as the destruction of agricultural and livestock outputs (Chris, Kwaja and Ademola 2018). The Fula-speaking population, referred to as the Fulani, is distributed across northern regions of Central Africa, including Sudan and Egypt, and is primarily concentrated in West Africa (Vicente et al. 2019). According to Eyekpimi (2016), 85 per cent of the Fulani are nomadic, herding cattle, goats and sheep across vast dry grasslands, and they are isolated from the local farming communities, making them the world's largest pastoral nomadic group.

Across West Africa, the farmer-herder crisis is increasingly viewed not merely as a socio-economic challenge but as a major threat to national and regional security (International Crisis Group 2018). These conflicts have escalated from small-scale resource disputes into episodes marked by armed violence, destruction of livelihoods, and significant displacement of rural populations. Weak governance, limited security presence in rural areas, and proliferation of small arms have further intensified the scale and lethality of these confrontations (Bukari and Schareika 2015). The spillover effects, such as cross-border movement of armed groups, erosion of community trust, and disruption of local food systems, pose wider risks to stability in West Africa.

Nigeria, as a nation, is under a severe internal socio-economic and security threat (Nwokwu and Ogayi 2021). At a more general level, the threat has special economic, political and environmental dimensions. Each of these dimensions has greatly affected the nation's stability and can be traced to the Fulani herdsmen and farmers clash, ethnic militant armies, ethnic and religious conflicts, poverty, insurgency, armed robbery, corruption, economic sabotage and environmental degradation (Ogbette, Attama and Okoh 2018). The main Fulani sub-groups in Nigeria consist of Fulbe Adamawa, Fulbe Mbororo, Fulbe Sokoto, Fulbe Gombe, and the Fulbe Borgu (Eyekpimi 2016). Reducing food insecurity continues to be a major public policy challenge in developing countries. Almost one billion people worldwide are undernourished, many more suffer from micronutrient deficiencies, and the absolute numbers tend to increase further, especially in sub-Saharan Africa (Food and Agriculture Organisation 2015). Recent food price hikes have contributed to greater public awareness of hunger-related problems, also resulting in new international commitments to invest in developing countries' agriculture (Fan and Rosegrant 2008). In Nigeria, these conflicts are particularly pronounced due to environmental pressures in the North, which have triggered seasonal and, in some cases, permanent southward migration of herders seeking pasture and

water for their cattle (Moritz 2010). Shaki, in Oyo State, lies along one of these migratory corridors, making it a recurrent hotspot for clashes between predominantly Fulani pastoralists and Yoruba indigenous farming communities. Disputes often arise over farmland encroachment, crop destruction, and the perceived lack of accountability in conflict resolution processes (Ofuoku and Isife 2009).

The Fulani herdsmen and farmers' crisis poses a serious obstacle to a successful national economy. It has become a major threat to the national security and development of Nigeria because its increased incidence has caused diversion and removed government attention from some key areas of the economy, as huge human and material resources are channelled into curbing the menace (Ekong 2010). The Fulani herdsmen and farmers' crisis, no doubt, has a negative impact on the lives, properties and economic activities of Shaki in the Oke Ogun region of Nigeria. Though there is a dearth of quantitative evaluation of the catastrophic attacks, available statistics from Human Rights Watch in 2017 indicate that, between June 2015 and December 2016, 65 people died in more than 24 attacks in the Oke Ogun region of Oyo State, among which is the Shaki community. It was also reported that nearly 50 people were killed in Nasarawa Egor (Nasarawa State) and Agatu/Logo (Benue State) in June 2016, and recently, in Abraka, the 23 April 2017 crisis between Fulani herdsmen and farmers claimed lives. Adedokun (2017) asserted that, besides resulting in loss of lives, the Fulani herdsmen attack also led to the destruction of arable farmland and valuable properties worth several billions of naira in Shaki. Weakness in the management of rural land use planning to ensure adequate documentation of rights has contributed to this development (Jónsdóttir and Gísladóttir 2023). Against this background, the study examines the influence of rural land use planning on communal clashes between Fulani herdsmen and Yoruba indigenous farmers in Shaki with a view to improving rural land use governance in the region.

From a security perspective, the urgency of addressing farmer-herder conflicts cannot be overstated. Beyond the immediate human casualties, these clashes threaten national cohesion, exacerbate ethnic tensions, and open avenues for recruitment by insurgent and criminal networks operating in the Sahel and Gulf of Guinea regions (Raleigh and Kniveton 2012). Therefore, an integrated rural land use approach that considers ecological realities, livelihood needs, and inclusive governance mechanisms is critical for sustainable peacebuilding. Examining Shaki as a case study offers valuable insights into localised conflict drivers, while contributing to broader regional strategies to pre-empt violence and foster coexistence.

Problem Statement

Fulani herdsmen and Yoruba farmers clash in some parts of Shaki, Nigeria, which has put farming activities to a halt, thereby disrupting farm product distribution. Farmers within this region find it hard to go to their farms as well as to get enough food crops to the market, thereby increasing the prices of commodities in the market. The government has spent huge amounts of money on the renovation of buildings and infrastructure that

have been destroyed by these religious conflicts. Also, a huge amount of funds from the country's budget has been spent on the compensation of families who have lost their loved ones to the Fulani herdsmen and farmers' crisis. Also, a huge amount of money is being spent on the acquisition of weapons, ammunition in order to equip the military to handle the situation on the ground (Obi, Nwobi, and Chukwurah 2020). All these have affected Nigeria's economy. Also, in Tede, which shares a boundary with Shaki, a recent Fulani herdsmen and farmers clash took place on 23 January 2018. This caused serious damage to farmlands, claimed lives and disrupted the socio-economic activities of the people, leading to an increase in the price of food items and commodities. This has disrupted the peaceful coexistence of the Hausa people and the indigenes of the Tede community.

