



EFFECTS OF BANDITRY ACTIVITIES ON FOREST ECOSYSTEMS AND THE HOST COMMUNITIES IN NORTH-EAST GUINEA SAVANNA ECOLOGICAL ZONE OF SANKERA AXIS, BENUE STATE, NIGERIA

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 Saawuan 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 (Ikoy-Nyian, Ukamberagya, and Gundu-Chaha from Katsina Ala, Logo, and Ukum local government areas respectively) were purposely 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. Based on this finding, the majority of the respondents (57.92%) were male farmers who are mostly young and agile. Majority (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.

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, construction materials, and many of these reasons are associated with cultures (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 (Abubabkar 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 (Abubabkar and Dau, 2019). Rural households spend income realized from NTFPs to buy food to maintain their families, hence dependence upon several combined and seasonal activities of NTFPs as 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, "forest estates have been a suitable hideout for different unlawful activities by different people which is tagged as 'banditry'.

Banditry is an act of robbery and violence committed in areas where the rule of law has broken down (Ladan and Matawalli, 2020). It consists of 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.

MATERIALS AND METHODS

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 areas of Benue State. It has a total land area of approximately 5,324 km² (IamBenue, 2018). 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).

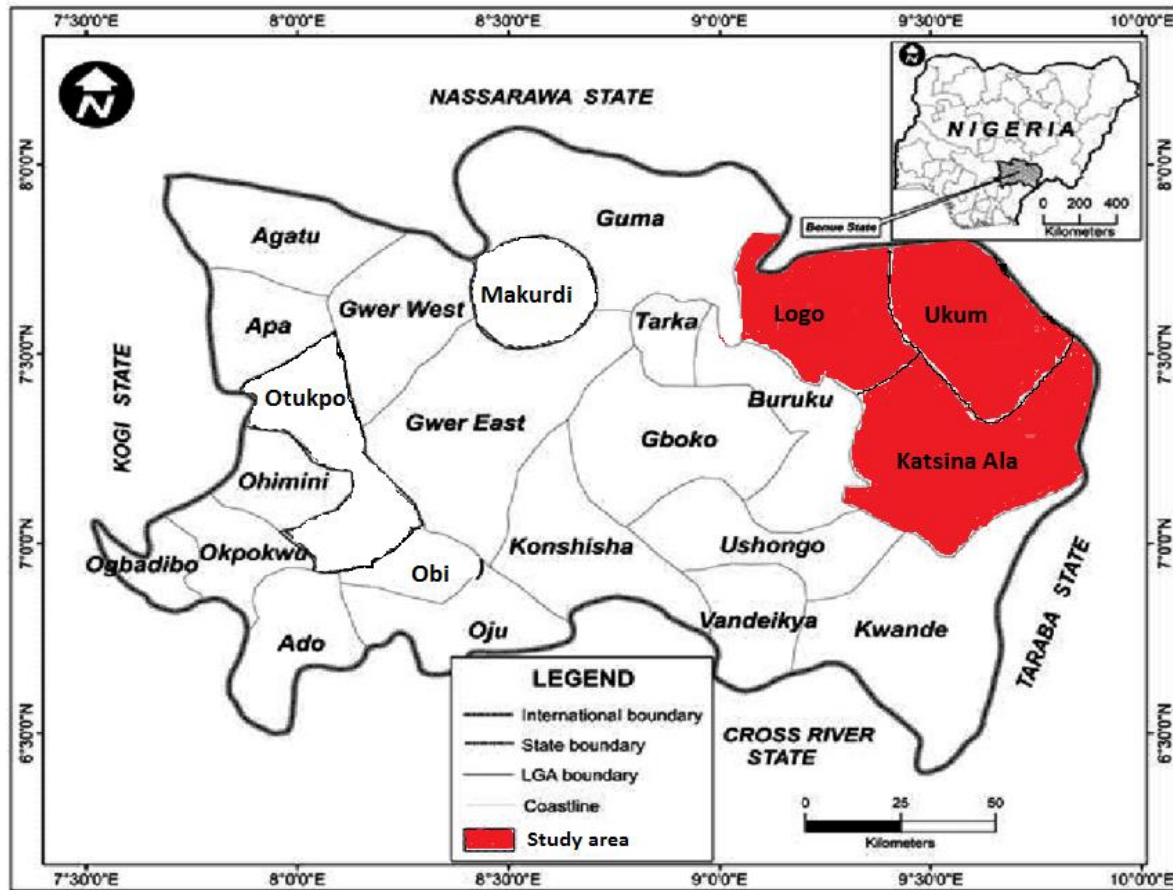


Figure 1: Map of Benue state showing the study area
Source: IamBenue (2018).

