



Effects of Banditry Activities on Forest Dependent Communities in Benue State, Nigeria: A Case Study of North-East Guinea Savanna Ecological Zone of Sankera Axis.

Meer B. B.^{1*}, Japheth H. D.² and Manyam H. I.³

¹Department of Forestry and Wildlife Management, Taraba State University, Jalingo, Nigeria

²Department of Forestry and Wood Technology, Federal University of Technology Owerri, Nigeria.

³Department of Forest Production and Products, Joseph Sarwuan Tarka University Makurdi, Nigeria

*Corresponding Author: meersbernardo@gmail.com, +2347039060249

Abstract

The study examined the effects of banditry activities on forest ecosystems and the host communities in the northeastern region of Benue State, Nigeria. It aims to identify the effects of banditry activities on forest ecosystems for effective prevention. Three forest reserves (Ikyo-Nyian, Ukamberagya, and Gundu-Chaha from Katsina Ala, Logo, and Ukum local government areas respectively) were purposively selected for the study. A total of 385 respondents from forest-dependent communities adjacent to these forests were sampled based on the Cochran sampling method. Descriptive statistics, a Likert scale, and Spearman correlation were used to analyze the data. Majority of the respondents (57.92%) were male farmers who are mostly young and agile. About fifty-six percent (55.84%) of the respondents significantly ($p = 4.56$) perceived that bandits use forest estates as major hideout areas. Bandits clash with security agencies in the forest, as significantly ($p = 3.84$) perceived by most of the respondents (78.18%). Their activities result in biodiversity destruction, degradation, and disturbance. This significantly ($p = 4.28$), affects the extraction, distribution, and consumption of forest resources and livelihood activities, thereby affecting other ecological, social, and economic activities. The correlation test showed a significant ($p = 0.05$) positive correlation (between 0.738 and 0.949) between forest ecosystems as banditry hideouts and all the identified ecological and socio-economic implications in the area. There is a need to equip and deploy active security agencies in affected areas for effective prevention, coupled with the provision of more basic infrastructure and amenities, to restore normalcy in the area.

Keywords: Banditry, Biodiversity, Ecosystem, Forests, Livelihood.

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INTRODUCTION

Many rural people depend predominantly on forests and forest resources for food, clothing, housing, medicine, art and crafts, oil, agricultural implements and a host of other requirements (Neelo *et al.*, 2015). Guinea savanna natural ecosystems constitute a main source of biodiversity. These species play an important role in the survival of man on earth,

thereby providing an array of timber and non-timber forest products (NTFPs) that are significant in sustaining the overall socio-economic wellbeing of humans (Meer, 2018). Forest products have been used by human beings over time for various purposes, such as food, fodder, fiber, traditional medicine, agricultural amenities, domestic materials and construction materials (Talukdar *et al.*, 2020). People are depending upon natural resources to meet a large number of their basic necessities of life. Considering the

variability and diverse nature of the NTFPs, a lot of households are able to meet their immediate needs by collecting NTFPs from the forest, while others earn income to meet other needs through the marketing of NTFPs harvested (Abubakar and Dau, 2019). Rural communities rely heavily on NTFPs as a means of generating income, sources of food and medicine, thereby reducing the poverty level of their people; hence, NTFPs play a vital role in Nigeria (Abubakar and Dau, 2019). Rural households spend income realized from NTFPs to buy food for their families; hence dependence upon several combined and seasonal activities of NTFPs is the only one-way sure way to ensure household food security (Dau and Elisha, 2013). The types of resources and utilization patterns vary by ecological zone and socio-cultural area. Due to high prevalence rate of banditry in the study area, it is generally believed that, the forest estates have become a suitable hideout for different unlawful activities by different people.

Banditry is an act of robbery and violence committed in areas where the rule of law has broken down (Ladan and Matawalli, 2020). It involves the organization of armed bands for the purpose of attacking social institutions, enterprises, community, or individuals. Participation in such bands and in the attacks committed by them is equally regarded as banditry (Collins, 2000). Large forested areas allowed for concealment and the formation of camps in the forest by bandits. According to Brenner (2021), vast areas of unregulated forests allow for easy concealment, and security forces have difficulty penetrating the rough terrain of the forests. These effects could have a critical influence on the forest ecosystems and socio-economic stability of rural communities and national development. The invasion of forest ecosystems by bandits is restricting the free access and use of these products. The activities of the bandits have resulted in unimaginable destruction of lives and properties, including biodiversity, displacement of many forest-dependent communities and a growing number of widows, widowers and orphans, who now reside in internally displaced persons (IDP)

camps following the continued attacks across different areas in Sankera axis (north-east ecological zone) of Benue State. This necessitates the need to assess the effects of banditry activities on forest ecosystems and the host communities in the study area. Thus, this study aims to identify the nature and patterns of banditry activities, to determine the consequences of banditry activities on forest ecosystems, and to examine the ecological and socio-economic implications of banditry activities on forest-dependent communities for effective prevention or control of banditry activities in the study area.

