



PREVALENCE FOREST OFFENCES AND COMBATING CHALLENGES IN OGUN STATE FORESTRY SERVICE, NIGERIA

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ABSTRACT

Enforcement of forest laws is a fundamental strategy for reducing forest offences and realizing sustainable forest plantation management. Effective law enforcement is necessary for continued production of goods and services. However, prevalence of forest offences has been noticed to be on the increase as a result of poor governance, corruption and other illegalities in Ogun State forestry service. Therefore, prevalent forest offences and combating challenges were investigated in the study area. Simple random sampling was used to select 85 forest officials across board n all the forestry administrative zones, representing 50% sampling intensity in the department of forestry in Ogun State out of the 170 forest officials identified: Egba (9), Yewa (18), Ijebu (38), Remo (2) and headquarters (18). Sample was drawn proportionate to size. Secondary data were obtained on prevalence forest offences and attracted penalties while a set of questionnaire was used to obtain data on challenges of combating forest offences in the past in the study area. Data were analyzed using descriptive statistics and logit regression at $\alpha_{0.05}$. The average age of the respondents was 42 ± 10.4 years and mostly male (80%). About 85.7% had tertiary education while 10% had secondary education. An appreciable fraction of them had worked for over ten years (61.4%). Identified prevalent forest offences included illegal exploitation, evasion of pass hammering, illegal collection of Non-Timber Forest Products and existence of forest enclaves among others. Prevalent penalties attracted by the various offences included seizure of the product and sale on court order, imposition of heavy fine and total ejection from the reserve. The identified challenges of combating forest offences in the past were cases of killing of forest guards, inadequate number of forest guards, poor remuneration of field officers and corrupted activities of the field officers with odd-ratios, 86.1, 46.5, 11.9 and 2.3 respectfully. Forest offences were found to be prevalent in various forms in Ogun State forest reserves and free areas in which efforts made in the past to combating them failed due to a number of factors. However, there is an urgent need for the State forestry service to act/facilitate the proposed arming of the field officers, recruits and train more field officers, improve on the staff welfare and deal with corrupted forest officials/community dwellers in accordance to the appropriate forest laws.

Keywords: Forest reserve, Forest Offences, Deserved Penalties, Combating challenges



INTRODUCTION

Forest reserves are areas designated by the government for the protection of trees growing or planted for the purpose of their ecological benefits among others (Usman and Adefalu, 2010). It is also a legal measure for the protection of forest resources which enables the society to have continued access to quality forest goods and services. Uncontrolled human activities which constitute forest offences threaten the sustainability of forest resources. However, forest offences are essentially the acts, or their omission, which contravene the provisions of the forest laws of the country (FAO, 2010).

Forest offences contribute to forest degradation and destruction, as well as revenue losses by the government (Ajayi, 1991; Udo, 1997), and so are at variance with the aims of sustained yield management of forests. Long ago, Adeyoju (1986) pointed out that the resources inside and outside forest estate in Ogun State have been battered by de-reservation for tree crop plantations and large scale illegal farming operation, all of which the State forestry authorities have been unable to curtail or manage. As a matter of fact, these observations still lingers. Many developing countries, like Nigeria, are suffering from serious environmental degradation primarily because the rapid grow in population which has not only been brought about gross encroachment and damage to natural forest, wildlife, land, water and even air but has also brought unacceptable quality of life conditions in the human community environment (Halley, 1998).

In achieving effective control and management of the forest resources in any country and by any government, it is necessary to have a forest law while forest owners and users should know and understand the provisions of the law and adhere to them. This allows successive government to promulgate different policies and law guiding the forest reserves. These forest regulations and policies are an effective instrument for forest protection, planning, prevention of degradation and control. It is used for stimulating responsible behaviour by citizens towards the protection of the forest and its resources. This makes it imperative to re-appraise the forestry legislation in the State and the challenges of effective enforcement of these legislations.