Purpose of the Study

Rural land management typically encompasses zoning, which can be defined as a regulation of different types of activities that can be accommodated on a given piece of land, as well as the amount of space devoted to those activities, and the ways that buildings and other physical structural developments may be situated and shaped (Bako and Balogun 2023). Going by this definition, it is expected that rural land use would be well-planned and coordinated to accommodate different uses such as grazing, farming, residential, commercial, and industrial and so on, with a view to avoiding or minimising land use conflict, especially between herdsmen and farmers. This study was not intended to break entirely new ground; rather, it was undertaken on the premise that it would add to the existing literature in the area of rural land use and planning. In addition, this study is very necessary, especially at this point in Nigeria, with the development of incessant communal clashes between herdsmen and farmers. This study is expected to guide professionals, policy makers, and community stakeholders whose livelihoods are being affected by the development of rural insecurity. Moreover, the findings will also provide useful background information to further research in the area of rural land use conflict management and resolution. To accomplish this purpose, the specific objectives are to:

- explain the conceptualisation of rural land management;
- ascertain the prevalence and causes of communal clashes between Fulani herdsmen and Yoruba farmers;
- investigate the implications of communal clashes between Fulani herdsmen and Yoruba farmers on the physical environment;
- discuss the provision of planning regulations on grazing and farmland activities; and
- suggest planning and policy measures aimed at improving rural land use governance.

Conceptualising Rural Land Management

The concept of rural land management is pivotal to addressing conflicts between Fulani herdsmen and Yoruba indigenous farmers in Shaki, Oyo State, Nigeria. The interplay between rural land use planning and effective land management practices can provide pathways for conflict resolution and sustainable coexistence. The clashes between Fulani herdsmen and Yoruba farmers are often rooted in competition for land and resources, exacerbated by demographic pressures, climate change, and historical land use practices. Fulani herders, traditionally nomadic, seek grazing areas, while Yoruba farmers need stable land for crop cultivation. This dichotomy creates friction as herders traverse through farmland (Ogunbameru and Olikeh 2020).

According to Barnet (2004), rural land management is historically traced to the practice of zoning in the United States of America in the late 19th and early 20th centuries to protect the interests of property owners. The operationalisation was found to be constitutionally sound by the Supreme Court decision of *Village of Euclid v. Ambler Realty Co*. in 1926. It was not far from this that the Standard State Zoning Enabling Act gave authority to the states to regulate land use (American Planning Association 2011).

Rural land management typically encompasses zoning, which can be defined as a regulation of different types of activities that can be accommodated on a given piece of land, as well as the amount of space devoted to those activities, and the ways that buildings and other physical structural developments may be situated and shaped (Barnet 2004). Going by the definition of rural land management, it is expected that a rural setting should be well-planned and integrated. This can be achieved through succinct land policy formulation and operationalisation. Despite the established land policies, Nigerian settlements are still confronted with land degradation, desertification, flooding, erosion and many others due to uncontrolled population expansion. These led to the manifestation of slums, ghettos, unauthorised development, land use conflict and many other more, which is contrary to the American Planning Association's (2011) suggestion that the goal of land management is to further the welfare of people and their communities by creating convenient, equitable, efficient, and attractive environments for present and future. More so, Nigerian urban and rural settlements contradict the expectation that efficient rural land use management should bring about environmental conservation, restraint of sprawl, minimisation of transport costs, prevention of land use conflicts and reduction in exposure to pollutants.

Planners assume that regulating the use of rural land management will change the patterns of human behaviour and be beneficial. The first assumption that land use regulation will bring about changes to human behaviour is widely accepted, while the beneficial changes are contested and depend on the location and regulations being discussed (American Planning Association 2011). These assumptions are not evident in the suburbs of major cities in Nigeria due to insufficient and a virtual lack of approved layout plans. Population pressure, coupled with competitiveness in major cities of

Nigeria, pushes many people to the outskirts, resulting in unapproved development and consequently giving birth to the manifestation of slum settlements.

According to Bahl and Linn (1992), rural land management responsibility in African cities is saddled on rural physical planning, rural administration, and social amenities provision. This represents several areas of responsibility, which form the basis for the key administrative departments. Wekwete (1992) expressed that the main stakeholders in rural land management include central government, local government, non-governmental agencies, private sector business planners, relevant professionals, rural households, and the various segments of civil society. These groups have interests in how land is managed and create a dynamic environment of both competing and complementary interests. Traditionally, local government represents the public interest, and in particular, the management of externalities created as a result of the operations of the different interest groups. Like the central government, local government aims to ensure that public interest is maintained and regulates activities to ensure free and fair competition. The intention is to provide a restraint on the operation of land use to serve private interests and to ensure the protection of all interest groups in society.

Rural land management has continued to be viewed in terms of addressing problems of land, environment, infrastructure, poverty, and finance, which are the traditional domains of city and town management. A typical municipal/city government operates on the basis of departments (e.g., health, town planning, engineering), which are responsible for providing and maintaining services. These departments are usually linked to the operations of central government ministries that are responsible for managing cities and rural areas. But the major trend in most towns and rural areas of Nigeria has been that of an increasing crisis in terms of failure to provide facilities, amenities and services that will make land management policy actualise the planners' assumptions of a changing pattern of human behaviour and be beneficial. Planners and other relevant professional bodies in Nigeria have advocated for improved urban and rural land management in building capacities at local and national levels.