METHODOLOGY

Study Area

The North-east ecological zone of Benue State is made up of Sankera and Kwande sub-political blocks located in the north-eastern part of Benue State, Nigeria. Sankera axis comprises of Katsina Ala, Logo, and Ukum Local Government Areas (LGAs). It lies between latitude 6° 30' to 7° 40' north and longitude 9° 4' to 9° 30' east (Figure 1). Sankera axis shares its north and east boundaries with Nasarawa and Taraba States, respectively. It is also bordered on the south-east by Kwande and Ushongo Local Government Areas and on the south-west by Buruku and Guma Local Government Area of Benue State. It has a total land area of approximately 5,324 km² (IamBenue, 2018). The study area lies in the southern guinea savanna vegetation characterized by mainly forest, tall grasses, shrubs and undulating hills (IamBenue, 2018; Hundu *et al.*, 2021). Sankera axis of Benue State is characterized by two (2) seasons: warm-wet and cold-dry. The warm-wet season lasts from April to October, while the dry season begins in November and ends in March. The annual rainfall ranges from 1,200 mm to 1,500 mm (Ani *et al.*, 2014). The temperature is generally high, ranging from 22° C to 30° C in the rainy season (Kakwagh, 2018; Ani *et al.*, 2014). According to the National Population

Census (NPC, 2006), the population of Sankera was estimated to be 610, 711 with

Katsina Ala LGA (224,718), Logo LGA (169,063), and Ukum LGA (216,930).

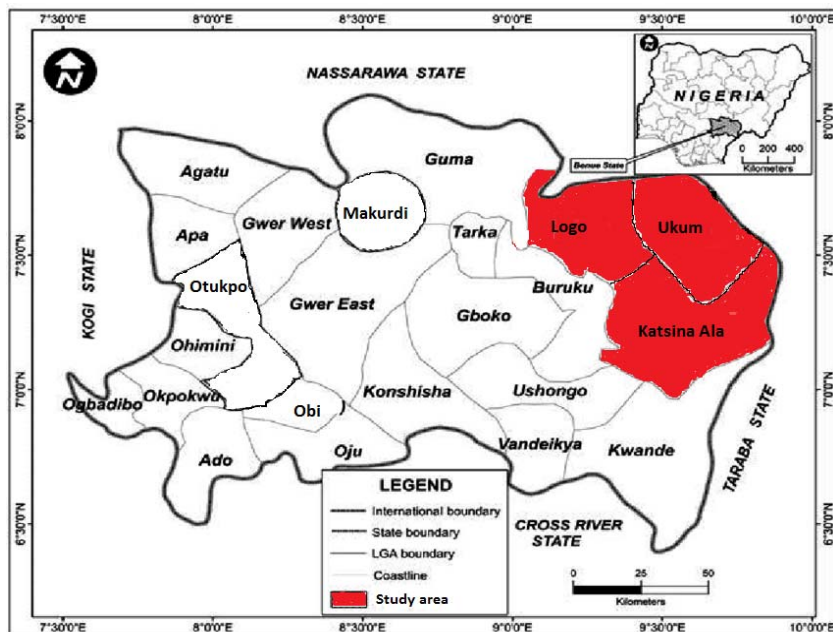


Figure 1: Map of Benue state showing the study area (Source: IamBenue (2018)).

Data Collection and Analyses

Purposive sampling technique was employed to select one (1) major forest (community forest or forest reserve) each from Katsina Ala LGA (Ikyo Nyian forest), Logo LGA (Ukamberagya forest) and Ukum LGA (Gundu-Chaha forest reserve). Forest-dependent communities adjacent to the selected forests were sampled based on their high tendency to depend on forests and their resources in the study area. A total of 385 respondents who depended on forests for their livelihoods were randomly sampled. Focus group discussions (FGD) were also adopted, guided by a check list of questions on the questionnaire. Administration of a structured questionnaire was conducted using the Cochran sampling method adopted by Kwaga *et al.* (2019). The formula is as follows:

$$n_h = N_h \times \frac{n}{N} \dots\dots\dots \text{Equation 1}$$

Where: n_h = no. of questionnaire administered in each forest reserve; N_h = estimated population of the people in the LGA where the forest reserve is located; n = total

no. of questionnaire administered; N = total no. of people in the study area.

