Gaming Activities and Forest Resources Degradation in Obubra Local Government Area of Cross River State

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Abstract

This study investigates the relationship between gaming activities and forest resources degradation in Obubra Local Government Area of Cross River State. To achieve the purpose of this study, two research questions and two null hypotheses were formulated. Correlational research design was adopted for the study. The area of the study was Obubra LGA, Cross River State. The target population was all household members who are farmers aged 18 to 35 years. Multistage sampling techniques were adopted in selecting four hundred and fifty (450) respondents used for the study. A ten item modified four point Likert scale questionnaire titled "Gaming activities and Forest Resources Degradation Questionnaire (GAFRCQ)" was the instruments used for collecting data for the study. To test the hypothesis formulated for the study, Pearson product moment correlation statistical tools was used as statistical tool for data analysis. The hypotheses formulated were tested at 0.05 level of significance. The statistical report of research question one established that there are several gaming activities taking place in the study area. The report in research question two established that forest resources degradation are available in the study Area. The results of the analysis revealed that there is a significant relationship between hunting for sport and forest resources degradation. There is a significant relationship between hunting for bush meat and forest

resources degradation. Based on the findings it was recommended among others that the government and other environmental stakeholders should ensure that community dwellers participate on mobilization and awareness against unsustainable gaming activities.

Keyword: Gaming activities, Forest resources, Degradation,

Introduction

Forest are land areas above 0.5ha with a complex ecosystem consisting of a variety of plants, wild animals and microbes which interact with non-living abiotic factors (FAO, 2015), Forest is vital for rural livelihoods, biodiversity, climate change mitigation, energy supply, soil, water and wildlife protection (Ajake, 2012). They contribute significantly to the overall global energy supply particularly in rural areas; provide building materials and paper products: non-timber forest products including food, fodder and medicines, as well as cultural, spiritual and recreational values to millions of people. Despite the crucial importance of forest, each year some 13 million hectares of forest areas in the tropics are converted, mainly to agriculture (FAO, 2015). Over the years, there has been increased concern at both national and regional levels about the declining condition of forest resources. Ajake & Anyadike, 2012) Human pressure on forests and forest land has resulted into biodiversity loss, degrading forests, land and water, and emission of considerable amounts of carbon into the atmosphere, with the greatest threats (most especially deforestation) occurring in developing countries within tropical ecosystems. Hence, the degradation of forest became an issue of increasing priority and urgency.

The state of forest resource degradation has been a source of concern to educational stakeholders, environmental health workers, and environmental management expert. It is often believe that gaming activities are on the frontline of the battle to degrade the environment. Most gaming activities such as hunting for sports have caused a major difficult condition within our environment. These appear to be increase of task of people on forest and wildlife resources which are the main source of their income. The continuous exploitation of forest resources has in turn affected the ecosystem, deforestation, fishing and hunting. Gaming activities and exploitation of mineral has raised a serious threat to our environment. The incessant exploitation of forest resources has led to ecological environmental degradation. They have been increase evidence of degradation and depletion of forest resources in the study area over the year.

Sustainable forest management is based on the broad consideration of environmental, social and cultural dimensions in a holistic manner when developing policies and plans for managing and conserving resources FAO (2015). The goal of sustainable forest management is to ensure that the significant benefits of forests are made available to the people who live in the forest or who rely on forests for their livelihoods, while at the same time conserving vital forest resources by increasing direct benefits to people and the environment: contributing to livelihoods, income generation and employment at the social level; and contributing to important services such as carbon sequestration and water, soil and biodiversity degradation at the environmental level (FAO, 2007; Dau, Mai & Dawaki, 2015).

Forest reserves are portions of state lands under reservation where commercial harvesting of wood products is controlled in order to capture elements of biodiversity. They are managed by the state government under the auspices of their forestry departments (Olujobi, 2015). Historically, reservation of land for forestry purpose was at its peak during the colonial era; this was done in order to manage, maintain forest resources and provide a supply of timber (Ayeni, 2013). This was followed by exploitation of forest resources to meet both export and increasing local demand as well as to earn foreign exchange.