Effective rural land management focuses on the sustainable use of land resources to maintain agricultural productivity while protecting the environment (Mann and Abubakar 2023). In the context of Oyo State, integrating agricultural practices with grazing management can enhance land productivity and reduce conflict. Engaging local communities in land management decision-making is crucial. Participatory approaches can help create a shared understanding of land use dynamics, facilitating cooperation between farmers and herders (Ogunleye 2019). Implementing spatial planning embodies a practical response to land use conflicts. Creating designated zones for farming, grazing, and communal lands can reduce competition (Omotayo and Olasunkanmi 2021). Such planning should involve stakeholders in mapping current land uses and historical rights. Leveraging existing customary land tenure systems can offer a framework for negotiation. Recognising the traditional rights of both Fulani and

Yoruba communities in land use planning processes can empower local conflict resolution mechanisms (Ibitoye et al. 2022).

Establishing conflict resolution frameworks that incorporate traditional dispute resolution processes can foster dialogue. This multi-stakeholder approach helps in managing disputes without parties resorting to violence (Adeshina and Adebayo 2020). The Nigerian government can play a significant role by drafting policies that protect pastoralist rights while safeguarding farmers' interests. A regulatory framework addressing land use, grazing reserves, and conflict resolution is crucial for balancing these interests (Mamman and Adamu 2021). Encouraging agro-pastoral practices, where both crop cultivation and livestock rearing coexist, can enhance productivity and resource management. Such integrated systems are essential for ensuring food security and reducing land use conflicts (Badejo and Togun 2023). Educating both farmers and herders about sustainable land practices and the ecological impacts of overgrazing or intensive farming is vital. Awareness campaigns can foster respect for the land and its resources, promoting cooperation over competition.

Materials and Methods

Saki is situated in the Northern part of Oyo State, with an estimated land area of 6,410 km^2 and is administratively in Oyo North Senatorial District. It is located between latitude $8^0\,2^1$ and $9^0\,0^1$ north of the Equator and between longitude $2^0\,4^1$ and $3^0\,50^1$ East and West of the Greenwich Meridian, respectively, as well as about 1,245m above sea level. It is bounded in the North by Baruten Local Government (Kwara State), in the South by ATISBO Local Government Area, in the West by the Republic of Benin and in the East by Saki East Local Government Area (Figure 1). According to the National Population Commission (1963), the population of Saki was put at 139,601, which grew to 230,713 in 1991 and was estimated to be 268,333 in 1996. Moreover, the 2006 National Population Census's results put the population of Saki at 278,002, which shows that Saki and its environs have experienced steady growth in population over the period of time. The population of Saki and its environs is substantive and significant enough to be toiled with at the expense of communal clashes that claim lives. Therefore, there is a need to protect this large human population from mass slaughter or massacre due to incessant communal clashes between Fulani herdsmen and Yoruba indigenous farmers.