Data was analyzed using descriptive statistics (such as frequencies, percentages, tables, and pie charts) and the *Likert scale* (four scales). The *Likert scale* mean(s) for all indicators were categorized as follows: the mean(s) 1.00-1.49 = Strongly Disagree (SD), 1.50-2.49 = Disagree (DA), 2.50-3.49 = Agree (A) and 3.50-4.0 = Strongly Agree (SA). Spear man correlation was also used to test for significant relationship between respondents' perceptions on Forests ecosystems as banditry hideout and the ecological and socioeconomic implications on forest-dependent communities in Sankera axis of Benue State, Nigeria.

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents in the study area

The results of socio-economic characteristics in the north-east guinea savanna of Sankera axis, Benue state showed that 61.27%, 32.71% and 74.27% of the respondents in

Katsina Ala, Logo and Ukum LGAs respectively were males while 38.73%, 67.29% and 25.73% were female. According to the age category, 54.28% of the respondents were young adults between the ages of 10 to 30 (53.52% in Katsina Ala LGA, 56.08% in Logo LGA and 53.68% in Ukum LGA). Following this are individuals between the ages of 31 to 50 (31.69%) with Katsina Ala LGA (35.21%), Logo LGA (34.57%) and Ukum LGA (31.69%). Only 14.03% of them were above 50 years with Katsina Ala, Logo and Ukum LGAs recording 11.27%, 9.35% and 20.59%, respectively (Table 1). Majority (64.42%) of the respondents were married, while 35.58% were single. In Katsina Ala LGA, 80.28% of the respondents were married, 58.88% in Logo, and 52.21% in Ukum LGA.

Majority of the respondents were married, male and young people between the ages of 10 to 30 years. This is a sign of a growing population that is in the prime of using, distributing, and consuming forest resources. Clarke *et al.* (1996) affirmed that forests provide a variety of goods and services that are crucial to the well-being of populations who depend on them, some of which serve as subsidies for agriculture (browsing and leaf mulch), while others meet critical requirements like food, shelter, and health.

Table 1 also showed that, 49.35% of the respondents had secondary school education while 25.97% of them had primary school education. A breakdown of respondents' occupation indicated that 54.28% of them were farmers, 21.56% were traders, and 20.00% were artisans/herbalists. There were 4.16% civil servants. The high level of education indicates that, respondents were knowledgeable about the social, ecological, and economic benefits of forests

and forest products. About 42.85 % of the respondents lived in households with more than 15 individuals, and 43.38% made between #100,000 and #200,000 annually (Table 1). The larger household sizes in the study area may be explained by socio-economic and socio-cultural factors that encourage greater household consumption and extraction of forest resources.

This finding is comparable to a study by Kabubo-Mariara and Gachoki (2008), who reported that, families with large household size who resided close to forested areas explore more resources from the forests due to labour availability that can be spread across the forests. The larger household sizes could also be connected to the diversification of livelihood activities in the study area to include the use and marketing of forest products as well as farming. This supports the finding of Clarke *et al.* (1996), which noted that households in rural areas, particularly those living adjacent to forests depend on a variety of activities to meet their needs for a living. These activities include farming (crop and livestock production) as well as off-farm activities (urban remittances, craftwork and harvesting products from forests). The precise combination of these activities depends on a number of variables, including socio-economic considerations (population densities and demand for forest products). The average annual household income in the study area is below #200,000. This suggests that they are low-income earners, which accounts for their reliance on forest and forest resources. This result supports the claims made by Suleiman *et al.* (2017), Awoyemi (2011) and Vedeld *et al.* (2004) that low-income households heavily rely on forest resource extraction from nearby forestlands.

Table 1: Socio-economic characteristics of respondents

Variable	Frequency (Percentage, %)			Total
	Katsina Ala LGA	Logo LGA	Ukum LGA	
Gender				
Male	87 (61.27)	35 (32.71)	101 (74.27)	223 (57.92)
Female	55 (38.73)	72 (67.29)	35 (25.73)	162 (42.08)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Age category				
10-30 years	76 (53.52)	60 (56.08)	73 (53.68)	209 (54.28)
31-50 years	50 (35.21)	37 (34.57)	35 (25.73)	122 (31.69)
51 years and above	16 (11.27)	10 (9.35)	28 (20.59)	54 (14.03)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Marital Status				
Married	114 (80.28)	63 (58.88)	71 (52.21)	248 (64.42)
Single	28 (19.72)	44 (41.12)	65 (47.79)	137 (35.58)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Educational Qualification				
Primary	29 (20.42)	30 (28.04)	41 (30.15)	100 (25.97)
Secondary	46 (32.39)	64 (59.81)	80 (58.82)	190 (49.35)
Tertiary	28 (19.72)	10 (9.35)	11 (8.09)	49 (12.73)
Non Formal Education	39 (27.47)	3 (2.80)	4 (2.94)	46 (11.95)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Occupation				
Farming	63 (44.37)	58 (54.21)	88 (64.70)	209 (54.28)
Civil Servant	10 (7.04)	5 (4.67)	1 (0.74)	16 (4.16)
Artisan/Herbalist	48 (33.80)	12 (11.21)	17 (12.50)	77 (20.00)
Trading	21 (14.79)	32 (29.91)	30 (22.06)	83 (21.56)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Household size				
Below 6	7 (4.93)	20 (18.70)	25 (18.38)	53 (13.51)
6-10	15 (10.56)	16 (14.95)	21 (15.44)	52 (13.51)
11-15	26 (18.31)	40 (37.38)	50 (36.77)	116 (30.13)
Above 15	94 (66.20)	31 (28.97)	40 (29.41)	165 (42.85)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Income (₦) (Per Annum)				
Below 100,000	30 (21.13)	41 (38.32)	28 (20.59)	99 (25.71)
100,000 to 200,000	55 (38.73)	62 (57.94)	50 (36.76)	167 (43.38)
200,001 to 300,000	39 (27.47)	4 (3.74)	32 (23.53)	75 (19.48)
Above 300,000	18 (12.67)	0 (0.00)	26 (19.12)	44 (11.43)
Total	142 (100)	107 (100)	136 (100)	385 (100)

