

# CLIMATE CHANGE AND ARMED BANDITRY ON FOOD SECURITY IN ADAMAWA STATE -NIGERIA

By

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## ABSTRACT

The study examines the effects of climate change and armed banditry on food security in Adamawa State. Adamawa has been grappling with an array of complex climate change and escalating security crises, marked by multifaceted forms of banditry that include acts of terrorism and an intractable herder-farmer conflict. The objectives of the study are to assess the causes of climate change and armed banditry in Adamawa State, examine the effects of climate change and armed banditry on food security in Adamawa State and to proffer mitigation measures to climate change and armed banditry in Adamawa State. The study adopts eco-scarcity theory. The study uses quantitative method of data analysis. The collected through questionnaires were analysed used simple percentage and mean. The study discovered deforestation and poverty as the major causes of climate change and armed banditry in Adamawa State. The recommends that state government should lunch tree planting campaign and should prioritize job creation.

**Keywords:** *Climate Change, Armed Banditry, Food Security and Insecurity*

## INTRODUCTION

Nigeria has been grappling with an array of complex and escalating security crises, marked by multifaceted forms of banditry that include acts of terrorism and an intractable herder-farmer conflict. This conflict is increasingly evolving into a more sophisticated form of banditry, forming alliances with known terrorist groups such as Boko Haram (BH) and the Islamic State of West African Province (ISWAP) (Ebonine, 2022a). Across various regions of the country, the nature of these security challenges differs but collectively contributes to national instability. The North East region contends with terrorist activities; in the North West, a combination of terrorism, banditry, and farmer-herder clashes is prevalent. The North Central region faces ongoing banditry and herder-

farmer conflicts, while other areas in the country experience issues such as cult clashes, secessionist struggles, hostage-taking, and kidnapping (Ebonine, 2022b).

The farmer-herder crisis, which often escalates into incidents of kidnapping, abductions, and fatal clashes, stands as one of the most pressing security threats in Nigeria today. Reports indicate that between 2019 and 2020 alone, over 310 attacks took place, resulting in at least 859 fatalities (Eromosele, 2022). More recently, around 589 people were reported killed by herders, with kidnappings—including abductions of schoolchildren for ransom—becoming increasingly frequent (Ebonine, 2022b). The cycle of reprisals affects not only the herders and farmers but also surrounding communities, creating a pervasive atmosphere of fear and instability that threatens Nigeria's food security.

Rural banditry in Nigeria, often occurring between Fulani herders and farmers, is a longstanding issue with significant implications for livelihoods, property, and community harmony (Nwozor et al., 2021). This form of conflict has historical roots, as disputes over resources between herders and farmers have been present in West Africa since the 20th century (Ofuoku and Isife, 2009). Even earlier, regions like Sudan and Guinea, along with Sahel zones characterized by pastoralism, experienced similar tensions as agricultural practices were limited by the short rainy season (Ofuoku and Isife, 2009).

Numerous factors contribute to the farmer-herder crisis in Nigeria. Climate change, urbanization, industrialization, agricultural policies, and the redistribution of water resources all create strain on limited land and water. Additionally, the interference of political elites for personal gain exacerbates these issues (Ajala, 2020). Conflicts over these resources—especially arable land and water often become zero-sum, with dire consequences for all parties involved. Thus, rural banditry has emerged as one of the most profound threats to Nigeria's agricultural sector, impacting food production and economic stability.

Agriculture comprises roughly 50% of Nigeria's GDP, with pastoralism accounting for about 40% (Akov, 2017). Food security in Nigeria heavily depends on the stability of the northern region, as it supplies a substantial portion of the nation's produce. With over 70% of Nigerians engaged in agriculture, the recent disruptions to farming activities in the North have led to rising food prices and a growing threat of hunger nationwide (All Africa News, 2022). The constant danger of violence and abductions has discouraged many farmers, who are increasingly abandoning their fields for alternative livelihoods. This situation underscores the urgent need for addressing both climate change and armed banditry to safeguard Nigeria's food security.