The forest sector has an extensive range of laws that govern the management of forest resources. In practice, however, it appears that the enforcement of such laws is compounded by political and institutional challenges, which result in the prevalence of illicit forest activities that eventually lead to environmental damage, revenue loss and the destruction of livelihood sources of forest fringe communities (Larbi *et al.*, 2007). Christy *et al* (1997) reported that, non-compliance with the regulations by the sector itself, too many regulations governing the forestry sector; low penalties for defaulters are the weaknesses that undermine the regulatory and legislative instruments of forest sector. Hence, this paper identified the prevalence offences, attracted penalties and challenges of combating forest offences in the past with a view to suggesting more reliable way forward for the accomplishment of sustainable forest management in the State.

METHODOLOGY

Study Area

The study area is Ogun State, Southwestern Nigeria (Figure 1). The State was created in 1976 from old western State. It borders to Lagos State to the South and Osun State to the North, Ondo to the East and the Republic of Benin to the West. Abeokuta is the capital of the State and is the largest city in the State. The State's nickname is 'gateway to Nigeria' with coordinates 6.9098⁰N and 3.2584⁰E. The area is dominated by two seasons, viz the dry and rainy season with dry season usually begin from November to March while the rainy season starts from April to October.

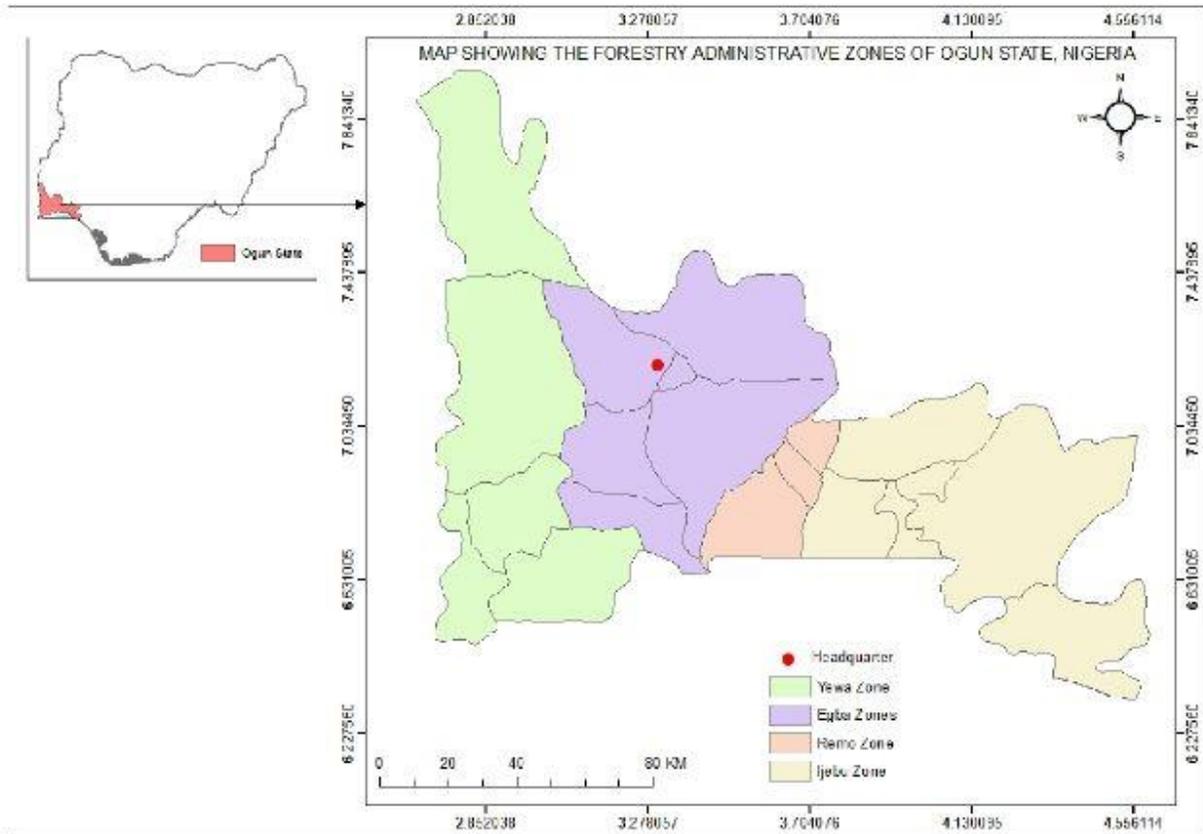


Figure 1: Map of the Study Area

Data Collection and Analysis

Simple random sampling technique was used to select 85 forest officials across board in all the forestry administrative zones, representing 50% sampling intensity in the State Department of Forestry in Ogun State out of the 170 forest officials identified: Egba (9), Yewa (18), Ijebu (38), Remo (2) and headquarters in Abeokuta (18). Therefore, a set of structured questionnaire were administered to the 85 respondents in the entire study area. However, 70 questionnaires were retrieved from the field which represents 82.35%. Data collected were subjected to descriptive statistics and Logit regression analysis.

Logit regression can be expressed as:

$$Y = \exp (b_0+b_1X_1+b_2X_2+ \dots +b_nX_n)/1+\exp (b_0+b_1X_1 +\dots +b_nX_n)$$



Where Y= dependent variable

X= independent variable

$b_0, b_1 \dots b_n$ = estimate parameters

exp = exponential

RESULTS AND DISCUSSION

Demographic Characteristics of the Respondents