Nature and patterns of banditry attacks in the study area

Table 2 indicates that, majority (98.70%) of the responses imply that most of the bandits who attack forest dependent communities were young men who usually operate in gangs (groups) of 6 or more and use sophisticated weapons such as “AK 47” rifle to cause harm, suffering, and injuries to the poor forest dependent communities. This finding is in line with that of Shalangwa (2013), who

reported that, bandits who attack the border communities of Adamawa state in north east Nigeria are purely males numbering from 10 and above.

Majority (64.49% and 66.18%) of the respondents in the study area (in Logo and Ukum LGAs, respectively) reported that, most bandits usually operate on motorcycles; while 76.76% of the respondents in Katsina Ala LGA, reported that, automobiles were the best form of transportation for bandits. This agrees with Mudashir *et al.* (2021), who

observed that bandits from Kuyambana forest in Kaduna and Kebbi states move to neighbouring villages on motorcycles with guns unchallenged. Dense vegetation and topography of Katsina Ala LGA may be attributed to the bandits' preference for vehicles as a means of escape. The Ikyo-Nyian forest's size and proximity, together with the presence of hills and mountains in Katsina Ala LGA, made it difficult for law enforcement officials to easily spot bandits.

This finding contradicts Shalangwa (2013), whose assertion showed that bandits usually escape on foot into the forests, hills and mountains of Adamawa state border communities of north-east Nigeria. About 87.79% of the respondents opined that the bandits typically escaped into the nearby forests after successive attacks on forest dependent communities. This implies that bandits have established a base of operations in the nearby forests of the study area thereby

preventing forest dependent communities from accessing the forests. In agreement with this finding, Shalangwa (2013) reported the development of bandit hideouts in the forests of Adamawa and Borno states border communities.

Consequences of banditry on forest ecosystems

The findings in Table 3 display the consequences of banditry on forest ecosystems in the study area. Based on the finding, the majority (55.84%) of the respondents believed that the majority of bandits in the study area significantly ($p=4.56$) use forest estates as a hideout for attack. All the respondents in the study area had the perception and agreed to the fact that bandits use forest estates as their hiding places in parts of Benue state.

Table 2: Nature and patterns of banditry attacks in the study area

Variable	Frequency (Percentage, %)			
	Katsina Ala LGA	Logo LGA	Ukum LGA	Total
Gender of the bandits that attack forest dependent communities				
Male	142 (100.00)	107 (100.00)	131 (96.33)	380 (98.70)
Female	0 (0.00)	0 (0.00)	0 (0.00)	57 (14.81)
Mixed gender	0 (0.00)	32 (0.00)	5 (3.67)	5 (1.30)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Estimated number of bandits whenever they attack				
2-5	0 (0.00)	0 (0.00)	15 (11.03)	15 (3.90)
6-10	98 (69.01)	90 (84.11)	67 (49.26)	255 (66.23)
11 and above	44 (30.99)	17 (15.89)	54 (39.71)	115 (29.87)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Types of weapons used by the bandits				
Sophisticated weapons	91 (64.08)	75 (70.09)	88 (64.71)	254 (65.97)
Small and light weapons	49 (34.51)	32 (29.91)	45 (33.09)	126 (32.73)
None of the above	2 (1.41)	0 (0.00)	3 (2.20)	5 (1.30)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Bandits escaping means after attack				
They escape by foot	0 (0.00)	18 (16.82)	0 (0.00)	18 (4.68)
They escape using motorcycles	33 (23.24)	69 (64.49)	90 (66.18)	192 (49.87)
They escape using vehicles	109 (76.76)	20 (18.69)	46 (33.82)	175 (45.45)
Total	142 (100)	107 (100)	136 (100)	385 (100)
Bandits hideout after attack				
They escape and hide in urban areas	0 (0.00)	4 (3.74)	9 (6.62)	13 (3.38)
They escape and hide in rural areas	31 (21.83)	3 (2.80)	0 (0.00)	34 (8.83)
They escape into the forests	111 (78.17)	100 (93.46)	127 (93.38)	338 (87.79)
Total	142 (100)	107 (100)	136 (100)	385 (100)

