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Determinants of Farming Households' Compliance with Forestry Laws in Forest-Dependent Communities of Boki Local Government Area of Cross River State, Nigeria

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ABSTRACT

Forest resources are central to the livelihoods of many rural households in Nigeria, particularly in forest-dependent communities where farming and forest use are closely intertwined. However, persistent non-compliance with forestry laws continues to undermine sustainable forest management, especially in ecologically sensitive areas such as Boki Local Government Area of Cross River State. This study examined the determinants of farming households' compliance with forestry laws in forest-dependent communities of Boki Local Government Area, Cross River State, Nigeria. A multistage sampling technique was used to select 180 respondents from forest-dependent communities, and data were collected through structured questionnaires. Descriptive statistics, a five-point Likert scale, and logistic regression analysis were employed to analyze the data. The results revealed that most respondents (38%) were aged between 41–50 years, predominantly male (73%), married (92%), and primarily engaged in farming (72%). The majority were aware of laws prohibiting farming or land clearing within forest reserves (89%) and bush burning (85%), while awareness of reforestation laws was lowest (18%). The level of compliance was high for prohibition of farming in forest reserves (mean = 4.23) and bush burning (mean = 3.88), but low for reforestation laws (mean = 1.88). Logistic regression results showed that educational status ($p<0.10$), household size ($p<0.05$), household income ($p<0.05$), awareness of forestry laws ($p<0.01$), and primary occupation ($p<0.05$) significantly influenced compliance. The major constraints to compliance were lack of alternative livelihoods (89%), poverty (68%), and low education (43%). The study concludes that economic conditions, awareness, and education are critical to fostering compliance with forestry laws. It recommends increased forestry extension services, provision of alternative livelihood opportunities, and improved enforcement and community participation to promote sustainable forest management in Boki LGA.

Keywords: Forestry laws, awareness, compliance, forest-dependent communities, Boki LGA

Introduction

Forestry laws play a vital role in maintaining ecological balance and ensuring sustainable use of forest resources, particularly in forest-dependent communities. According to the Center for International Forestry Research (CIFOR, 2006), compliance with forestry laws refers to the extent to which forest users adhere to established legal requirements governing forest use. Forestry laws encompass provisions related to environmental impact assessments, wildlife protection, and community participation in forest management (Vihi *et al.*, 2020). In the context of natural resource management, forest laws serve as essential legal frameworks that regulate the conservation, utilization, and protection of forest resources. These laws ensure a balance between ecological integrity, social welfare, and

economic development. Effective forestry governance depends on the existence of well-formulated laws, coupled with compliance by forest users and managers. According to Udo *et al*. (2009), forestry laws are primarily designed to prevent misuse of forest resources, protect individual and public rights, and serve as catalysts for development and sustainable management. They also function as instruments of environmental preservation, addressing issues such as illegal logging, deforestation for agriculture, overgrazing, fuelwood harvesting, and uncontrolled bush burning. Given that forests often take decades or centuries to regenerate, preservation laws are crucial to prevent irreversible ecological loss (Vihi *et al*., 2020). Historically, forest policies and laws in most African countries, including Nigeria, originated during the colonial era and have continued to shape post-independence forestry governance (Oguntala, 1995). While these laws provide a framework for forest management, their implementation and enforcement often face challenges such as weak institutional capacity, poor awareness, and low compliance among forest-dependent communities. Consequently, the study of forestry law compliance becomes vital for achieving sustainable forest management.