### **Objectives of the Study**

The aim of the study is to examine the effects of climate change and armed banditry on food security in Adamawa State -Nigeria. The specific objectives are to:

- i. Assess the causes of climate change and armed banditry in Adamawa State

- ii. Examine the effects of climate change and armed banditry on food security in Adamawa State
- iii. Proffer mitigation measures to climate change and armed banditry in Adamawa State

### **Research Questions**

In line with the objective the following research questions serve as guide to the study thus:

- i. What are the causes of climate change and armed banditry in Adamawa State?
- ii. What are the effects of climate change and armed banditry on food security in Adamawa State?
- iii. What measures can be proposed to mitigate the impacts of climate change and armed banditry in Adamawa State?

### **Literature Review**

#### **Armed Banditry**

Banditry, a complex and evolving phenomenon, has no universally accepted definition, as its understanding has shifted over time and varies across disciplines. Scholars from different perspectives in the social sciences have defined banditry in numerous ways, each contributing to a broader conceptualization of the term. Historically, banditry was often associated with social resistance and class struggle, where bandits were seen as champions of the marginalized, opposing elite oppression. According to Rife (2011), traditional or "old" banditry was characterized by figures who, like folk heroes, "robbed from the rich to give to the poor," earning admiration, support, and protection from the local populace who viewed them as symbols of resistance.

Expanding on the motivations behind banditry, Warty (2011) defines it as an act of crime committed by individuals from economically disadvantaged backgrounds as a means of meeting basic needs such as food, shelter, and clothing. This perspective underscores the survival-based motivations that can drive individuals in poverty-stricken areas toward banditry. In a more contemporary context, Okoli and Ugwu (2019) distinguish between economically and politically motivated banditry, with the former driven by material accumulation and the latter motivated by ideological or political objectives. This distinction highlights how banditry can encompass a range of motives, from economic survival to political opposition, and how it adapts to the socio-political context.

Armed banditry, a specific form of banditry involving the use of weapons and organized violence, has been widely discussed in the context of deteriorating rule of law and widespread insecurity. Collins (2000) defines armed banditry as the formation of armed groups with the intent of attacking state institutions, social enterprises, or individuals. Such attacks often involve a combination of robbery, violence, and political destabilization, positioning armed banditry as a distinct form of criminality with significant social and political ramifications. This definition emphasizes the organized,

often militarized nature of bandit groups and the impact of their actions on both state institutions and civilians.

In Nigeria, armed banditry involves not only robbery but also a range of violent crimes such as kidnapping, cattle rustling, and market raids, often executed with the intent to intimidate, rob, or harm (Okoli & Okpaleke, 2014). These acts are typically marked by the use of force or the threat thereof and are often aimed at subduing victims to obtain valuables or to fulfill other political or ideological goals. The use of advanced weaponry, such as AK-47 rifles and other small arms illegally brought into the country, has escalated the violence associated with banditry, contributing to an atmosphere of fear and lawlessness, particularly in rural areas where state security presence is limited (Ladan & Matawalli, 2020).

Contrary to views that associate banditry solely with rural areas, recent research has noted an expansion of bandit activities into urban centers, demonstrating the adaptive and pervasive nature of these criminal groups. Unlike historical banditry, which targeted wealthier segments of society, contemporary armed banditry in Nigeria indiscriminately affects all socioeconomic groups, including vulnerable populations such as women and children (Shalangwa, 2013). These bandits are often viewed as outlaws, with no fixed residence or destination, operating in remote and often inaccessible locations such as forests and mountains to evade law enforcement.

The socio-political impact of armed banditry in Nigeria is profound, contributing to a deteriorating political economy by destabilizing communities, disrupting trade, and diverting state resources toward security rather than development. Omotola (2014) observes that the implications of armed banditry extend to Nigeria's political economy, where insecurity hampers development efforts and economic stability. Banditry, according to Dayo and Salihu (2015), stems from political and economic exclusion, where inequitable access to resources and social alienation fuel grievances that manifest in violent criminal activities.

This review underscores the multidimensional nature of banditry in Nigeria, a phenomenon that transcends simple definitions to encompass economic deprivation, political grievances, and social exclusion. Within the context of this research on *The Effects of Climate Change and Armed Banditry on Food Security in Adamawa State, Nigeria*, understanding the causes and manifestations of banditry is essential. In particular, rural banditry in Adamawa State disrupts agricultural activities, contributes to food insecurity, and exacerbates the impacts of climate change on local communities. By examining the linkages between climate change, armed banditry, and food security, this research aims to provide insight into the challenges faced by rural farmers and offer recommendations for mitigating the adverse effects on food production and community resilience.