Table 1 showed the demographic characteristics of the respondents. Information on gender revealed that 80% of the respondents were male while the 20% were female. This is an indication that the profession requires more of male officers than the female. It is important to stress that forestry is a male-dominated profession. As a matter of fact, mostly females are being recruited for administrative work rather than field work. For instance in Norway, where forestry has traditionally been one of the most masculine rural occupations, women have faced negative attitudes upon joining the profession (Brandth and Haugen, 1998; Brandth and Haugen, 2000).

The average age of the respondents was 42 ± 10.4 years. It could be inferred that most of the respondents were in their economic active age. This conforms to the report of NSSC (2011) which observed that economic active age is anticipated within the age bracket 35-50.

Among the 70 respondents, result revealed that 51.4% were married. This implies that majority of the forest officials are married and also involved in the livelihood activities which cater for their household needs. This finding concurs with the research work of Akinbile (2007) that marriage confers responsibility.

Information on the respondents' educational status revealed that majority of them had tertiary education (85.7%). As a matter of fact, productivity of staff is expected to be enhanced with the high level of education. It is of no doubt that the respondents (Forest officials) do much of protection job and in this era of technological advancement, a sound scientific base can play an invaluable role in the protection, as well as sustainable management and use of forests (Rebugio,



1998; Werland, 2009; FAO, 2011). However, effective utilization of this knowledge base requires 'strong' development which is educational advancement dependent.

The study on work experience revealed that majority of the respondents (61.4%) had worked for over 10 years. It is expected that with this long years of experience, and of course attributed exposure in the profession, the respondents should be capable of judging rightly on forest offences.

Table 1: Demographic Characteristics of the Respondents

Demographic Characteristics	Frequency	Percentage (%)
Sex		
Male	56	80
Female	14	20
Total	70	100
Age		
21-30	12	17.1
31-40	19	27.1
41-50	21	30
51-60	18	25.7
Total	70	100
Marital Status		
Single	14	20
Married	36	51.4
Divorced	20	28.6
Total	70	100
Educational Distribution		
Primary Education	3	4.3
Secondary Education	7	10



Tertiary Education	60	85.7
Total	70	100
Work Experience (Years)		
1-5	8	11.4
6-10	19	27.1
>10	43	61.4
Total	70	100

Source: Field Survey (2017).