Ayeni (2013) observed that as environmental degradation and its consequences come clearly into focus, humans are faced with the prospect that the renewable forest resources may be exhausted and that man stands the risk of destroying his environment if all the impacts of deforestation are allowed to go on unchecked Greater attempts are now being made to rationalize the decision making process with respect to the use of forest resources. There is need to ensure that the forest is managed in a sustainable manner if the resources of the forest will last long. In other words, the production of goods and services need to be balanced with the degradation of the resource base of the forest.

Furthermore, how best to manage forest resources by rural households so that they can make more income and even create more economic opportunities has become a growing concern for policy makers, interests groups and the public due to the following reasons: the increasing scarcity of virgin forest land; greater awareness and understanding of the social and economic implications of destructive forest practices especially at the rural level; and, a growing realization that the significant opportunities for economic development based on forestry activities should not be

wasted (Ezebilo, 2004). The management of forest reserves in Nigeria is the responsibility of the state governments. How well or how far these state governments and it communities managed and ensured the sustainability of these forest reserves, in the light of the threats enunciated above.

According to Dau, Mai and Dawaki (2015) hunters focus initially on large animals, and continue to hunt them even when their numbers become low. Such species comprise the majority of the mammalian biomass in undisturbed forests, and play keystone ecological roles. Reduction or loss of such species will have wider impacts on the forest community, through: loss of pollinators. Large fruit bats in particular are extremely important pollinators of many tropical forest trees. Loss of seed dispersers (e.g.. primates, frugivorous bats, frugivorous birds, forest ungulates) and more.

In addition, Usang et al. (2024) states that many large animals play a primary role in seed dispersal; seeds of up to 75% of plant species in African rain forests are dispersed by animals. Hunting activities can deplete complete guilds of seed dispersers by removing primates, large birds and bats. The exact balance between animal dispersed plants and vegetative propagation of rain forest plants is still unknown, but the loss of seed dispersers will undoubtedly affect forest composition, in ways that are difficult to predict; loss of predators (large cats, raptors). This can cause unusual and uneven densities of different prey species. In turn, proliferation of certain prey species can lead to declines or local extinctions of their animal or plant food species, which changes forest composition and decreases overall biodiversity.

In India, hunting activities resulted to reductions of 90% of the prey eaten by tigers. This reduces tiger densities, and also results in their gaming activities smaller prey, thereby causing further detrimental effects on the biological community. The loss of animals from forest ecosystems and the resultant disruption of ecological and ultimately evolutionary processes, changes in species composition and probable reduction in biological diversity are collectively known as the empty forest syndrome (Wright, 2009).

Brooks (2014) on the basis of reports from the hunting activities literature, it seems likely that a majority of tropical nature reserves may already be considered empty forests meaning that all bird and mammal species larger than approximately two kilograms barring a few gaming activities-tolerant species have either been extirpated or exist at densities well below natural levels

of abundance. The disruption of ecological functions caused by the loss of symbionts further compromises the capacity of these reserves to conserve biodiversity over the long term.

It has long been recognized that gaming activities poses a threat to the degradation of tropical wildlife, but the scale of the problem has increased immensely in recent years (Peres 2009). For example, in the early 1990s, an estimated six million animals were hunted annually in Malaysian Borneo, or approximately 36 animals per square kilometer (km2) of forest, and in Africa, four million metric tons of bush meat are extracted from the Congo basin each year, and this has a significant effect on forest resource degradation practice. However. national parks and other totally protected areas now cover over 18% of tropical rainforests Therefore, if wildlife within reserves were well protected, we could feel reasonably confident that current degradation strategies might succeed in preserving a substantial proportion of tropical biodiversity. However, although protected-area systems in the tropics have been somewhat successful in reducing habitat clearance (Bruner, 2001).