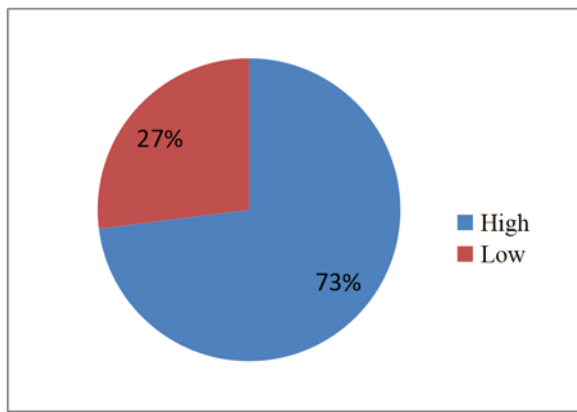


Figure 2: The rate of forest dependence in the study area

This implies that forests in the study area have turned into a haven for bandits. This result confirmed the statement made by El-Rufai (2022) that, bandits operate at the forest's fringes since the woodland serves as their primary hiding area. Rings of bandits have taken over chunks of hinterland communities in Benue State (Onwuzuruigbo, 2020). According to Mudashir *et al.* (2021), the nine forests include Sambisa, Alagarno, Kamuku, Kuduru, Kuyambana, linking almost the entire northern part of Nigeria and some neighbouring countries are being governed by bandits, thus worsening the insecurity challenges bedeviling the region. This development has affected the biodiversity of these forests, which in turn affects the extraction, distribution, and consumption of the forest resources. El-Rufai (2022) reaffirmed that the carpet-bombing of the forests usually leads to collateral damage to the forest.

Significant ($p=3.84$) proportion of the respondents (39.74% and 38.44% representing strongly agree and agree respectively) perceived that whenever bandits clash with security forces in the forest, their actions (such as airstrikes, forest fire and gunfire sounds) devastate the biodiversity of the area, causing forest degradation and wildlife migration. All of the respondents agreed that they lose their livelihoods due to banditry activities in the study area. The implication of this is the migration of wildlife species and displacement of human populations affects

the ecological, social and economic activities. The result of this finding indicates that banditry activities have significant implications for the respondents' socio-economic activities in the area.

Majority of the respondents agreed that banditry activities destroy the available forest ecosystems in the area and disrupt social and economic activities (such as historical and religious festivals and educational activities, among others). Also, deliveries of basic amenities (such as instructional school materials, hospital equipment, water and electricity) and psychological trauma are some of the significant implications of banditry facing the study areas as perceived by the respondents.

Ecological and socio-economic implications of banditry activities on forest-dependent communities in the study area

Table 4 shows the result of the ecological and socio-economic effects of bandits' activities on forest-dependent communities in the study area. Based on the result of this finding on the ecological and socio-economic effects implication, the majority of the respondents (44.16% for strongly agree and 48.83% for agree) reported that the destruction of forests and forest products due to banditry activities in the study area had ecological implications such as soil erosion, drought, climate change, among others. Additionally, the respondents significantly ($p = 3.97$) perceived that banditry activities within the forest ecosystems mostly interfere with social activities (such as festivals, religious and educational activities) of the people that depend on forest.

Banditry-related economic disruption had a significant ($p = 3.37$) impact on forest-dependent communities in the study area. The banditry actions also significantly ($p = 3.74$) affected the supplies or deliveries of basic amenities (such as schools' or educational materials, medical equipment, electricity, and water, among other things). Also, the socio-economic implications of

banditry activities in the study area were perceived to have psychological effect on the surrounding communities who largely depend on forests and forest products for their livelihood in the study area (Table 4).

The result of the Spearman correlation test between respondents' perceptions on the effects of banditry hideouts in forest ecosystems and the ecological and socio-economic implications on forest-dependent communities in the study area is presented in Table 5. The test variables, spearman correlation scores, and *p*-values were displayed in the table. No significant (*p* 0.051) correlation was found between "forest ecosystems as banditry hideouts" and any of the ecological and socio-economic implications (Table 5). However, a negative correlation (-0.211) was recorded between "forest ecosystems as banditry hideouts" and psychological trauma experienced by forest dependents who are banditry victims and relatives of victims of banditry (Table 5).