Prevalence Forest Offences and Deserved Penalties

Table 2 revealed prevalence forest offences and deserved penalties in Ogun State forestry service. Weak penalties for offenders would encourage continued occurrence of forest offences in the study area. As a matter of fact, virtually all the identified offences in the study area would have negative effects on the forest such as reduction of revenue accruable to government, reduction in the quantity of resources available for consumption and of course degradation of the forest. Meanwhile, all these effects are detrimental to achieving sustainable forest development. Topping the list of the prevalence offences by the illegal exploitation in the study area is not amazing at all simply because it has been generally observed that the act has been existing for quite a long time in the country and still lingers, meanwhile FAO (2007) had earlier stated that illegal logging and associated timber trade have far reaching environmental, social and economic consequences. Also, CIFOR (2009) pointed out that contradictory or unclear policies, ineffective or inconsistent law enforcement and overall weakness in the rule of law constrain the realization of social and environmental benefits and significantly reduce economic development returns from forests. Therefore, improving the capacity of both forest and judicial authorities to enforce forest legislation is also a key issue in crime prevention and may also require the adjustment of penalties to ensure that they constitute an effective deterrent to the forest crime and offences (World Bank, 2006).



Table 2: Prevalence Forest Offences and Deserved Penalties in Ogun State Forestry Service

Offence	Penalty
1. Illegal exploitation.	(a) Charge to court. (b) Seizure of the products and sold on court order. (c) Imposition of heavy fine.
2. Evasion of pass-hammering.	(a) Seizure of the products and sold on court order. (b) Imposition of heavy fine.
3. Operating without timber contractors' licence/permit.	(a) All operations must be suspended and fine imposed. (b) Apprehend and mandated to obtain permit/licence. (c) Charge to court. (d) Imposition of heavy fine.
4. Operating without Sawmill licence/non-payment of renewal fee.	(a) All operations must be suspended and fine imposed. (b) Imposition of heavy fine.
5. Illegal collection of Non-Timber Forest Products (NTFPs).	(a) Charge to court. (b) Seizure of the products and sold on court order. (c) Imposition of heavy fine. (d) Apprehend and mandated to obtain permit/licence.
6. Illegal occupation of forest reserve e.g Settlement (existence of forest enclaves)	(a) Charge to court. (b) Destruction of their illegal farm. (c) Ejection from the reserve and ban from staying/operating.



7. Illegal land use activities e.g farming and mining.
 - (d) Imposition of heavy fine.
 - (e) Payment for land use to the government through the Baales.
8. Sawing of arrow-marked logs.
 - (a) Eviction and destruction of their farm land.
 - (b) Imposition of heavy fine.
9. Sawing of non-hammered logs.
 - (a) Seizure of logs and lock-up of sawmill.
 - (b) Seizure of the sawnwood (planks) and sold on court order.
10. Ripping and Sawing.
 - (a) Arrest of illegal contractors.
 - (b) Seizure of the sawnwood (planks) and sold on court order.
- (a) Seizure of the sawnwood (planks) and sold on court order.
 - (b) Seizure of the equipment and machines used for the sawing operation.

Source: Ogun State Forestry Service (2017).

Challenges of Combating Forest Offences

Logit Regression Model for Challenges of combating Forest Offences in the Past in Ogun State Forestry Service

The binary models

Binary regression models obtained for the challenges of combating forest offences in the past in Ogun State Forestry Service (Table 3).

$$CCFOP = 102.99 + 34.39CK - 0.59FNA - 17.29FPV + 32.41 PRFO + 17.65NFG + 0.84CA - 17.30PCNR - 16.48LRTFS$$

N = 70, Final loss = 13.21, Chi square (df, 8) = 4.19, P = 0.000

Odd-ratio (unit change): Constant (102.99); CK (86.12); FNA (0.56), FPV (0.00); PRFO (11.90); NFG (46.47); CA (2.31); PCNR (0.00); LRTFS (0.00)