In many developing countries, including Nigeria, a complex mix of customary, national, and international laws regulate forest access, conservation, and utilization. However, these laws are often contradictory or poorly enforced, leading to widespread illegal logging, encroachment, bush burning, and wildlife exploitation. In Nigeria, weak enforcement and outdated forest policies have created loopholes for the continuous degradation of forest resources (Vihi *et al.*, 2020; Agbeja, 2008). Most of the existing forest laws were inherited from the colonial era and have not been sufficiently adapted to current realities (Federal Republic of Nigeria, 1999). Forest crimes such as illegal timber extraction, land encroachment, and wildlife poaching have continued to threaten biodiversity and forest sustainability, resulting in estimated global losses exceeding US$10 billion annually (World Bank, 2006). The rapid rate of deforestation driven by agricultural expansion, logging, and fuelwood harvesting poses a serious threat to ecological stability, biodiversity conservation, and rural livelihoods (Ikoni, 2012; Agbogidi and Ofuoku, 2009).

Despite numerous government interventions such as forest reservation policies, reforestation campaigns, and community forestry initiatives (FAO, 2003), deforestation and environmental degradation persist across many states. Boki Local Government Area, located within the rainforest belt of southern Nigeria, is one of the most forest-dependent regions of the state. The area hosts part of the Cross River National Park and several community forests that provide timber, non-timber forest products (NTFPs), and wildlife resources that underpin the livelihoods of local households. However, increasing population pressure, agricultural expansion, illegal logging, hunting, and weak law enforcement have led to rapid deforestation and biodiversity loss, posing serious threats to sustainable forest management and community welfare (UN-REDD, 2021).

To address these challenges, the Cross River State Government established a strong legal and institutional framework for forest management through the Cross River State Forestry Commission Law (2010) and the Forestry Regulations (2011). These laws, implemented by the Cross River State Forestry Commission (CRSFC), aim to ensure sustainable utilization of forest resources,

promote reforestation, and regulate access to forest lands. The laws also align with national and international conservation initiatives such as the National Forest Policy (2006) and the REDD+ Programme (Reducing Emissions from Deforestation and Forest Degradation).

The key forestry laws governing Boki Local Government Area include the following:

- Law Establishing the Cross River State Forestry Commission (2010):

-This law established the CRSFC as the principal regulatory authority for managing all categories of forests in the state. It empowers the Commission to issue permits, enforce forestry regulations, monitor timber concessions, and implement conservation measures.

- Law Prohibiting Illegal Logging and Timber Extraction (2011):It is illegal to fell, saw, or transport timber without a valid permit issued by the Forestry Commission. The law prescribes strict penalties for offenders and regulates the trade and transportation of forest products.

- Law Prohibiting Farming and Settlement within Forest Reserves:Unauthorized farming, grazing, or settlement within protected forest reserves is prohibited. Encroachment, bush burning, and land clearing in forest areas attract penalties, including forfeiture of crops and fines.

- Law Regulating Transportation and Marketing of Forest Products: All forest products must be registered and accompanied by movement permits. The law specifies approved transport routes and tariff charges to curb illegal trade and enhance traceability.

- Law Encouraging Community Forestry and Co-management: The 2010 Forestry Law promotes the establishment of Community Forest Management Associations (CFMAs), empowering local communities to co-manage forest resources, monitor illegal activities, and implement reforestation projects.

- Law on Environmental Protection and Reforestation: This law mandates reforestation and tree planting as conditions for logging or land conversion. Environmental Impact Assessments (EIAs) are required for commercial forest exploitation, and offenders risk suspension or revocation of permits.

- Law Prohibiting Hunting and Wildlife Exploitation: The Wildlife (Conservation and Protection) Law (2010) prohibits hunting, trapping, or killing of wild animals within protected areas and forest reserves without a valid license. It also bans the use of firearms, traps, or poisons for hunting and outlaws the trade of bushmeat from protected species such as the Cross River Gorilla (*Gorilla gorilla* diehli), chimpanzees, and forest elephants. The law further encourages communities to establish wildlife committees to support enforcement and awareness creation.

- Executive Order on Total Suspension of Logging (2024): In response to escalating deforestation, the Cross River State Government reaffirmed a total suspension of logging in all forest areas, including Boki LGA, as part of its REDD+ conservation strategy and climate change mitigation effort (Vanguard, 2024).