Data Collection and Analyses

The study area was stratified into Katsina Ala, Logo, and Ukum Local Government Areas (LGAs). A 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 sampled forests were sampled based on their high tendency to depend on forests and their resources in the study area. Sample size of 385 respondents who depend 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 based on 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 north-east guinea savanna ecological zone of Sankera axis, Benue, Nigeria

The results of socio-economic characteristics in the north-east guinea savanna of Sankera axis, Benue state showed that 3561.27%, 32.71% and 74.27% of the respondents 35 in Katsina Ala, Logo and Ukum LGAs respectively were males while 3538.73%, 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 fall above 50 years with Katsina Ala, Logo and Ukum LGAs recording 11.27%, 9.35% and 20.59%, respectively (Table 1). According to the study's marital status results, 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 observed to be 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. 35 Clarke *et al.* (1996) affirmed that 35 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.

The result (Table 1) also showed that, 49.35% of the respondents had secondary school education while 25.97% of them had primary school education. The respondents' occupational breakdown indicated that 54.28% of them were farmers, 21.56% were traders, and 20.00% were artisans/herbalists. There were just 4.16% civil servants. Despite the high educational of farming operations in the study area, the high level of education indicate that, respondents were knowledgeable about the social, ecological, and economic benefits of forests and forest products. Forty two point eighty five percent (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 like polygamy that encourage greater household consumption and extraction of forest resources.

This finding is comparable to the one made in a research 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). 35

The average annual household income in the study area is below #200,000. This suggests that they are low-income, 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. Households with better income would opt to invest more in other sectors of the economy rather than relying on forest resources (Suleiman *et al.*, 2017).

Table 1: Socio-economic characteristics of respondents

Variable	Frequency (Percentage, %)			
	Katsina Ala LGA	Logo LGA	Ukum LGA	Total
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)

Variable	Frequency (Percentage, %)			
	Katsina Ala LGA	Logo LGA	Ukum LGA	Total
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 north-east guinea savanna ecological zone (Sankera axis) of Benue State, Nigeria

The result on the nature and patterns of banditry attacks (Table 2) indicates that, majority (98.70%) of the responses implies 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 A.K 47 raffle to cause harm, suffering, and injuries to the poor forest dependent communities. This finding was 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 flee on motorcycles; while 76.76% of the respondents in Katsina Ala LGA, reported that, automobiles were the best form of transportation for bandits. The popularity of "bajaj" motorbikes in the study area could be due to the fact that these motorcycles move faster in the forest and bush paths. This agrees with Mudashir *et al.* (2021), they observed that bandits from Kuyambana forest in Kaduna and Kebbi states move to neighbouring villages on motorcycles with guns unchallenged. The vehicular escaping means of transportation preferred by the bandits in Katsina Ala LGA as opined by the respondents may be due to the thick vegetation and topography of the area. The Ikoy-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 contradict Shalangwa's (2013), whose assertion showed that bandits usually escape on foots into the forests, hills and mountains of Adamawa state border communities of north-east Nigeria. Eighty seven point seventy nine percent (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 keeping with this finding, Shalangwa (2013) reported the development of bandit hideouts in the forests of Adamawa and Borno states border communities.

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				
Sophiscated 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)
Non 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)

Tendency of respondents to depend on forest resources

Figure 2 depicts the tendency to depend on forest resources. The results revealed that majority (73.00%) of the respondents had a high tendency to rely on forest resources in the study area, but the existence of bandits in these forests defile their tendency. The high tendency to depend on forest resources may be explained by crucial functions that forests play in providing goods and services required for both human and animal well-being. According to Clarke *et al.* (1996), essential forest products include wood for tool handles and household utensils, poles and construction products, timber, foods, medicines, leaf litter, grazing, and browsing. Forest lands have a service role in controlling soil erosion, providing shade, modifying hydrological cycles and maintaining soil fertility. Religious and cultural customs which relate to designated woodland areas and certain tree species are vital to the spiritual well-being and effective functioning of rural communities (Clarke *et al.*, 1996).