## **Climate Change**

Climate change, defined as long-term shifts in temperature, precipitation, and frequency of extreme weather events, has both natural and human-induced causes. Fawehinmi (2007) highlights the primary contributors to climate change as greenhouse gases (GHGs) — particularly carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons (CFCs) — which trap heat in the earth's atmosphere and disrupt the natural balance of gases. Deforestation exacerbates this issue by reducing the earth's capacity to absorb carbon dioxide, thus increasing atmospheric GHGs and contributing to a warming effect known as the greenhouse effect. According to Goldberg (1994), these GHGs have led to a progressive depletion of the ozone layer, which acts as a natural shield, absorbing approximately 90% of the sun's harmful electromagnetic energy. This depletion has not only accelerated global warming but has also increased vulnerability to climatic hazards. The concept of vulnerability, as defined by Blaiki et al. (1994), is crucial for understanding climate change impacts, particularly in regions with limited resources and adaptive capacity. Blaiki et al. explain that vulnerability is the extent to which individuals or groups can anticipate, cope with, and recover from natural hazards. Those with more resources and social networks, such as affluent households, are generally less vulnerable, as they can recover more quickly from climatic events. Vulnerability to climate change is also unevenly distributed, not only across countries but also within regions, sectors, and social groups (IPCC, 2001). This uneven distribution is due to factors such as differences in climate conditions, economic wealth, and access to resources, which significantly impact how communities experience and adapt to climate change.

Adaptation, as defined by Burton (1972, cited in Smit et al., 2000), is the process through which communities mitigate the adverse effects of climate on their well-being and take advantage of any opportunities presented by their environment. This concept of adaptation underscores the importance of resilience-building to cope with climate variability, particularly for vulnerable populations who are more likely to experience adverse outcomes due to limited adaptive capacity. In the context of climate change, adaptation measures are essential for food security, especially in agriculture-dependent regions like Adamawa State, where climate-sensitive systems such as agriculture, water supply, and food production are heavily impacted.

Mitigation is another critical component in addressing climate change. Mitigation involves actions aimed at reducing GHG emissions and enhancing carbon sinks to slow global warming. These actions may include improving energy efficiency, reducing deforestation, and transitioning to renewable energy sources (IPCC, 2001). Effective mitigation can limit the adverse effects of climate change by decreasing the overall concentration of GHGs in the atmosphere, thereby reducing the severity of climate-related phenomena such as droughts, floods, and storms. Climate-sensitive systems, which include agriculture, water resources, and ecosystems, are particularly vulnerable to these changes, and mitigation strategies are necessary to prevent further degradation.

Climate change has specific and severe implications for food security, as extreme weather events disrupt agricultural activities, reduce crop yields, and threaten food availability. For example, frequent droughts and erratic rainfall patterns can delay planting seasons, reduce soil fertility, and ultimately decrease food production. The impacts of climate change are further compounded by social and political challenges, such as armed banditry, which undermines the security and stability of rural communities. In Adamawa State, armed banditry has disrupted farming activities, causing farmers to abandon their fields and exacerbating food insecurity. This situation highlights the interconnectedness of climate change and social conflict, as environmental stressors can contribute to resource scarcity, which in turn fuels competition and conflict. The interaction between climate change and armed banditry presents significant challenges for food security in Adamawa State. With climatic conditions worsening due to rising temperatures and unpredictable rainfall, communities are increasingly vulnerable to both environmental hazards and insecurity. This vulnerability makes it essential to implement integrated adaptation and mitigation strategies that address both climate resilience and security concerns. Such strategies could include community-based adaptation programs that enhance resource access, improve agricultural practices, and support conflict resolution to ensure that rural communities in Adamawa State can achieve sustainable food security despite the dual pressures of climate change and armed banditry.