Despite the existence of these comprehensive forestry and wildlife laws, compliance among forest-dependent farming households in Boki Local Government Area remains weak. Illegal logging, shifting cultivation, encroachment into forest reserves, and indiscriminate hunting persist, leading to deforestation, loss of biodiversity, and environmental

degradation (The Guardian Nigeria, 2025). Weak institutional enforcement, poverty, low awareness, and dependence on forest resources for livelihood contribute to non-compliance. Consequently, the sustainability of forest resources and community welfare are under increasing threat. There is therefore a pressing need to examine the level of compliance with forestry laws among farming households and identify the socioeconomic, institutional, and attitudinal factors influencing compliance behavior in the area. The broad objective of this study is to analyze the determinants of farming households' compliance with forestry laws in forest-dependent communities of Boki Local Government Area, Cross River State, Nigeria. The specific objectives are to: describe the socioeconomic characteristics of farming households in the study area, identify the existing forestry laws and assess the level of compliance among farming households, determine the socioeconomic and institutional factors influencing households' compliance with forestry laws, identify the major challenges constraining compliance with forestry regulations in the study area.

Methodology

Study Area

The study was conducted in Boki Local Government Area (LGA) of Cross River State, Nigeria. Boki lies within the tropical rainforest ecological zone of southeastern Nigeria and is one of the most forest-rich areas in the country, forming part of the Cross River National Park buffer zone (Daniel *et al*., 2018). The LGA is located between latitude 6°05' and 6°30' North and longitude 8°45' and 9°20' East.

It shares boundaries with Obudu and Obanliku LGAs to the north, Ikom and Etung LGAs to the south, Ogoja LGA to the west, and the Republic of Cameroon to the east. The area covers a landmass of approximately 2,870 square kilometres and has an estimated population of 186,611 persons (National Population Commission, 2006), projected to about 256,000 persons in 2025 using an annual growth rate of 2.8%. The LGA is predominantly inhabited by the Boki ethnic group, who depend heavily on forest resources for livelihood activities such as farming, hunting, fuelwood collection, non-timber forest product (NTFP) harvesting, and logging. Boki LGA comprises ten (10) political wards, namely: Beebo/Bumaji, Abo/Ogboja, Buda/Wula, Okundi, Ogep/Osokom, Alankwu/Bokim, Boje, Kakwagom/Bawop, Iruan and Bunyia/Okubuchi. The topography is largely undulating and mountainous, with elevations ranging from 150m to over 1,200m above sea level. The area experiences a humid tropical climate, characterized by high rainfall ranging between 2,500mm and 3,500mm annually and a temperature range of 18°C to 30°C. The rainy season lasts from March to October, while the dry season spans November to February. The fertile soil and favorable climate support dense vegetation, making agriculture and forest exploitation the mainstay of the local economy (Daniel *et al*., 2018).

Sampling Technique and Sample size

The population for this study consists of all farming households residing in forest-dependent communities of Boki LGA who engage in farming and other forest-related livelihood activities. This population includes both male- and female-headed households who derive part or all of their income from forest-related resources. A multi-stage sampling technique was employed to select

respondents for the study. In the first stage, Boki LGA was purposively selected because it contains one of the most important forest reserves in Cross River State, including the Afi River Forest Reserve and the Okwangwo Division of the Cross River National Park, making it a hotspot for forestry-related activities and conservation conflicts. Similarly, in the second stage, six (6) out of the ten (10) political wards in Boki LGA were purposively selected namely; Bunyia/Okubuchi, Boje, Kakwagom/Bawop, Buda/Wula, Abo/Ogboja and Beebo/Bumaji. The purposive selection of wards and communities was guided by their closeness to forest reserves and the high intensity of farming and forest related livelihood activities, which ensured that respondents possessed relevant experiences and knowledge required to address the study objectives. In the third stage, from each of the selected wards, two (2) prominent forest-dependent communities were purposively chosen, giving a total of twelve (12) communities. Within each selected community, a list of farming households was obtained from community heads, village forestry committees, and local extension agents. From this list, random sampling was employed to select household respondents proportionate to community size.The sample size for the study was determined using Yamane's (1967) formula for finite population samples:

$$n = \frac{N}{1 + N(e^2)}$$

Where,

n = required sample size,
N = total population (number of farming households), and
e = level of precision (set at 0.07).