The result on the correlation between forest ecosystems as banditry hideouts and different ecological and socio-economic effects revealed a non-significant positive correlation. There was a very high correlation (95%) between banditry hideouts in forest ecosystems and their effects on biotic and abiotic components of the forest. This indicates that banditry and high security activities in forest ecosystems influenced the population status of biotic and abiotic components of the forest estates in the study area. Also, banditry and high security activities affect the utilization of wood and non-wood forest products (WNWFPs). Ecological disruption has various effects on forest ecosystems used by bandits as hideouts, including the extinction or threatened status of economically significant fauna species, among other NWFPs.

Table 3: Respondents' Perceptions on Effects of banditry on Forest Ecosystems in the Study Area

S/N	Consequences	SA		A		D		SD		No of Resp.	WS	WMS	Remark
		Freq (LS)	%	Freq (LS)	%	Freq (LS)	%	Freq (LS)	%				
i.	Most bandits use forests as their hideout	215 (1075)	55.84	170 (680)	44.16	0 (0)	0.00	0 (0)	0.00	385	1,755	4.56	**
ii.	Whenever bandits clash with security agencies in the forest, activities such as air bombardment and burning of forests destroy the living component of the forest including plants and animals	153 (750)	39.74	148 (592)	38.44	54 (108)	14.03	30 (30)	7.79	385	1,480	3.84	*
iii.	Banditry causes the migration of wild animals	140 (700)	36.36	177 (708)	45.97	42 (84)	10.91	26 (26)	6.75	385	1,518	3.94	*
iv.	Banditry affects the extraction, distribution, supply and consumption of forest resources such as timber, fruits, vegetable, honey, etc.	196 (980)	50.91	150 (600)	38.96	28 (56)	7.27	11 (11)	2.86	385	1,647	4.28	**
v.	Some forest-dependents whose houses or livelihood activities are located close to the forests abandoned their homes and livelihoods	181 (905)	47.01	204 (816)	52.99	0 (0)	0.00	0 (0)	0.00	385	1,721	4.47	**

Where: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree, Freq = Frequency, LS = Likert scale, % = Percentage, WS = Weight score, WMS = Weight mean score, * = Significant effect, ** = Highly significant effect.

Table 4: Perception on Socio-economic Effects of Banditry Activities on Forest-dependent Communities in the Study Area

S/No	Implication	SA		A		D		SD		No of Resp.	WS	WMS	Remark
		Freq (LS)	%	Freq (LS)	%	Freq (LS)	%	Freq (LS)	%				
i.	Destruction of forests and displacement of forest-dependent communities resulting to famine, soil erosion, drought, climate change, etc.	170 (850)	44.16	188 (564)	48.83	27 (54)	7.01	0 (0)	0.00	385	1,468	3.82	*
ii.	Disruption of social activities e.g. festivals, religious and educational activities, etc.	186 (930)	48.31	199 (597)	51.69	0 (0)	0.00	0 (0)	0.00	385	1,527	3.97	*
iii.	Disruption of economic activities e. g. trade, transportation, tourism, etc.	109 (545)	28.31	216 (648)	56.10	46 (92)	11.95	14 (14)	3.64	385	1,299	3.37	*
iv.	Negative impact on supply/delivery of basic amenities like schools/instructional materials, hospitals/equipment, electricity, water, etc.	162 (810)	42.08	192 (576)	49.87	22 (44)	5.71	9 (9)	2.34	385	1,439	3.74	*
v.	Psychological trauma suffered by forest dependents who are victims of banditry and relatives of victims of banditry	98 (490)	25.46	64 (192)	16.62	137 (274)	35.58	86 (86)	22.34	385	1,042	2.71	*

Where: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree, Freq = Frequency, LS = Likert scale, % = Percentage, WS = Weight score, WMS = Weight mean score, * = Significant effect.

Table 5: Relationship between respondents' perceptions on Forests ecosystems as banditry hideout and the ecological and socioeconomic implications on forest-dependent communities

Test Variables		Spearman value	p-value	Decision
Forests ecosystems as banditry hideout	<i>verses</i>	0.949	0.051	not sig.
Effects on biotic & abiotic components of forest				
Forests ecosystems as banditry hideout	<i>verses</i>	0.738	0.262	not sig.
Effects on fauna species				
Forests ecosystems as banditry hideout	<i>verses</i>	0.949	0.051	not sig.
Utilization of woods and non-wood forest products				
Forests ecosystems as banditry hideout	<i>verses</i>	0.778	0.222	not sig.
Communities livelihoods activities				
Forests ecosystems as banditry hideout	<i>verses</i>	0.738	0.262	not sig.
Destruction of forests and displacement				
Forests ecosystems as banditry hideout	<i>verses</i>	0.738	0.262	not sig.
Disruption of social & economic activities				
Forests ecosystems as banditry hideout	<i>verses</i>	0.738	0.262	not sig.
Effect on basic amenities				
Forests ecosystems as banditry hideout	<i>verses</i>	-0.211	0.789	not sig.
Psychological trauma				

Where: Not sig = Not significant at 0.05

Effective prevention and control of banditry activities in the study area

Table 6 shows the respondents' opinions on the effective prevention and control of banditry activities in the forest ecosystems in the study area. The majority of respondents (88.57%) believed that converting or clearing forest ecosystems (used by bandits as hideouts) to other uses would not be an effective means of preventing or controlling banditry activities in the study area. This implies that such a means of curtailing banditry activities in the area could have a great negative impact on their livelihood.