### **Food Security**

Food security, according to the World Bank (1986), and as cited by Abu and Soom (2016, p.55), is defined as the condition in which all individuals have access at all times to sufficient, safe, and nutritious food for a healthy and active life. The Food and Agriculture Organization (FAO, 2004) expands on this by noting that food security not only requires the availability of food but also the ability of people to access it in ways that are nutritionally adequate and culturally acceptable. This multidimensional approach to food security means that the absence of any of these key conditions — availability, accessibility, adequacy, and acceptability — leads to food insecurity, a critical issue at household, regional, and national levels (Folorunso, Gama & Ademiluyi, 2018).

Food security is vital not only for individual health and well-being but also as a foundation for economic development, political stability, and national security. It is considered a basic prerequisite for sustainable development, as a lack of food security often correlates with increased social tensions and instability. Importantly, food security can operate at multiple levels: global, national, regional, and household. However, as Ingawa (cited in Abu & Soom, 2016, p.56) notes, food security at one level does not necessarily guarantee security at another; for example, national food sufficiency does not automatically ensure that all households have adequate access to food.

In state like Adamawa State, Nigeria, food security is increasingly under threat from the dual pressures of climate change and armed banditry. Climate change has direct and

indirect effects on food security by impacting agricultural productivity, leading to changes in crop yields, water availability, and soil fertility. Rising temperatures, irregular rainfall patterns, and increased frequency of extreme weather events disrupt local food systems, leading to a decrease in food availability and increased prices, which impacts accessibility. Folorunso, Gama, and Ademiluyi (2018) point out that when these environmental stressors are combined with armed banditry — which involves violent theft and destruction of resources — the situation becomes even more precarious for food security.

Armed banditry exacerbates food insecurity by driving farmers off their lands, disrupting agricultural activities, and damaging infrastructure. Banditry often targets rural communities, as these areas are typically more vulnerable to crime due to limited law enforcement presence. In such environments, banditry not only threatens the food supply chain but also affects food accessibility by creating an atmosphere of fear and instability, which can prevent people from accessing markets or food sources. As Yusufu (2020) highlights, food security is not just about the availability of food but also the ability to access it safely and sustainably.

The complex interplay of climate change and armed banditry in Adamawa State underscores the need for an integrated approach to food security. Addressing food security in this region will require climate adaptation strategies that build resilience among local farmers, such as drought-resistant crop varieties, efficient water use practices, and soil conservation techniques. Simultaneously, addressing armed banditry will require stronger security measures, improved rural infrastructure, and policies that promote social stability and economic opportunities for vulnerable populations.

In conclusion, achieving food security in Adamawa State, Nigeria, amidst the challenges of climate change and armed banditry, will necessitate coordinated efforts that address both environmental and security concerns. Only by tackling these multifaceted issues can sustainable food security be realized, ensuring that all people have access to sufficient, safe, and nutritious food for a healthy life.

### **Theoretical Framework**

The eco-scarcity theory, notably advanced by Thomas Homer-Dixon (1994), provides a theoretical foundation for examining how resource scarcity, exacerbated by environmental and demographic pressures, can contribute to violent conflict. In the context of natural resource conflicts, eco-scarcity theory explores the causal pathways through which scarcity of renewable resources, often driven by environmental degradation, climate change, and population growth, may lead to social instability and violence. This theory is particularly relevant for understanding the dynamics of farmer-herder conflicts in Nigeria, where competition over land and water resources has intensified due to environmental changes and increased population pressures.

Homer-Dixon (1994) identifies specific environmental stressors — such as deforestation, depletion of arable land, and diminishing freshwater resources — that can erode agricultural productivity and destabilize local economies. According to the eco-scarcity framework, resource scarcity often generates internal displacement, migration, and forced resettlement, which can then trigger inter-group conflicts, especially when incoming groups encroach upon the territories of established communities. In many cases, these tensions are further exacerbated by cultural and ethnic fault lines, leading to violent confrontations. As Homer-Dixon notes, climate-induced resource scarcity can, therefore, catalyze conflict, particularly in regions where resources like farmland and water are critical to livelihoods.