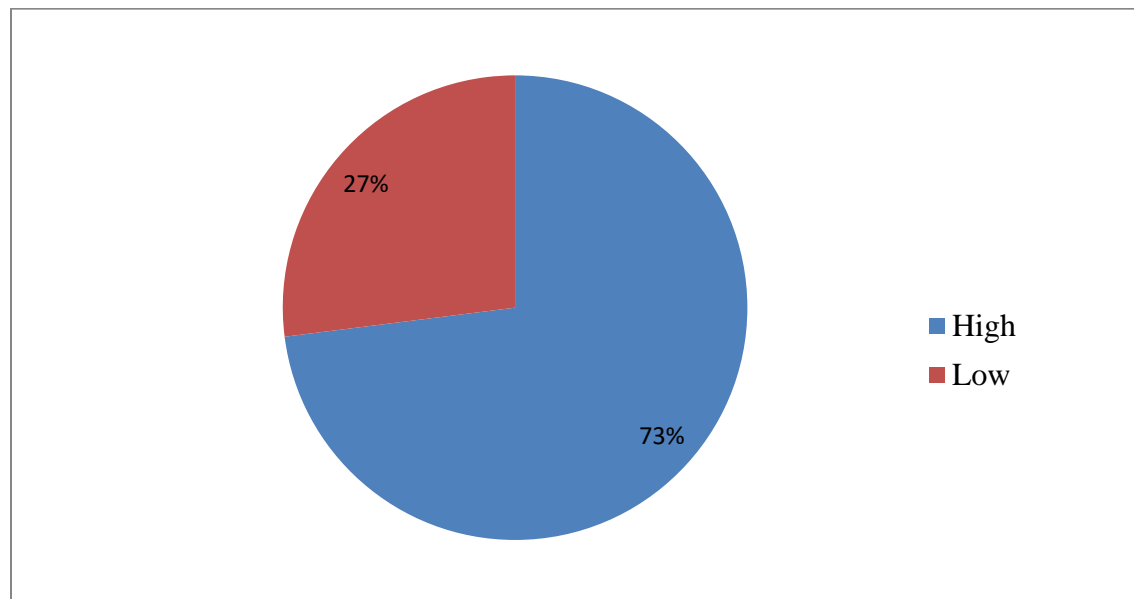


Figure 2: Respondents' forest dependent tendency in the study area

Consequences of banditry on forest ecosystems

The finding in Table 3 displays respondents' perceptions on how banditry affects the 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. 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 loss 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 which 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.

Most of the respondents perceived 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.

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

Table 4 shows the result of the respondents' perception 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) significantly ($p = 3.82$) reported that the destruction of forests and forest products due to banditry activities in the area results in ecological implications such as soil erosion, drought, climate change, among others in the study area. 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 ($p = 3.74$) affect 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 trauma 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 the presence of banditry and high security activities in forest ecosystems influences the population status of biotic and abiotic components of the forest estates in the study area. Also, the presence of banditry and high security activities affects 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.

Effective prevention and control of banditry activities in the study area

Table 6 shows the respondents' perceptions 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% and 29.09%) 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 required to

respond speedily to early warnings and distress calls to monitor forest ecosystems and their surroundings would be an effective control of such insecure activities in the area as significantly ($p = 4.16$) perceived by the respondents. The establishment of local security outfits (vigilante groups) to monitor forest ecosystems and their surroundings implies that authorities will never get it right in terms of securing the people unless the forests are ransacked, reclaimed, and properly guarded. The respondents (32.21%) significantly ($p=3.12$) perceived 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 banditry.

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, burning of forests and sounds from gun exchange 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 vs. Effects on biotic & abiotic components of forest	0.949	0.051	not sig.
Forests ecosystems as banditry hideout vs. Effects on fauna species	0.738	0.262	not sig.
Forests ecosystems as banditry hideout vs. Utilization of woods and non-wood forest products (WNWFPs)	0.949	0.051	not sig.
Forests ecosystems as banditry hideout vs. Communities livelihoods activities	0.778	0.222	not sig.
Forests ecosystems as banditry hideout vs. Destruction of forests and displacement	0.738	0.262	not sig.
Forests ecosystems as banditry hideout vs. Disruption of social & economic activities	0.738	0.262	not sig.
Forests ecosystems as banditry hideout vs. Effect on basic amenities	-0.211	0.789	not sig.
Forests ecosystems as banditry hideout vs. Psychological trauma			

Where: Not sig = Not significant at 0.05

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 should, therefore, provide alternative livelihoods to the bandits through the provision of basic amenities that will create job opportunities.

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 activities have 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. This finding suggests 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.

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

S/No	Preventive/Control measures	SA		A		D		SD		No of Resp.	WS	WMS	Remark
		Freq (LS)	%	Freq (LS)	%	Freq (LS)	%	Freq (LS)	%				
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.

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