A total population of 1,525 farming households was obtained across the study communities:

$$n = \frac{15251}{1 + 15251(0.07^2)}$$

$$n = \frac{15251}{1 + 7.47)}$$

$$n = 188$$

Thus, a total of 180 respondents were selected for the study. The number of respondents chosen from each community was proportionate to the estimated household population of that community.

Methods of Data Analysis

Descriptive statistics such as frequencies, percentages and mean were used to analyze the socio-economic characteristics of the respondents, examine the level of awareness of existing forestry laws in the study area. Five-point likert rating scale was used to examine the level of compliance with forestry laws while logit regression was used to determine the factors influencing compliance with forestry laws in the study area.

Likert scale

The level of compliance with forestry laws was measured using a Five- point Likert scale. Here compliance score was calculated against a five-point scale: 'strongly complied (SC), complied (C), undecided (U), not complied (NC) and strongly not complied (SNC)' weighted as 5, 4, 3, 2 and 1, respectively. Based on the 5- point scale, a mid-point of 3.0 was established i.e. 5+4+3+2+1= 15 ÷ 5 = 3.0. Thus a decision rule was that, a mean value of 3.0 was used as cut-off point to determine the level of compliance with forestry laws. Any forestry law with weighted mean value equal to or

above the cut-off mean of 3.0 is considered complied with, while those with weighted mean of less than 3.0 will be considered not complied with.

Logit Model Specification

To examine the factors influencing compliance with forestry laws in this study using logit regression, the model was expressed with the appropriate dependent and independent variables. Since the dependent variable is the mean values of the five-point Likert scale measuring the level of compliance, we modeled the likelihood of compliance in terms of categorical outcomes (i.e., compliance vs. non-compliance).

Dependent Variable:

The dependent variable, Y, is a binary outcome, where:

- Y=1 if the respondents complied with forestry laws (i.e., the mean Likert score for compliance is greater than or equal to a threshold of 3.0).
- Y= 0 if the respondent does not comply with forestry laws (i.e., the mean Likert score is less than 3.0).

The Likert scale range from 1 (non-compliance) to 5 (full compliance), and the mean value would summarize the level of compliance across various laws. A cutoff point of 3.0 is chosen, where respondents scoring 3.0 or higher are considered forestry laws compliant, and those below 3.0 are non-compliant.

The logit regression model to analyze the compliance decision is specified as follows:

$Y = ßo + ß_1 X_1 + ß_2 X_2 + - - - - - ßn Xn$

Where Y = Level of forestry laws compliance (1= compliant, 0 = non-compliant)

ßo = Intercept
$ß_1 - - - - n$ = estimated parameters
$X_1 - - - - n$ = set of independent variables
X_1 = Age of the farmers (years)
X_2 = Gender (1= male, 0=female)
X_3 = Marital status (1 = married, 0 = single)
X_4 = Education level (number of years spent in formal education)
X_5 = Household size (number of persons under the same roof)
X_6 = Household income level (Naira)
X_7 = Awareness of forestry Laws (1 =Aware, 0 =Not aware)
X_8 = Primary occupation (1 = farming, 0 = otherwise)

Results and Discussion

Socio-economic characteristics of the respondents

The socio-economic profile of farming households in this study sheds important light on the determinants of compliance with forestry laws in forest-dependent communities of Boki LGA. Results in Table 1 shows that most respondents were within the economically active age bracket, with a mean age of 44 years. This aligns with research in Botswana, where age and education significantly influence household forest dependency, with younger and better-educated household heads engaging differently with forest resources compared to older individuals, affecting compliance with forest management policies (Garekae *et al*., 2017). Similarly, Vihi *et al*. (2020) found that age plays a significant role in shaping farmers' adherence to forestry laws in Plateau State, as middle-aged adults are the main actors in forest-based livelihoods.