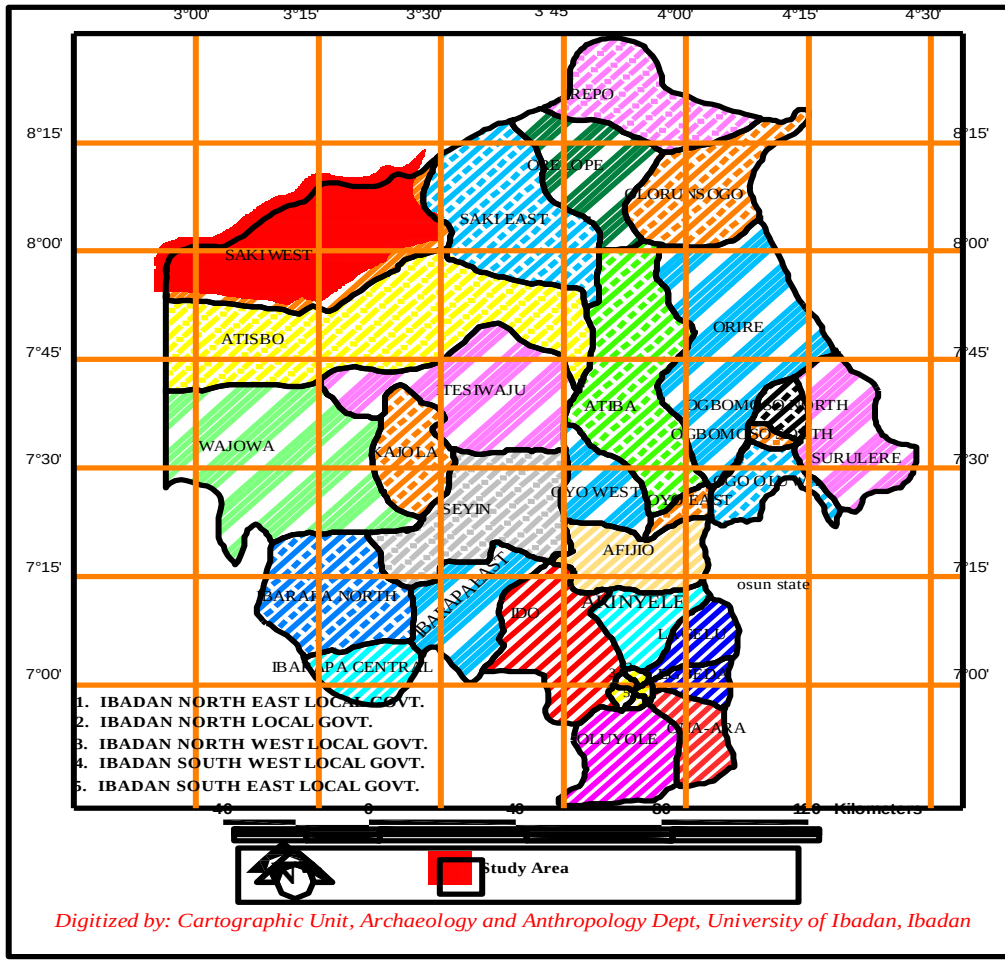

Figure 1: Map of Saki West Local Government Area in the Context of Oyo State Map

The research adopted a mixed method design involving a combination of quantitative and qualitative methods, while a purposive sampling technique was used in data gathering. The mixed method research design was used in collecting quantitative and numbered data using a closed-ended questionnaire, while qualitative data were content analysed using Key Informant Interview (KII). Twenty-two (22) villages that are experiencing communal clashes between Fulani herdsmen and Yoruba indigenous farmers were identified in Saki West Local Government Area (LGA) based on the National Population and Housing Commission (2006) and Google Earth. Five villages that are mostly affected by communal clashes between Fulani herdsmen and Yoruba indigenous farmers were purposively selected. Using the sample ratio of 33 per cent, a total of 161 villages' sample sizes were selected from the sampling frame of 491 for the household survey (see Table 1). To gather relevant primary data from eligible respondents, two sets of questionnaires were used. The first was served on the household

heads (home owners or tenants) in the selected nomadic pastoralists' dwellings and sedentary communities who have resided in their present abodes for at least a year. The second questionnaire was for the heads of selected communities and Local Government Area (LGA) chairmen, where nomadic pastoralists are predominant. A structure questionnaire on: socio-economic characteristics (age, sex, income); rural land use governance (planning permit for grazing, planning permit for farmland, zoning regulations); perception on the experience of personal safety (safe, fairly safe, unsafe); measures of personal safety (weapons of self-defence, traditional/spiritual, technological devises); indicators of personal safety (community patrolling, street level crime data, prevalence of petty crime, criminal gang activity); community safety (safety of walking in the day and safety of walking in the dark); indicators of communal unrest (kidnapping, social unrest, armed robbery, rape, burglary, insurgency); and causes of communal clashes (poverty, unemployment, political activities, land grabbers ethnic differences) was administered to the household heads. Key Informant Interviews were conducted with stakeholders [five Village Heads or Baale, one Police District Command Officers and one Local Government Chairman]. The major problems encountered in the study areas include the reluctance of the security stakeholders and selected community residents to provide the required information. Several methods were employed to ensure that interviews were granted, such as telephoning, face-to-face, recording, and interviewees responding without the presence of the interviewer. This took a lot of time to complete. Transcription of responses also took time as different methods, as convenient for the interviewee, were explored. Despite the limitations, efforts were made to get data on the rural land use planning approach to communal clashes between Fulani herdsmen and Yoruba indigenous farmers in Shaki, Oyo State, Nigeria, through instruments of a structured questionnaire and Key Informant Interview.

Table 1: Selected villages, existing number of buildings, updated population and sampled buildings

S/N	**Name of Selected villages**	**Number of existing buildings by the National Population Commission (2006)**	**Updated number of buildings using Google Earth (2023)**	**Sample buildings using a 33% sample ratio**
1	Baabo	39	43	14
2	Agoladi	51	58	19
3	Ekokan	176	182	60
4	Mua	168	179	59
5	Onigbongbo	10	14	4
	Total	444	491	161

Source: Regular Household, Population and Housing Census (2010), National Population Commission (2006), Google Earth (2023)

Results and Discussion

Demographic characteristics from Table 2 revealed that 77.6 per cent of the respondents were male, while 22.4 per cent were female. This implies that the proportion of males in the sample was greater than that of females. The result on the respondents' age distribution shows that 1.9 per cent of the respondents were in the age range from zero to 19 years; 21.7 per cent were between 20 and 34 years; 54.7 per cent were in the age range from 35 to 49 years, while 21.7 per cent were 50 years and above. This indicated that the majority of the respondents were in ages between 35 and 49 years. Also, the type of occupancy of the respondents shows that 19.9 per cent were tenants, while 80.1 per cent were landlords. More so, 3.1 per cent of the respondents have spent one to nine years in the communities under study; also, 16.1 per cent have spent 10 to 19 years in the location, while 23.6 per cent and 52.2 per cent have spent 20 to 29 years and over 30 years, respectively. It could be observed that the majority of the respondents have spent over 30 years in their location. Moreover, 61.5 per cent of the respondents were farmers, 19.9 per cent were traders, 9.3 per cent were transporters, and 8.1 per cent and 1.2 per cent were herders and civil servants, respectively. This indicates that the majority of the respondents were farmers, which confirms their indigeneity.

Table 2: Demographic and socio-economic characteristics

Variable	Level	Frequency	Percentage
Gender	Male	125	77.6
	Female	36	22.4
Age	0–19yrs	3	1.9
	20–34yrs	35	21.7
	35–49yrs	88	54.7
	50 yrs and above	35	21.7
Type of Occupancy	Tenant	32	19.9
	Landlord	129	80.1
Year of Residency	1–9yrs	5	3.1
	10–19yrs	26	16.1
	20–29yrs	46	28.6
	30 yrs and above	84	52.2
Educational Status	No formal education	27	16.8
	Primary school	47	29.2
	Secondary school	58	36.0
	Technical school	10	6.2
	Tertiary	19	11.8
Occupation	Farmer	99	61.5
	Trader	32	19.9
	Transporter	15	9.3
	Herder	13	8.1
	Civil servant	2	1.2

Source: Field Survey 2023.

Table 3 shows the prevalence of communal clashes in the study areas. The result revealed that 28.6 per cent of the respondents said communal clashes are not prevalent, while 15.5 per cent said it is fairly prevalent. 44.1 per cent of the respondents agreed that it is prevalent, 3.7 per cent said it is highly prevalent, and 8.1 per cent were indifferent. Invariably, 63.3 per cent affirmed the incidence of communal clashes between Fulani herdsmen and Yoruba indigenous farmers, which calls for concern. This confirmed the earlier assertion that communal clashes between farmers and herders are prevalent and pervasive in Central and West Africa (Aver 2020).