In Nigeria, protected forest environment are mostly located in the savanna ecosystem as those in other tropical and sub-Sahara countries of the world. These conserved forest protected areas (reserves) are set aside for the protection, preservation and propagation of wild vegetation and wild animals, for the preservation of objects, aesthetic geological prehistoric, archaeological artefacts and other scientific interest for the benefits, advantages and enjoyment of mankind. The entire forest protected reserve enclave are biologically productive and function as field research laboratories, but growth in human population increases the cases of anthropogenic activities in the protected area and preservation of the land resources. An instance of such is the intrusion of conserve ecosystem environment by the Fulani herdsmen in most of our national parks of West Africa. Conversely, the wildlife resource become threatened and regard as a wasteful programme through extinction initiated due to human interplay. In Africa, the sub-Sahara wild resources are influence by human population trends and ecological factors.

The anthropogenic activities like fishing, gaming activities, ecosystem fragmentation, agriculture, tourism and human population settlement are prone to have some degree of ecological effect on wildlife resources and have subjected to intensive studies over years The main natural vegetation types in this area are lowland moist forest and swamp forest, together with some savannah woodland The forests left are in state forest reserves established during the colonial

period to ensure timber supplies and safeguard watersheds. Due to lack of adequate protection to the wildlife species in them, large mammals are seriously threatened.

According to Usang, et al. (2024) hunting activities of all animals for bush meat have been a traditional activity for a very long time in southern part of Nigeria. Recently, gaming activities pressure has sharply rise in size of opulence because of human population, natural forest environments are converted for economic benefit through exploitation. Even though, it is theoretically protected by both State and Federal law, wildlife resources there in are still widely hunted for their meat and other uses. Due to wild resources that are particularly vulnerable to gaming activities and other human induced pressures, resulting to low population densities and slow rate of reproduction. Over exploitation of wildlife resources threaten not only biodiversity but those that depend on it either directly or indirectly; which their estimates of national values for subsistence use and legal contribution to national economies of many countries involved are rarely included in national economic statistic or nutrition data. This protected forest enclave is among the preserved ecosystem zone where wildlife resources were geared towards optimum utilization and effective degradation of its resources; to change the indifferent attitudes of the rural community to protection management of natural resources for sustainable development.

The findings of this research work may be of great benefit to rural farmers Obubra LGA, government, policy makers, the Non-Governmental Organizations (NGOs), and other researchers. To the rural farmers, it will encourage them to imbibe crop rotation farming practice and avoid shifting cultivation which gives room for unsustainable felling of trees. Since this is no economic justification to leave mature trees in the forest, it will help guide the users of forest to harvest mature trees, regulation will be observed also in both timber and NTFPS. The outcome of this study will spur the policy makers to formulate realistic forestry and agricultural policies that are likely to promote sustainable forest resources utilization and degradation of forest resources in the research area. Similarly it may enable the government to in addition to formulating policies, help in making sure all the policies are enforce through the use of relevant agencies in-charge of environmental protection.

This study will also help stakeholders, Government, non-governmental organizations (NGOS), private bodies, individuals, forest degradation organizations to create job opportunities for rural dwellers in Obubra LGA to divert their attention from total dependence on forest

resources. Hence the major challenge that induce the total dependence on environmental resources is poverty and lack of job, this may hence be an eye opener to these body to create job opportunities to the teaming masses and reduce their attention an environmental resource which may go a long way in helping to conserve the environmental resources. Finally, this study with offer other intending researchers in similar area the opportunity to know the level of exploitation of forest resources in Cross River State. The study will equally serve as a body of knowledge or reference work for other researchers in similar area.

The literature reviewed (Brooks, 2014; Dau, Mai & Dawaki, 2015) revealed that the pattern of gaming activities explained why very little surviving wildlife are around areas of high human population. The uncontrolled or unregulated gaming activities have resulted in loss of biodiversity. The forest elephants, chimpanzee, leopard and others are among the animals that are in endangered list. Literatures reviewed were from both foreign and local sources. Despite the efforts by various authorities above on the relationship between forest resource exploitation and biodiversity degradation, enough has not been studied on the exploitation pattern of rural dwellers activities as it relates to forest resource degradation which bothered this study and more so, none of such studies have been carried out in the present study area. This therefore is the gap the present study intends to fill. It on this background the study seeks to examine the relationship between gaming activities and forest resources degradation in Obubra Local Government Area of Cross River State.