The male predominance (73%) observed in this study reflects broader gender patterns in forest use. In Sierra Leone, gender, age, and

education were shown to significantly influence forest dependency, indicating that socio-economic roles shape household interactions with forest environments and adherence to forestry regulations (Samura, 2025). Most respondents were married (92%), a pattern consistent with findings showing that marital status influences forest resource use. Married households often have greater labour capacity and responsibilities, which can shape forest use intensity and interactions with forestry laws (Wale *et al*., 2022). Regarding educational attainment, over half of respondents had secondary or tertiary education. Studies in Cameroon indicate that education, along with income and age, influences the intensity of forest resource gathering, with higher education levels linked to better understanding of conservation regulations and potentially higher compliance (Wale *et al*., 2022).Vihi *et al*. (2020) also highlighted that education improves farmers' awareness of forestry laws and their willingness to comply.

Household size averaged eight persons, which is comparable to findings in Plateau State where larger households often rely more heavily on forest resources due to higher consumption needs, potentially influencing compliance with forest laws (Vihi *et al*., 2020). Most respondents were primarily engaged in farming (72%), reflecting the agrarian nature of forest-edge communities. Research in South Africa shows that socio-economic factors such as income and household size influence how rural households rely on non-timber forest products, which affects compliance with forestry laws (Wale *et al*., 2022). The mean monthly income of ₦182,500 indicates moderate livelihood levels. Studies from Cameroon demonstrate that income and training significantly influence household engagement with forest products; higher-income households may have alternatives and thus are more likely to comply with forest regulations (Samura, 2025). Finally, the predominance of inherited land tenure suggests strong customary land systems. Research in Cross River State indicates that customary land rights influence how communities interact with forest resources and formal policies, affecting compliance with forestry laws (Samura, 2025; Vihi *et al*., 2020).

Table 1: Distribution of Respondents according to Socio-economic Characteristics (n = 180)

Variable	Frequency	Percentage	Mean
Age			
21-30	6	3.0	
31-40	58	32.0	
41-50	68	38.0	
>50	48	27.0	44
Sex			
Male	131	73.0	
Female	49	27.0	
Marital status			
Married	165	92.0	
Single	15	8.0	
Highest educational status			

Primary	26	14.0	
Secondary	91	51.0	
Tertiary	43	24.0	
Non formal education	20	11	
Household size			
1-5	22	12.0	
6-10	111	62.0	
>10	47	26.0	**8**
Primary occupation			
Farming	129	72.0	
Civil servant	31	17.0	
Business	20	11.0	
Monthly income (₦)			
50,000 – 100,000	5	3.0	
101,000 -150,000	52	29.0	
151,000 -200,000	58	32.0	
201,000 -250,000	41	23.0	
>250,000	24	13.0	182,500
Land tenure			
Inheritance	138	77.0	
Hired	37	20.0	
Purchased	5	3.0	

Awareness of forestry laws

Result of the awareness of respondents on forestry laws in Boki Local Government Area of Cross River State is presented in Table 2. The findings indicate that awareness levels vary significantly across the different forestry laws, suggesting unequal dissemination of information and varying degrees of community engagement in forest governance. The results show that the majority of respondents (89%) were aware of the prohibition of farming or land clearing inside forest reserves, while 85% were aware of the prohibition of bush burning within forest areas. This high level of awareness could be attributed to frequent sensitization campaigns by forestry officials, non-governmental organizations, and local forest management committees, especially given the widespread environmental consequences of these activities. These laws are also more visible and directly affect community members whose livelihoods depend on farming, making them more likely to remember and comply with such restrictions. Similarly, 75% of respondents were aware of the law prohibiting cutting or transporting timber without permits and 55% knew about the prohibition of illegal logging. This reflects a fair level of awareness regarding the control of timber extraction and transportation, key areas of concern for the Cross River State Forestry Commission. However, the gap between awareness of legal timber transport and illegal logging indicates that while people recognize permit requirements, some may not clearly distinguish between regulated and unregulated logging practices.