Table 3: Prevalence of communal clashes in Shaki community areas

Occurrence of Communal Clashes	Frequency	Percentage
Not Prevalent	46	28.6
Fairly Prevalent	25	15.5
Prevalent	71	44.1
Highly Prevalent	6	3.7
Indifference	13	8.1
Total	161	100

Source: Field Survey 2023.

Table 4 shows the result of the analysis on the causes of communal clashes between the Fulani herdsmen and Yoruba farmers. The result revealed that 39.2 per cent of the respondents agreed that poverty is the major cause of clashes, while 60.8 per cent disagreed (Mean=2.36, SD=1.03). Also, 21.2 per cent agreed that unemployment is the cause, while 78.8 per cent disagreed (Mean=2.01, SD=0.92). More so, 13.6 per cent agreed that the communal clashes are caused by political activities, while 86.4 per cent disagreed (Mean=1.81, SD=0.84). In the same vein, 80.8 per cent of the respondents agreed that conflict of interest was the major reason for the clashes, while 19.2 per cent disagreed (Mean=3.18, SD=0.89). Moreover, most respondents disagreed that land grabbing (Mean=2.14, SD=0.97), ethnic difference (Mean=1.70, SD=0.83), and religion (Mean=1.61, SD=0.69) are the causes of communal clashes between herdsmen and farmers. It could be observed that mean values of land grabbing incidents (Mean=2.14), conflict of interest (Mean=3.18), and poverty (Mean=2.36) are very high. Also, conflict of interest has the highest mean value. Therefore, an inference could be made that communal clashes between Fulani herders and Yoruba farmers are caused by a conflict of interest. This aligns with the result of qualitative data collected and expressed as follows:

> There is much to tell you as you know that we farmers are into farming, and we cannot sleep on the farm. The herdsmen will lead their cattle to our farmland to eat our cassava and yams and destroy all our crops. They usually leave the farm before we return to the farmland. Yesterday, all the peppers I planted have destroyed everything, I mean the Fulani herdsmen (Village Head).

The head of vigilante in the region is also of the opinion that:

> In all our areas here, farming is our major occupation, and farmland is immovable; it is the cattle that move into the farmland. We have been coexisting here together but sometimes when they or their children's rear cattle out of their range, they do wreak havoc on our farmland. Sometimes when you challenge them, they may bring out cutlass to fight us, most especially their children (Vigilante Head 2023).

Table 4: Causes of communal clashes between the Fulani herdsmen and Yoruba farmers

Causes	Strongly Agree%	Agree%	Disagree%	Strongly Disagree%	Mean	Standard Dev.
Poverty	3119.3(%)	32(19.9%)	62(38.5%)	36(22.4%)	2.36	1.03
Unemployment	17(10.6%)	17(10.6%)	78(48.4%)	49(30.4%)	2.01	0.92
Political activities	11(6.8%)	11(6.8%)	75(46.6%)	64(39.8%)	1.81	0.84
Conflict of interest	70(43.5%)	60(37.3%)	21(13.0%)	10(6.2%)	3.18	0.89
Land grabbing	23(14.3%)	20(12.4%)	75(46.6%)	43(26.7%)	2.14	0.97
Ethnic differences	3(1.9%)	29(18.0%)	45(28.0%)	84(52.2%)	1.70	0.83
Religion	5(3.1%)	4(2.5%)	76(47.2%)	76(47.2%)	1.61	0.69

Source: Field Survey 2023.

Table 5 shows the result of communal clashes between Fulani herders and Yoruba farmers; it could be observed that 65.8 per cent of the respondents agreed that they experienced loss of lives and properties, while 34.2 per cent did not. Also, 46.0 per cent agreed that they experienced a decrease in the production of consumable goods, while 54.0 per cent did not. Again, 29.2 per cent agreed that they experienced fear of living in the community, while 70.8 per cent said they did not, and 9.3 per cent agreed that they experienced a decrease in working personnel, while 90.7 per cent did not. The result indicated that the major and significant implication of communal clashes between herders and farmers in the study area is the loss of lives and properties. This validated the assertion of Chris, Kwaja, and Ademola (2018) that communal clashes have increased confrontations between farmers and herders, leading to violent conflicts, deaths, forced displacement and migration, erosion of inter-communal relationships, as well as the destruction of agricultural and livestock outputs. The result corroborates the qualitative findings that:

> … whenever we are injured, we usually resort to police and explain our ordeal to them. Sometimes the police do plead with us to allow peace to reign and when they destroy our farm, they do plead with them to compensate us (Village Head 2023).

Table 5: Implications of communal clashes between Fulani herders and Yoruba farmers

Consequences of communal clashes	Experienced n (%)	Not Experienced n (%)
Loss of lives and properties	106 (65.8)	55 (34.2)
Decrease in the production of consumable goods	74 (46.0)	87 (54.0)
Fear of living in the community	47 (29.2)	114 (70.8)
Decrease in working personnel	15 (9.3)	146 (90.7)

Source: Field Survey 2023.