The theoretical contributions of Homer-Dixon are echoed in the work of other scholars, who emphasize how environmental scarcity intersects with social and political fault lines. Penu and Paalo (2021) argue that eco-scarcity not only affects economic productivity but also reinforces existing social divides along lines of race, ethnicity, and religion, making the potential for conflict more pronounced. These scholars highlight that conflicts over resources are often framed along communal boundaries, such as herders versus farmers, locals versus migrants, or herders versus herders. As land and water resources become increasingly limited, political alliances may develop along these lines, further entrenching divisions and heightening the risk of violent outbreaks.

In the context of Nigeria, eco-scarcity theory is particularly useful for explaining the farmer-herder conflicts that have affected agricultural productivity and food security. For example, herders often move in search of pastures and water, driven by environmental factors like desertification, drought, and soil degradation. These migrations bring them into direct conflict with settled farming communities, leading to competition over arable land and water. Itemoagbo and Ebonine (2022) point out that these conflicts result not only in loss of life but also in a significant reduction in agricultural output, as communities are disrupted and resources are destroyed.

The eco-scarcity perspective is also valuable in examining the rise of armed banditry in regions like Adamawa State. Armed banditry can be viewed as an outcome of resource scarcity, where groups resort to violence to secure access to land, food, and other necessities. Paalo (2020) notes that armed conflicts in the region often align with political alliances and social identities, leading to the formation of factions that contribute to the instability of local food systems. This dynamic is reflected in the categorization of natural resource conflicts by the International Crisis Group (2018), which emphasizes how competition over scarce resources is shaped by broader socio-political dynamics, including the involvement of political actors who support specific groups.

In Nigeria, climate change has exacerbated the eco-scarcity issues that lead to farmer-herder conflicts. Population growth, combined with diminishing natural resources, places enormous pressure on land that could otherwise support agricultural productivity. As

climate change renders traditional grazing routes less viable and farmland less productive, both herders and farmers face heightened competition. This leads not only to reduced food availability but also to lower household incomes, intensifying food insecurity in communities affected by these conflicts. Akerjiir (2020) highlights the tragic outcomes of such conflicts, including casualties among both farmers and herders, the destruction of crops and livestock, and the subsequent impact on local food security.

In sum, eco-scarcity theory offers a robust framework for analyzing the complex relationship between climate change, resource scarcity, and conflict, particularly in the context of Adamawa State, Nigeria. By exploring how environmental pressures intersect with social and economic vulnerabilities, this theory sheds light on the roots of farmer-herder conflicts and the rise of armed banditry. It also helps to clarify the broader impact of these conflicts on agricultural productivity and food security. As such, eco-scarcity theory is a crucial tool for understanding the mechanisms that link environmental degradation to social instability, and it underscores the urgent need for policies that address both climate resilience and conflict prevention to safeguard food security in Nigeria's affected regions.

## **Methodology**

### **Research Design**

The study employs a semi-structured questionnaire as the primary data collection instrument. The questionnaire is designed to capture both structured and semi-structured responses, allowing for a comprehensive understanding of the research variables while providing participants the opportunity to share specific insights on issues affecting food security.

### **Population of the Study**

The population for this study comprises the total population of three selected Local Government Areas (LGAs) in Adamawa State. These LGAs are: **Maiha LGA**: 207,874 persons, **Numan LGA**: 167,435 persons and **Song LGA**: 243,259 persons. The combined population of these LGAs is 618,568 persons, which constitutes the study population for this research.

### **Sample Size and Sampling Techniques**

Multi-stage sampling procedure was used in this study. In the first stage, purposive sampling technique was used to select Adamawa State out of the six States in North-East which consist of Borno, Yobe, Gombe, Adamawa, Taraba and Bauchi. In the second stage, 3 LGAs were randomly selected out of the 21 most affected LGAs. The selected LGAs were Maiha, Numan and Song LGA. Slovin (1960) sample size calculation, is used to determine the sample size for the study, which resulted in a total of 400 participants. The following is the formula for the calculation:

$$n = N / 1 + N (e)^2$$

Where N represents population size

n represents minimum sample size

E represents the degree of error expected (0.05)

$$n = 618,568 / 1 + 618,568 (0.05)^2 = 399.9$$

Sample size (n) is approximately **400**

Proportional Allocation Formula (PAF)

$$\text{PAF} = \frac{\text{Stratum Size} \times n}{N}$$

N

$$\text{Maiha} = \frac{207,874 \times 400}{618,568} = 134$$

$$= 134$$

$$\text{Numan} = \frac{243,259 \times 400}{618,568} = 158$$

$$= 158$$

$$\text{Song} = \frac{167,435 \times 400}{618,568} = 108$$

$$= 108$$

### Method of Data Collection

A structured questionnaire was employed to gather quantitative data, utilizing a five-point Likert scale (LS) with response options as follows: Strongly Agree (SA=5), Agree (A=4), Undecided (U=3), Disagree (D=2), and Strongly Disagree (SD=1).