Where,



CCFOP= Challenges of Combating Forest Offences in the Past

CK= Cases of killing of forest guards

FNA= Funding of Necessary Activities

FPV= Lack of Functional Patrol Vehicles

PRFO= Poor Remuneration of Field Officers

NFG= Inadequate number of Forest guards

CA= Corrupt Activities of Field Officers

PCNR= Poor Communication Network within the Reserve

LRTFS= Lack of provision for Re-training of Field Staff

Model presented above for Ogun State Forestry Service gave overall significant fit to the data judging from χ^2 value that was significant at $p < 0.05$. Cases of Killing of forest guards (CK) had the highest odd-ratio of 86.12 followed by inadequate Number of Forest Guard (NFG) with the odd-ratio of 46.47, Poor Remuneration of Field Officers (PRFO) with the odd-ratio of 11.90 and lastly, Corrupt Activities of Field Officers (CA) with odd-ratio of 2.31 respectively.

Therefore, the factors identified to be responsible for unsuccessful stoppage of forest offences in the past in Ogun State were Cases of Killing of forest guards (CK), inadequate Number of Forest Guard (NFG), Poor Remuneration of Field Officers (PRFO) and Corrupt Activities of field officers (CA). There was sufficient evidence that the estimated coefficients for the factors were not zero. This implies that the regression variables in the model were statistically significant. In other words the higher the value of odds-ratio, the more likelihood the factors responsible for unsuccessful stoppage of forest offences in Ogun State forestry service. Hence, it clearly indicated the variable (s) i.e factors that mostly influence successful stoppage of forest offences in the study area. The implication was corroborated by Deeks (1996); Bland and Altman (2000) that the logit model provides information on the consequences of one variable on the other. Therefore, existence of these factors poses serious challenges to successful stoppage of forest offences in the study area



Table 3: Logit Binary Nature of Challenges of Combating Forest Offences in the Past in Ogun State Forestry Service

Dependent variable	Coefficient	Odds-ratio
Whether presence of (CK) was responsible for unsuccessful stoppage of forest offences in the past.	34.39	86.12*
Whether presence of (FNA) was responsible for unsuccessful stoppage of forest offences in the past.	-0.59	0.56ns
Whether presence of (FPV) was responsible for unsuccessful stoppage of forest offences in the past.	-17.29	0.00ns
Whether presence of (PRFO) was responsible for unsuccessful stoppage of forest offences in the past.	32.41	11.90*
Whether presence of (NFG) was responsible for unsuccessful stoppage of forest offences in the past.	17.65	46.47*
Whether presence of (CA) was	0.84	2.31*



responsible for unsuccessful stoppage of forest offences in the past

Whether presence of (PCNR) -17.3 0.00ns

was responsible for unsuccessful stoppage of forest offences in the past.

Whether presence of (LRTFS) -16.48 0.00ns

was responsible for unsuccessful stoppage of forest offences in the past.

Model χ^2 (df, 8) = 4.19, Final

loss = 13-21; p<0.05

***Significant at p<0.05; ns = Not significant**

Dependent variable (CCFOP) = Challenges of Combating Forest Offences in the past (Yes = 1), (No= 0)

CONCLUSION AND RECOMMENDATIONS

This study established the existence of diverse forest offences and efforts of the forestry service to combating them by attaching well-deserved penalties. Meanwhile, all the identified offences would impact forest negatively while their effects are detrimental to achieving sustainable forest development. The study also identified factors responsible for unsuccessful stoppage of forest offences in the past to be incessant cases of killing of forest guards, inadequate number of forest guards, poor remuneration of field officers and corrupt activities of field officers.

Therefore, building of institutional capacity to foster better forest law compliance is of great importance if forest offences in the study area would be reduced to barest minimum even if the act cannot be curtailed completely. To stem tide the menace of incessant killing of forest guards, it is high time they are fully armed by the government so as to enable them discharge their duties



more effectively and efficiently as this would give them more confidence to withstand any internal/external attack. In the same vein, more forest guards should be recruited and trained to ensure better protection of the forest resources while the welfare of the field officers should be looked into so as to motivate them appropriately. Finally, corrupted forest officials should be dealt with in accordance with the civil service laws while community dwellers perpetuating evil activities within and around the forest estates should be brought into book.

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