Table 6 presents the results of the analysis on the popular forms of security challenges in the study area. The result revealed that five per cent of the respondents agreed that insurgency is the common security challenge experienced, while 95.0 per cent disagreed (Mean=1.61, SD=0.66). The result further revealed that 1.9 per cent of the respondents agreed that they experienced kidnapping, while 98.1 per cent disagreed (Mean=1.54, SD=0.60). The result also revealed that 14.9 per cent of the respondents agreed that they experienced communal clashes, while 85.1 per cent disagreed (Mean=1.93, SD=1.10). It could also be observed that five per cent of the respondents agreed that they experienced social unrest, while 95.0 per cent disagreed (Mean=1.68, SD=0.63). Again, 31.0 per cent of the respondents agreed that robbery/armed robbery constitutes a major security challenge that they experienced, while 69.0 per cent disagreed (Mean=2.01, SD=1.01). More so, 8.0 per cent agreed is a terrorist attack (Mean=1.60, SD=0.67), 6.0 per cent agreed is rape (Mean=1.61, SD=0.67), 5.6 per cent agreed that it is housebreaking (Mean=1.65, Sd=0.65), 8.7 per cent said is murder (mean=1.67, SD=0.67), 55.9 per cent agreed is mugging/stabbing (Mean=2.48, SD=1.02), 40.9 per cent agreed is car hijacking/theft (Mean=2.28, SD=1.02). It can be deduced that communal clashes (14.9%) and robbery/armed robbery (31.0%) constitute the largest percentage of the security challenges in the study area because the presence of one leads to the other.

Table 6: Popular forms of security challenges in Shaki community areas

Security challenges	SA%	A%	D%	SD%	Mean	Std. Dev.
Insurgency	4(2.5%)	4(2.5%)	79(49.1)	7(46.0)	1.61	0.66
Kidnapping	3(1.9%)	0(0.0%)	78(48.4%)	80(49.7%)	1.54	0.60
Communal clash	6(3.7%)	18(11.0%)	84(52.2%)	53(32.9%)	1.93	1.10
Societal unrest	3(1.9%)	5(3.1%)	90(55.9%)	63(39.1%)	1.68	0.63
Robbery/Armed robbery	16(9.9%)	34(21.1%)	47(29.2%)	64(39.8%)	2.01	1.01
Terrorist attack	2(1.2%)	11(6.8%)	69(42.9%)	79(49.1%)	1.60	0.67
Rape	3(1.9%)	8(5.0%)	74(46.0%)	76(47.2%)	1.61	0.67
Housebreaking	3(1.9%)	6(3.7%)	83(51.6%)	69(42.9%)	1.65	0.65
Murder	2(1.2%)	12(7.5%)	78(48.4%)	69(42.9%)	1.67	0.67
Mugging/stabbing	25(15.5%)	65(40.4%)	33(20.5%)	38(23.6%)	2.48	1.02
Car hijacking/ theft	26(16.1%)	40(24.8%)	48(29.8%)	47(29.2%)	2.28	1.06
Gang-related crime	2(1.2%)	8(5.0%)	72(44.7%)	79(49.1%)	1.58	0.65
Child abuse	0(0.0%)	0(0.0%)	81(50.3%)	80(49.7%)	1.50	0.50

Source: Field Survey 2023.

Table 7 presents the measures taken by the community against insecurity. The result revealed that 70.8 per cent of the respondents agreed that they used weapons for defence, while 29.2 per cent said it was not used. Also, 24.8 per cent agreed they used traditional/spiritual power, while 75.2 per cent said they did not. Again, 0.6 per cent of the respondents agreed that they used closed-circuit television, while 99.4 per cent said it was not. It could be observed that out of 100 per cent of respondents for each measure, 28.0 per cent said they used security guards, 67.7 per cent said they used community-based organised security, 3.1 per cent used a member of a gang, 7.4 per cent used high wall fence, 28.0 per cent used dogs, 2.4 per cent used burglary alarm, 3.1 per cent said they used a security door, while 21.7 per cent used the police/military. The result obtained from the analysis is in line with the qualitative findings on means of protecting the community members, that:

> … in this Saki, we don't have much policemen, it is the local vigilante that are assisting on security challenges. Because we the local vigilante are many and when there is any challenge, they call us and we follow them to the scene (Vigilante Head 2023).

The result also aligns with the opinion of the community-based organised security member, who said that:

> whenever we discover that a problem is about to happen to any of our fellows, we use to help each other to repel it. They (Fulani herdsmen) usually go about with a knife and cutlass and claimed that, they are using them to protect themselves. But we made a policy that whenever they are approaching the community, they should find where to keep their weapons (Village Head 2023).

The vigilante head also added that…

> … as a coping strategy, we used to invite them when the planting season is drawing near or during the festive period as a way of passing a message to tell them to distance themselves from our farmlands. We used the festive period to tell their leaders and the police on peaceful co-existence. That's the specific period when both parties will be called and cautioned. This is what usually give us confidence to have free movement without fear (Village Head 2023).

This implies that community-based organised security outfit plays a significant part in securing the territories from herdsmen attacks in the selected communities in Saki.

Table 7: Measures against herdsmen's attack

Measures	**Used%**	**Not used%**
Weapons of defence	47 (29.2%)	114 (70.8%)
Traditional/ Spiritual power	40 (24.8%)	121(75.2%)
Closed-circuit television	1 (0.6%)	160 (99.4%)
Security guard	45 (28.0%)	116 (72.0%)
Community-based organised security	109 (67.7%)	52 (32.3%)
Member of a gang	5 (3.1%)	156 (96.9%)
High wall fence	12 (7.4%)	149 (92.5%)
Dogs	45 (28.0%)	116 (72.0%)
Burglary alarm	4 (2.4%)	157 (97.5%)
Specific security door	5 (3.1%)	156 (96.9%)
Police/military	35 (21.7%)	126 (78.3%)

Source: Field Survey 2023.