### Method of Data Analysis

Data generated were analysed using SPSS V23 and presented in tables with the aid of frequency counts, simple percentages and mean.

### Result and Discussion

Table 1 presents data collected from respondents on the causes of climate change and armed banditry in Adamawa State, Nigeria. The results indicate that high unemployment rates and deforestation are the most significant contributors to climate change and armed banditry in the state. The threat of climate change and armed banditry to farming activities could further exacerbate unemployment rates. Additionally, high illiteracy and ignorance (Mean Index [MI] = 3.81) were identified as notable factors contributing to armed banditry in the area. Other significant factors include bush burning (MI = 3.62), the proliferation of small and light weapons (MI = 3.71), high rates of drug abuse and addiction (MI = 3.60), the desperate desire for wealth (MI = 3.58), limited security presence (MI = 3.66), and the porosity of Nigeria's borders (MI = 3.76). These findings align with similar studies by Okoli and Okpaleke (2014), Gadzama, Saddiq, Oduechie, and Dariya (2018), and Ladan (2019).

**Table 1:** Causes of Climate change and armed banditry in Adamawa State

Statement	SA (5)	A (4)	U (3)	D (2)	SD (1)	TWV	MI
<b>High rate of unemployment and poverty</b>	150	148	44	20	38	1552	3.88*
<b>Porosity of Nigeria's borders</b>	150	125	35	58	32	1503	3.76*
	37.5%	31.25%	8.75%	14.5%	8.0%		

<b>Proliferation of small arms and light weapons</b>	130	119	49	55	47	1485	3.71*
	32.5%	29.75%	12.25%	13.75%	11.75%		
<b>Deforestation</b>	122	127	61	57	33	1448	3.62*
	30.5%	31.75%	15.25%	14.25%	8.25%		
<b>High rate of drug abuse and drug addiction</b>	137	108	53	63	39	1441	3.60*
	34.25%	27%	13.25%	15.75%	9.75%		
<b>Bush burning</b>	130	140	24	46	60	1434	3.58*
	32.5%	35%	6%	11.5%	15%		
<b>Limited presence of security operatives</b>	135	133	45	34	53	1463	3.66*
	33.75%	33.25%	11.25%	8.5%	13.25%		
<b>High level of illiteracy and ignorance</b>	146	128	57	42	27	1524	3.81*
	36.5%	32%	14.25%	10.5%	6.75%		

**Source:** Field Survey 2024

Table 2 presents data collected from respondents on the effects of climate change and armed banditry on food security prospects in Adamawa State. The findings indicate that the most significant impact is a reduction in food availability, with a mean score of 3.60, which affects both Adamawa State and northeastern Nigeria as a whole. Other notable effects include decreased food accessibility (Mean Index [MI] = 3.56), reduced food sustainability (MI = 3.53), diminished food utilization (MI = 3.47), and a decline in livelihood income (MI = 3.37).

**Table 2:** Effects of Climate change and armed banditry on food security in Adamawa State

Statement	SA (5)	A (4)	U (3)	D (2)	SD (1)	TWV	MI
<b>Reduction in food availability</b>	141	139	3	54	63	1441	3.60*
	35.25%	34.75%	0.75%	13.5%	15.75%		
<b>Reduction in food accessibility</b>	134	130	21	57	58	1425	3.56*
	33.5%	32.5%	5.25%	14.25%	14.5%		
<b>Reduction in food sustainability</b>	128	123	33	66	50	1413	3.53*
	32%	30.75%	8.25%	16.5%	12.5%		
<b>Reduction in food utilization</b>	133	128	11	51	77	1389	3.47*
	33.25%	32%	2.75%	12.75%	19.25%		
<b>Reduction in livelihood income</b>	127	125	5	53	90	1346	3.37*
	31.75%	31.25%	1.25%	13.25%	22.5%		