In contrast, only 49% of respondents were aware of the prohibition of hunting or killing

of wildlife within protected forests, suggesting low dissemination of wildlife protection regulations. This limited awareness could be due to weak enforcement of wildlife laws and the continued cultural acceptance of bushmeat hunting as a livelihood activity in forest communities. The lowest level of awareness (18%) was recorded for the law requiring tree planting or reforestation after tree felling, indicating that the concept of reforestation and environmental restoration is poorly understood among local farmers. This low awareness level may stem from inadequate extension services, limited government follow-up, and weak implementation of reforestation policies at the community level.

Table 2: Distribution of Respondents based on Awareness of Forestry Laws in the Study Area

Forestry laws	Frequency	Percentage
Prohibition of cutting or transporting-timber without necessary permits	135	75.0
Prohibition of illegal logging-of timber	99	55.0
Prohibition of farming or land-clearing inside forest reserves.	161	89.0
Prohibition of bush burning -within forest areas	153	85.0
Plant trees to replace those cut down-as required by reforestation laws	33	18.0
Prohibition of hunting or killing of -wildlife within protected forests	88	49.0

Multiple choices allowed

Level of Compliance with Existing Forestry Laws

Result in Table 3 presents the level of compliance with forestry laws among farming households in Boki Local Government Area of Cross River State. The results reveal a varied pattern of adherence across the different legal provisions governing forest resource use. The findings show that the prohibition of farming or land clearing inside forest reserves recorded the highest mean compliance score (4.23), indicating a high level of adherence to this regulation. This suggests that respondents are increasingly aware of the environmental consequences of farming encroachment and recognize the restrictions imposed by forestry authorities on agricultural expansion into protected areas. The high compliance level may also reflect the effectiveness of enforcement efforts by forest guards and local forest management committees. The prohibition of bush burning within forest areas also recorded a high mean score (3.88), signifying substantial compliance. This could be attributed to intensified awareness campaigns on the dangers of uncontrolled burning, which often leads to soil degradation, loss of biodiversity, and destruction of forest cover. Communities may also have internal regulations discouraging indiscriminate bush burning, especially during dry seasons.

Conversely, compliance with the prohibition of illegal logging and timber/firewood

extraction (mean = 2.78) and the prohibition of hunting or killing of wildlife within protected forests (mean = 2.75) were both moderate. These results indicate that, although some respondents observe these laws, illegal logging and hunting remain prevalent challenges in the area. The persistence of these practices could be linked to poverty, limited alternative livelihoods, and weak enforcement capacity of local forestry institutions. The lowest compliance was observed in the requirement to plant trees to replace those cut down (mean = 1.88), suggesting that reforestation laws are poorly implemented or largely ignored by the respondents. This low level of compliance could be attributed to inadequate awareness, insufficient incentives for tree planting, and lack of access to seedlings or extension support.

Table 3: Level of Compliance with Forestry Laws (n=180)

IRPT	SC(3)	C(2)	U(3)	NC(2)	SNC(1)	Total	Mean
Prohibition of illegal logging of timber/firewood	125	180	33	126	36	500	2.78
Prohibition of farming or land clearing inside forest reserves.	350	380	15	12	4	761	4.23*
Prohibition of bush burning within forest areas	310	308	27	42	11	698	3.88*
Plant trees to replace those cut as required by reforestation laws	25	44	63	128	79	339	1.88
Prohibition of hunting or killing of wildlife within protected forests	105	132	66	176	16	495	2.75