The respondents (51.95% for strongly agree and 48.05% for agree) opined that the government should deploy more security personnel in the affected communities and provide enough equipment required for adequate crime control and prevention. The establishment of local security outfits (vigilante groups) and deployment of security personnel in the affected areas and the provision of equipment would be an effective control of such insecure activities in the study area.

The respondents (32.21%) opined that the government should grant amnesty to the bandits and as well provide alternative livelihoods for them. Furthermore, the government and non-governmental organizations should provide basic infrastructure and amenities at the rural level in order to create employment opportunities, thereby discouraging any cooperation or collaboration between bandits and community members who could serve as informants to the bandits. This idea was backed up by 29.09% of the respondents. Only 15.84% disagreed and 24.94% strongly disagreed with the government's ability to provide infrastructure and amenity provision at the rural level due to the government's nonchalant attitude toward rural communities in Nigeria. Concerned stakeholders such as government at all levels and non-governmental organization should, therefore, provide alternative livelihoods to the bandits through amnesty programmes and the provision of basic amenities like good roads, hospitals, local security outfits, etc. These developments will create job opportunities for the repentant bandits.

Table 6: Effective Prevention and Control of Banditry Activities in the Study Area

S/N	Preventive/Control measures	SA Freq (LS)	%	A Freq (LS)	%	D Freq (LS)	%	SD Freq (LS)	%	No of Resp.	WS	WMS	Remark
i.	All the bandits hideout forest areas should be destroyed and converted to other uses	11 (55)	2.86	33 (132)	8.57	156 (312)	40.52	185 (185)	48.05	385	684	1.78	Ns
ii.	Establishment of local vigilante groups that will monitor forest ecosystems and forest dependent communities	164 (820)	42.60	175 (700)	45.45	36 (72)	9.35	10 (10)	2.60	385	1,602	4.16	**
iii.	Provision of security personnel and equipment required for adequate crime control and prevention	200 (1000)	51.95	185 (740)	48.05	0 (0)	0.00	0 (0)	0.00	385	1,740	4.52	**
iv.	Granting amnesty to bandits and provision of alternative livelihood to them	90 (450)	23.38	124 (496)	32.21	84 (168)	21.82	87 (87)	22.59	385	1,201	3.12	*
v.	Provision of basic infrastructure and amenities at the rural level with a view to creating employment opportunities	116 (580)	30.13	112 (448)	29.09	61 (122)	15.84	96 (96)	24.94	385	1,246	3.24	*

Where: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree, Freq = Frequency, LS = Likert scale, % = Percentage, WS = Weight Score, WMS = Weight mean score, Ns = Not significant, ** = Highly significant effect, * = Significant effect.

CONCLUSION AND RECOMMENDATIONS

Young and energetic male bandits use forests as their hideout in North East guinea savanna ecological zone of Sankera axis, Benue state, Nigeria. Their nefarious activities have continued to drive the general shift from forest conservation to forest degradation, resulting mainly from airstrikes, fire, and wildlife migration, all of which have adverse impact on how well the resources are utilized in the study area. Banditry had also posed a serious threat to the safety and security of forest-dependent communities. As a result, forest-dependent communities have been displaced, and their social, economic, and ecological activities have been disrupted. These findings suggest that clearing forest estates due to banditry activities, as commonly suggested by people, is not an effective method of prevention or control. Therefore, this study recommends strengthening both traditional and modern security systems to protect people's lives and properties, including the forests.

REFERENCES

Abubakar, E. M. and Dau, J. H. (2019): Economic Analyses of Non-timber Forest Products Utilized by Communities around *Kwabaktina* Forest Reserve; *Asian Journal of Agricultural and Horticultural Research (AJAHR)*, 3(4): 1-8.

Agbogidi, O. M. (2010): Contribution of non-timber forest products to food security in Nigeria, In Onyekwelu, J. C., Adekunle, V. A. J. and Oke, D. O. (Eds). Proceedings of the 2nd Biennial National Conference of the forests and forest products society (FFPN) held in the Federal University of Technology Akure, Ondo State between 26th -29th April 2010: 372-377.