**Source:** Field Survey, 2024

Table 3 summarizes respondents' perspectives on possible solutions to address climate change and armed banditry in Adamawa State. Findings suggest that the most effective approaches include providing employment opportunities for the significant number of unemployed youths and a dedicated government effort to reduce poverty, both achieving a mean score of 3.88. Another key recommendation is to increase security presence in communities across the state, with a mean score of 3.68. Additional strategies identified include imposing stricter penalties for armed banditry (MI = 3.64), expanding educational and social infrastructure (MI = 3.65), strengthening border surveillance to prevent armed bandits from entering the state (MI = 3.63), promoting good governance practices (MI = 3.55), regulating the circulation of small arms and light weapons (MI = 3.45), and actively retrieving unauthorized firearms at all governmental levels (MI = 3.40). Notably, the findings suggest that negotiating with armed bandits is perceived as an ineffective solution, reflected in a low mean score of 2.31.

**Table 3:** Way forward to the problem of climate change and armed banditry in Adamawa State

Statement	SA (5)	A (4)	U (3)	D (2)	SD (1)	TWV	MI
<b>Increased security presence</b>	139	132	41	39	49		
	34.75%	33%	10.25%	9.75%	12.25%	1473	3.68*
<b>Planting trees</b>	133	138	35	42	52		
	33.25%	34.5%	8.75%	10.5%	13%	1458	3.64*
<b>Employment generation and poverty reduction</b>	153	127	69	22	29		
	38.25%	31.75%	17.25%	5.5%	7.25%	1553	3.88*
<b>Avoid bush burning</b>	125	122	13	67	73		
	31.25%	30.5%	3.25%	16.75%	18.25%	1359	3.40*
<b>Control of light and small weapons in circulation</b>	132	122	22	40	84		
	33%	30.5%	5.5%	10%	21%	1378	3.45*
<b>Border surveillance</b>	131	129	47	47	46		
	32.75%	32.25%	11.75%	11.75%	11.50%	1452	3.63*
<b>Government should provide schools and other social amenities</b>	136	134	38	38	54		
	34%	33.5%	9.5%	9.5%	13.5%	1460	3.65*
<b>Good governance</b>	133	131	17	60	59		
	33.25%	32.75%	4.25%	15%	14.75%	1419	3.55*
<b>Negotiating with bandits</b>	49	48	23	138	142	924	2.31
	12.25%	12%	5.75%	34.5%	35.5%		

Source: Field Survey, 2024

## Conclusion

Scholars generally agree that the social and economic effects of climate change are more severe in developing countries like Nigeria and Adamawa State in particular, where it contributes to poverty, poor health, increased migration, and potentially heightened risks of violent conflicts. This study confirms that armed banditry is a significant threat to food security in Nigeria, especially in Adamawa State, impacting food availability, access, sustainability, and utilization. It identifies key causes of armed banditry as high unemployment and poverty, widespread small arms and light weapons, porous borders, high illiteracy, poor governance, and drug abuse. The manifestations of banditry include kidnappings, cattle rustling, farm looting, armed robbery, and raids on villages and markets, leading to loss of lives and income for farmers and pastoralists. Additionally, bandits often evade arrest due to their sophisticated weaponry and alleged collusion with formal and informal security agents.

## Recommendations

Based on the findings and conclusion of this study, the following measures are recommended:

- i. The State government should launch trees planting campaign in the state in order to mitigate the effects of climate change in the state.

- ii. The State government should prioritize job creation and poverty reduction. When youths have stable employment and can meet their basic needs, such as food, clothing, and shelter, they are less likely to resort to criminal activities.
- iii. The State government should provide affordable education for all residents, making it compulsory. Furthermore, the government should ensure the availability of basic services, including regular access to clean water, electricity, quality healthcare, and well-maintained roads.
- iv. The Federal Government must ensure that the country's borders are effectively patrolled by well-trained, disciplined military and paramilitary personnel equipped with advanced weaponry to counter the firepower of bandits.

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