Table 8 shows the magnitude of intervention of different security actors in the study area. The result revealed that 3.1 per cent of the respondents agreed that federal/state government security actors' involvement is above average, 45.3 per cent said that they are averagely involved, 34.8 per cent agreed that their involvement is below average, while 16.8 per cent said their involvement was poor (Mean=2.35, SD=0.79). In the same

vein, 6.2 per cent of the respondents agreed that the involvement of non-governmental security actors is above average, 24.8 per cent said they were averagely involved, 48.4 per cent said it was below average, while 20.5 per cent said it was poor (Mean=2.17, SD=0.82). More so, 67.7 per cent agreed that the involvement of community-based organised security actors is above average, 31.1 per cent agreed that they are averagely involved, while 1.2 per cent said their involvement is below average (Mean=3.66, SD=0.50). The result shows that the proportion of respondents who indicated community-based organised security was involved is more than those who said it was government security and those who said it was non-government. This result also corroborates the qualitative information obtained from a community leader, who said that:

> …is it during this present administration that you know about the brutal communal clashes that is happening between Fulani and Yoruba people in Ibarapa area? The Governor also played his part but the herders have not stopped ravaging everywhere. It is because in our area, saboteur has not followed us in our outing/parading but when you go to the police station to lodge complaints on invaders they will ask if you were able to capture them and they will call the community leaders to come and settle the case. Nobody gives them permission to stay on their land; they are just ravaging all the land. They will be claiming we are all Nigerians and how can you be chasing fellow citizens out of their country. We are working sleeplessness in our farms, they may bye pass us with their cattle in the morning, immediately they discover we are no longer in the farm they resort to our farm estate to feed their cattle (Village Head 2023).

One of the vigilante members also reported that:

> … we are the sons of the soil, the police may be reposted after some years as heir customs, we are the one helping the police in their investigation because we know our territories. There is no Fulani in this land that we don't know where he resides. When Fulani challenge any of our member, we are the one who use to enlighten the police or follow policemen to the scene. Our is to arrest the troublesome Fulani and deliver him to the police, sometimes we may not know how the case ended (Vigilante member 2023).

Table 8: Major security actors in Shaki community areas

Security Actor	Above Average%	Average%	Below Average%	Poor%	Mean	Std. Dev.
Federal/State government security	5(3.1%)	73(45.3%)	56(34.8%)	27(16.8%)	2.35	0.79
Non-government security bodies	10(6.2%)	40(24.8%)	78(48.4%)	33(20.5%)	2.17	0.82
Community-based organised security actors	109(67.7%)	50(31.1%)	2(1.2%)	0(0.0%)	3.66	0.50

Source: Field Survey 2023.

Table 9 presents the forms of physical planning regulation available in the study area. It could be observed that 61.5 per cent of the respondents agreed that no planning with respect to the spatial arrangement is available in the area. More so, 27.3 per cent of the respondents agreed that they were given building plan approval. In the same vein, 6.2 per cent collected layout plan approval, while 3.1 per cent and 1.9 per cent collected land use zoning and interim permit, respectively. From the result, it could be observed that the majority of the respondents did not collect approval or permit of any kind before building, farming or grazing, hence, the major reason for land use conflict.

Table 9: Physical planning regulation available in the Shaki region

Form of Planning Regulation	Frequency	Percentage
No planning	99	61.5
Building plan approval	44	27.3
Layout plan approval	10	6.2
Land use zoning	5	3.1
Interim permit	3	1.9

Source: Field Survey 2023.

Table 10 presents the crosstabulation of the responses of respondents on whether they collect physical planning approval/permit of any kind before grazing activities. The result shows that of 161 respondents, only 51 collected approvals for grazing. Out of which 13 respondents obtained interim, and 19 did not disclose whether interim or permanent. The result indicates that most residents did not obtain a physical planning permit for grazing from government authorities or individuals. Most herders have no physical planning permit for grazing. They intrude on people's farms without consent. The result also corroborates the report obtained from qualitative analysis that:

> ….. there is much to tell you as you know that we farmers are into farming and we cannot sleep in the farm. The herdsmen will lead their cattle to our farmland in the mid-night to eat our cassavas and yams and to destroy all our crops. They leave the farm as early as possible before we return to the farmland the following morning. Yesterday, all the peppers I planted, they have destroyed everything, I means the Fulani herdsmen (Village Head 2023).

Table 10 also presents the available physical planning approvals for farmland. The result shows that 65 farmers (out of 161 respondents) agreed that they sought approval for their farming activities. From the total 65 farmers that got approval for farming, only 11 respondents have permanent approval, 29 were on interim, and 25 could not disclose the nature of their approval. This indicates that rural land use planning/approval is not given enough consideration in Oyo State, Nigeria.

Table 10: Physical planning approval for grazing and farming activities

		Undisclosed	Interim Planning	Permanent	Total
Approval for Land Grazing	Yes	19	13	19	51
	No	98	12	0	110
Total		117	25	19	161
Approval for Farmland	Yes	25	29	11	65
	No	90	5	1	96
Total		115	34	12	161

Source: Field Survey 2023.

Table 11 shows the results on the effectiveness of regulatory physical planning approval in curbing herder-farmers clashes. It reveals that 21.1 per cent of the respondents agreed that the regulatory approval is highly effective; 56.5 per cent are of the opinion that it is moderately effective, while 7.5 per cent agreed that its level of effectiveness is low, and 15.0 per cent agreed that it is not effective. The result shows that government regulatory physical planning approval would be effective in curbing land use disputes between the Fulani herdsmen and Yoruba indigenous farmers to some extent.

Table 11: Effectiveness of physical planning approval on grazing and farming activities

Level of Effectiveness	Frequency	Percentage
Highly effective	34	21.1
Averagely effective	91	56.5
Low effective	12	7.5
Not Effective	24	15.0

Source: Field Survey 2023.