SC= strongly complied, C= complied, U=undecided, NC=not complied, SNC=strongly not complied

Factors Influencing Households Compliance with Forestry Laws

Result in Table 4 shows the results of the logistic regression analysis examining the factors influencing farming households' compliance with forestry laws in Boki Local Government Area of Cross River State. The model's likelihood ratio (LR) Chi-square statistic of 30.17 with 8 degrees of freedom and a p-value less than 0.01 indicates that the set of explanatory variables, taken together, significantly predict compliance behaviour. The Pseudo R^2 value of 0.1654 suggests that the model explains approximately 16.5% of the variation in households' compliance with forestry laws, indicating that while the included variables are significant determinants, other factors not captured by the model may also influence compliance. The constant term (16.8951) was positive and significant (p = 0.011), implying that other unobserved factors not captured in the model also contribute to the likelihood of compliance with forestry laws. The model results indicate that educational status, household size, household income level, awareness of forestry laws, and primary occupation were statistically significant predictors of compliance, while other variables were not.

Educational Status (ß = 0.0958, p = 0.088) was positive and significant at the 10% level, implying that higher educational attainment increases the likelihood of compliance with

forestry laws. Educated households are better informed about the environmental and economic implications of deforestation and therefore tend to adhere more strictly to forestry regulations. This finding aligns with Vihi *et al*. (2020) and Udo *et al*. (2009), who reported that education enhances awareness and positive attitudes toward forest conservation. Household Size (ß = -0.0538, p = 0.057) had a negative and significant relationship with compliance, suggesting that larger households are less likely to comply with forestry laws. Larger family sizes often exert greater pressure on forest resources for food, fuelwood, and farmland, leading to a higher tendency to violate forest regulations. This result corroborates the findings of Agbeja (2008), who noted that population pressure within households increases the demand for forest products and reduces compliance. Household Income Level (ß = 1.2086, p = 0.035) was positive and significant at the 5% level. This indicates that wealthier households are more likely to comply with forestry laws since they have alternative income sources and depend less on exploiting forest resources for survival. This agrees with Agbeja (2008), who emphasized that poverty and low-income levels are major drivers of illegal logging and forest encroachment in rural Nigeria. Awareness of Forestry Laws (ß = 2.0490, p = 0.001) was positive and highly significant at the 1% level, showing that awareness strongly promotes compliance. Respondents who are well-informed about the content and importance of forestry regulations are more likely to obey them.

This underscores the need for effective extension services, environmental education, and community sensitization campaigns to improve compliance behaviour. Primary Occupation (ß = 1.397, p = 0.030) was also positive and significant at the 5% level, suggesting that those whose main occupation is farming tend to comply more with forestry laws. This could be due to farmers' direct involvement in forest-related activities and their exposure to forestry regulations through extension agents and community-based monitoring systems.

Table 4 Factors Influencing Households Compliance with Forestry Laws

Variable		Coefficient	Std Error	Z	P value
Constant		16.8951	6.6256	2.55	0.011
Age		-0.001	0.286	-0.00	0.998
Gender		3.6509	2.3657	1.54	0.123
Marital status		3.693	2.108	1.75	0.080*
Educational status		.0958	.0562	1.70	0.088**
Household size		-.0538	.0283	-1.90	0.057**
Household income level		1.2086	.5732	2.11	0.035**
Awareness of forestry Laws		2.0490	.6040	3.39	0.001***
Primary occupation		1.397	0.642	2.17	0.030**
No. of observations	=	180			
LR Chi2 (8)	=	30.17			
Log likelihood	=	-76.0870			
Pseudo R2	=	0.1654.			