Ani, D. P., Iorkaha, J. T. and Ogebe, F. O. (2014): Technical efficiency of yam production in Ukum Local Government Area, Benue State, Nigeria; *IOSR Journal of Agriculture and Veterinary Science*. 7(7): 2319-2380.

Awoyemi, T. T. (2011): Rural non-farm incomes and poverty reduction in Nigeria. *African Economic Research Consortium*: 1-29.

Brenner, C. (2021). Combating Banditry in Northwest Nigeria. <https://www.americansecurityproject.org>. Accessed on April 20, 2022.

Clarke, J., Cavendish, W and Coote, C. (1996): *Rural households and miombo woodlands: use, value and management. in the miombo in transition: woodlands and welfare in Africa*. Campbell, B. (Editor). Center for International Forestry Research. Pp 100-135.

Collins, H. (2000): Social Banditry, 3rd Edition. Harper Collins Publishers. Retrieved From <https://www.collinsdictionary.com/dictionary/english/banditry>. Accessed on April 20, 2022.

Dau, J. H. and Elisha, A. (2013): Survey on non-timber forest products in Bauchi South Senatorial districts, Bauchi State, Nigeria. *Journal of Research in Forestry, Wildlife and Environmental*. 6 (1): 82-97.

El-Rufai, N. (2022): Nigerian Military Should Carpet-Bomb Bandits' Forests, Trees Can Be Replanted; *Sahara Reporter online News* <https://saharareporters.com/2022/01/04>. Accessed on April 24th, 2022.

Hundu, W.T., Anule, P.T., Kwanga, G.M and Dam, D.P. (2021). Assessment of Land Use and Land Cover Change Using GIS And Remote Sensing Techniques in Katsina-Ala Local Government Area of Benue State, Nigeria. *Journal of Research in Forestry, Wildlife and Environment*. 13(4): 195 – 204.

IamBenue (2018): Katsina Ala, Logo and Ukum Local Government Areas: 1-2.

Kabubo-Mariara, J. Gachoki, C. (2008). Forest Dependence and Household Welfare: Empirical Evidence from Kenya, *CEEPA Discussion*. Pp. 41.

Kakwagh, V. V. (2018): The impact of roads on rural development in Katsina Ala, Logo and Ukum local government areas of Benue State Nigeria. *International Journal of Sociology and Anthropology Research*. 4(1): 10-15.

Kwaga, B. T., Shalangwa, A. A., Ringin, M. I. G. and Boni, P. G. (2019): Assessment of human settlement in Toungo sector of Gashaka-Gumti national park, Nigeria;

Global Journal of Science Frontier Research. D. Framingham Massachusetts
Pin: 01701, USA: 11-17.

Environment Department, Washington,
DC: 1-95.

- Ladan, I. S. and Matawalli, B. U. (2020): Impacts of Banditry on Food Security in Katsina State, Nigeria. *Direct Research Journal of Agriculture and Food Science*. 8(12): 439-447.
- Meer, B. B. (2018): Threats and Conservation Status of Woody Plant Species in Different Ecological Zones of Taraba State, Nigeria. *Advance in Plants and Agriculture Research (APAR)*. 8(6): 443-447.
- Mudashir, I., Isamotu, I., Sadiq, L., Umar, S., Aminu, U. H. and Bashir, M. (2021): Things You Need To Know About Forests 'Governed' By Bandits, Boko Haram. Published by Daily Trust on Saturday, February 27, 2021.
- Neelo, J., Teketay, D., Kashe, K., Masamba, W. (2015): Stand structure, diversity and regeneration status of woody species in open and enclosed dry woodland sites around *Molapo* farming areas of the Okavango Delta, Northeastern Botswana. *Open Journal of Forestry*. 5: 313- 328.
- Onwuzuruigbo, I. (2020): Enclaves of Banditry: Ungoverned Forest Spaces and Cattle Rustling in Northern Nigeria; *African Studies Review*. 64(1):1-24.
- Shalawanga, M. W. (2013): The nature and consequences of arm banditry on border communities of Adamawa state Nigeria. <http://kubanni.abu.edu.ng>: 1-116.
- Suleiman, M. S., Wasonga, V. O., Mbau, J. S., Suleiman, A. and Elhadi, A. Y. (2017): Non-timber forest products and their contribution to households income around Falgore Game Reserve in Kano, Nigeria. *Ecological Processes*. 6(1): 1- 14.
- Talukdar, N. R., Choudhurya, P., Barbhuiyaa, R. A. and Singh, B. (2020): Importance of Non-Timber Forest Products (NTFPs) in rural livelihood: A study in Patharia Hills Reserve Forest, North East India. *Elsevier B.V.* 100042.
- Vedeld, P., Angelsen, A., Sjaastad, E. and Berg, G. K. (2004): Counting on the environment: forest incomes and the rural poor, Paper #98. The World Bank