Table 12 shows the result of regression analysis for the influence of land use planning regulation on grazing and farming activities in the rural area of Shaki. The result shows the R value of 0.503, which indicates that there is a high coefficient of linear relationship between the independent and dependent variables. The R^2 of 0.253 indicates that independent variables accounted for 25.3 per cent of the total variance observed in the dependent variable (grazing and farming activities).

ANOVA results also show that the independent variable (land planning regulation) is a reliable predictor of grazing and farming activities ($F_{(1,\ 159)}$ =53.885, $p<0.005$). Therefore, land planning regulations made a significant contribution to grazing and farming activities. The coefficient of contribution indicates that the more the effective use of planning regulation, the more the control on the practices of grazing and farming activities (β= -.503, t= -7.341). Thus, it could be concluded that there is a likelihood of control on the practices of grazing and farming activities if all the rural land use planning regulations are put in place. More so, it will reduce the incessant communal clashes between the Fulani herdsmen and Yoruba indigenous farmers in Shaki environs.

Table 12: Influence of land use planning on grazing and farming activities in Shaki

Model		**Sum of squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	9.166	1	9.166	53.885	.000b
	Residual	27.045	159	.170		
	Total	36.211	160			
Model Summary						
Model		1				
R		.503a				
R Square		.253				
Adjusted R Square		.248				
Std. Error of the Estimate		.41243				
β= -.503						
t= -7.341						

Table 13 presents the results of the analysis on the suggested physical planning regulation and policy for farming and grazing activities. 28.6 per cent suggested the designation of cattle route, while 71.4 per cent did not. Also, 27.3 per cent suggested designation of cattle range, while 72.7 per cent did not. More so, 44.7 per cent suggested designation of farmland, while 55.3 per cent disagreed, and lastly, 6.8 per cent suggested review of the land tenure system, while 93.2 per cent did not. Designated farmland (44.7%) takes the highest percentage among the suggested planning regulations for farming and grazing activities in the study area. This implies that the farmers in this region are clamouring for rural land use zoning that will be effective enough in protecting their farms from being ravaged by cattle.

Table 13: Suggested planning regulations for farming and grazing activities in the Saki Area

Planning Policy for Farming and Grazing	Yes	No
Designated cattle route	46 (28.6%)	115 (71.4%)
Designated cattle range	44 (27.3%)	117 (72.7%)
Designated farmland	72 (44.7%)	89 (55.3%)
Review of the tenure system	11 (6.8%)	150 (93.2%)

Source: Field Survey 2023.

Conclusion, Recommendations and Areas for Future Research

Conclusion

This study has examined the rural land use dimensions of communal clashes between Fulani herdsmen and Yoruba indigenous farmers in Shaki, Oyo State, Nigeria. By situating the local experience within the broader West African farmer-herder conflict context, the research highlights how competing access to land and water resources, exacerbated by climate variability, population growth, weak land governance, and inadequate conflict resolution mechanisms, fuel recurrent violence. The study contributes to existing scholarship by integrating an agro-ecological lens with security analysis, offering a nuanced understanding of the interplay between rural land use patterns and the escalation of communal conflicts. It underscores the urgency of proactive, multi-sectoral interventions to promote sustainable land management, mitigate inter-group tensions, and safeguard rural livelihoods against destabilising violence.

Recommendations

Policymakers are required to evolve actions in the following areas: strengthen land tenure systems by reviewing and harmonising statutory and customary land laws to provide clarity on ownership, usage rights, and dispute resolution, especially in mixed farming pastoral zones. The implementation of participatory land use planning will be strengthening collaboration between the herders and the farmers by establishing locally driven land use committees involving farmers, herders, traditional rulers, and local government authorities to ensure equitable resource allocation; and incentivise conflict prevention initiatives by providing grants and subsidies for joint community projects (e.g., shared grazing reserves and fodder banks) that foster cooperative engagement. Security agencies are advised on how to improve early warning and rapid response mechanisms by deploying community-based intelligence networks to detect tensions early and mobilise trained mediators before escalation. The movement of arms in rural

areas must be regulated by strengthening border controls and monitoring the proliferation of small arms that fuel violence.

Officers must be trained in cultural sensitivity and community policing by incorporating local norms and practices into security operations to build trust between security personnel and rural communities. Traditional and community leaders are expected to facilitate dialogue platforms by institutionalising regular farmer-herder forums at ward and district levels to discuss emerging issues and coordinate seasonal activities to avoid resource overlap. Indigenous conflict resolution mechanisms must be deployed by reviving and adapting traditional councils for arbitration, supported by modern legal frameworks to enhance enforceability. Development partners and non-government organisations are required to support climate adaptation programmes by investing in drought-tolerant crops, pasture restoration, and alternative livelihoods to reduce migratory pressures. Integrate gender perspectives in conflict management by recognising the role of women in both communities as mediators in peacebuilding processes.

Areas for Future Research

Based on the findings of this study, specific areas for further studies have been identified to include:

1. Impact of climate change on migration patterns: quantitative modelling of seasonal migration trends of pastoralists in southern Nigeria and their correlation with conflict frequency.

2. Economic cost analysis of farmer–herder clashes: assess impacts on agricultural productivity, local markets, and household income over time.

3. Effectiveness of grazing reserves policy: evaluate the socio-political and environmental feasibility of proposed and existing grazing reserves in Oyo State.

4. Role of technology in conflict mitigation: use of GIS mapping, drones, and mobile reporting apps for real-time conflict monitoring.

5. Cross-border dimensions: comparative studies between Nigeria and the neighbouring Benin Republic to understand transboundary pastoralism's role in security and land disputes.

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