Note: *, Significant at 10%, **, Significant at 5%, ***, Significant at 1%

Constraints to Forestry Law Compliance by Households

The result of the major constraints hindering compliance with forestry laws among farming households in Boki Local Government Area of Cross River State is presented in Table 5. The results reveal that a combination of socio-economic, institutional, and cultural factors limits the effective enforcement and adherence to forestry regulations in the area.The most prominent constraint identified was lack of alternative livelihoods (89%), ranked first. This indicates that a large proportion of the respondents depend directly on forest resources such as timber, fuelwood, bushmeat, and farmland for their daily survival. Because most households rely on these resources as their main income sources, compliance with forestry restrictions becomes difficult, as doing so could threaten their means of livelihood.

This finding aligns with Vihi*et al.* (2020) and Udo *et al*. (2009), who reported that heavy reliance on forest resources for sustenance remains a key driver of non-compliance with forest conservation laws in rural Nigeria.The second major constraint, poverty and livelihood dependence (68%), reinforces the economic basis of forest exploitation. Low-income households in Boki LGA depend on forest-based activities to supplement their food and income needs. Poverty reduces their willingness or ability to adopt sustainable practices or seek alternative occupations outside the forest. This result agrees with Agbeja (2008), who found that poverty compels rural dwellers to engage in illegal forest activities such as unlicensed logging and farming within reserves.Low education (43%) ranked third, showing that many rural farmers do not understand the importance of forestry laws or do not fully understand their provisions. This lack of knowledge leads to unintentional violations of forest regulations. Limited access to forestry extension services and weak environmental education contribute to this low level of awareness.

This corroborates Vihi*et al*. (2020), who noted that inadequate sensitization of rural communities on forest laws and sustainable practices results in poor compliance.The fourth major constraint was inconsistent or conflicting policies (38%) which reflects weak institutional coordination among agencies responsible for forest governance. Overlapping responsibilities between local authorities, the Forestry Commission, and community institutions often create confusion and enforcement gaps. Similar findings by the World Bank (2006) indicated that policy inconsistency and governance failures remain key obstacles to effective forest law enforcement in developing countries.High cost of compliance (33%), ranked fifth, implies that obtaining legal permits for timber harvesting, transport, or land use can be financially burdensome. For low-income households, these costs discourage legal compliance and instead promote illegal exploitation of forest resources.Lastly, traditional practices and beliefs (17%) were also found to constrain compliance. In Boki communities, cultural norms and ancestral rights often permit activities such as hunting, gathering, and small-scale farming in forest lands. These customs frequently conflict with statutory forestry laws, resulting in poor adherence to formal regulations.

Table 5 Constraints to Forestry Law Compliance

Constraint	*Frequency	Percentage	Rank
Lack of Alternative Livelihoods	160	89.0	1st
Poverty and Livelihood Dependence	123	68.0	2nd
Low education	77	43.0	3rd
Inconsistent or Conflicting Policies	68	38.0	4th
High Cost of Compliance	59	33.0	5th
Traditional Practices and Beliefs	31	17.0	6th

*Multiple choice responses

Conclusion

The study concludes that compliance with forestry laws in Boki Local Government Area of Cross River State is influenced by a combination of socio-economic, institutional, and awareness-related factors. Although farming households show high compliance with laws prohibiting farming and bush burning in forest reserves, adherence to reforestation and wildlife protection laws remains relatively low. The regression results revealed that educational status, household income, awareness of forestry laws, and occupation positively influenced compliance, while large household size reduced the likelihood of adherence. The findings underscore the importance of improving forest governance through awareness creation, livelihood diversification, and effective enforcement.

Recommendations

The study recommends improving compliance with forestry laws in Boki Local Government Area by enhancing forestry education and awareness among rural households, promoting alternative livelihood opportunities to reduce dependence on forest resources, and strengthening enforcement mechanisms through well-trained and empowered law enforcement and community forest guards. Involving local communities in participatory forest management, providing access to credit and financial incentives for sustainable practices, and reviewing existing forestry policies to align with socio-economic realities are also essential. Implementing these measures will foster sustainable forest management, increase adherence to forestry regulations, and support environmental stability in forest-dependent communities.

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