This research was anchored on Legal pluralism by Anne Griffiths in 1986. Legal pluralism has been conceptualized by Griffiths (1986) as a critic to the legal centralist point of view. The legal centralism states that the dominant conception of law is the one of state regulation, which is uniform for all people, exclusive of all other normative systems (or orders), and administered by a unique set of state institutions. According to the author legal pluralism is the existence of multiple sources of law (both state and non-state) within the same geographical area. Legal pluralism' is generally defined as a situation in which two or more legal systems coexist in the same social field (Griffiths, 1986). The relevance of this theory to this study is directly on the legal perspective of not only considering the direct gain of exploiting natural resources but also the legal implication. This will go a long way in controlling the unguarded usage of environmental resources that has environmental, physical and economic impact of the populace.

Purpose of the study

The major purpose of this study was to examine the relationship between gaming activities on forest resources degradation in Obubra Local Government Area of Cross River State. Specifically, the study seeks to:

i. identify the gaming activities in Obubra Local Government Area.
ii. find out the forest resources degradation available in Obubra Local Government Area.
iii. investigate the relationship between hunting activities for sport and forest resources degradation.
iv. ascertain the relationship between hunting of animals for bush meat and forest resources degradation.

Research questions

i. What are the gaming activities in Obubra Local Government Area?
ii. What are the forest resources degradation available in Obubra Local Government Area.

Research hypotheses

The following Hypotheses stated in null form were formulated to guide the study:

i. There is no significant relationship between hunting activities for sport and forest resources degradation in the study area.
ii. There is no significant relationship between hunting of animals for bush meat and forest resources degradation.

Methodology

Correlational research design was use for the study, correlation refers to the act of collecting data through asking questions either in person, phone, online or questionnaire from a target population. Correlational research is used to gather the opinions, beliefs and feeling of selected groups of individual often chosen for demography sampling (Obasi 2016:18). This was used since part of the research objective could be achieved through conducting a field correlation (testing relationship between variables) in order to collect data from the sample population. Obubra Local

Government was created out of Obubra Local Government in 1987. It has its boundary with Abi and Akamkpa Local Government Areas.

The population of the study covers the entire inhabitants of the 10 communities in Obubra Local Government Area of Cross River State. Currently the have a projected population of 205.654 inhabitants from 640 housing units in the area and these constitutes the population of the study (NPN, Calabar 2023). Multistage sampling procedure was adopted for the study. First the purposive sampling technique was used to select various communities with tropical high forest in Obubra LGA, this is because there is concentration of forest in some areas than others in study area. The forest cover map of cross river state produced by the GIS unit of the Cross River State forestry commission was used to purposively select communities with high concentration of forest. At the second stage simple random sampling technique was used to select villages to be used in the study. And finally, the accidental sampling technique was employed to sample on the residents in the study areas, By accidental sampling technique, it implies that the researcher gave the instrument to the residents he was able to access in the study area. Here the researcher positioned himself in the strategic locations in the communities selected and administer the instrument, at the end of the process, 450 questionnaires were completed and retrieved and used as the sample for the study. A total of 450 persons from the research area were sampled using multistage sampling technique, and these constitute the sample for the study.

The instrument used for the data collection is a structure questionnaire title: "Gaming activities and Forest Resources Degradation Questionnaire (GFRCỌ)". The questionnaire has two sections section A and B. Section A Contain personal data of the respondents and section B contain direct statement with multiple options such as Strongly Agree (SA), Agree (A), Disagree (D) and Strong Disagree (SD). Validity is the extent to which an instrument measure what is meant to measure. The research instrument was designed by the researcher with reference to the major variables of the study. The questionnaire was face and construct validated by two experts in Measurement and Evaluation and one from Environmental Education department, both from University of Calabar, Calabar Cross River State. The researcher included some important information to aid the experts in validating the instrument. A total of 450 copies of questionnaires were designed and administered in person to the target respondents, a period of two weeks would be allotted for this field work. Following the collection of the completed questionnaire

codes/scores was assign to each item. Each of the items were scored independently using the 4-point likert scale: 4 points for strongly agree (SA), 3 points for agree (A), 2 points for disagree (D) and 1 point for strongly disagree (SD). The sum of scores for each respondent from section B were determined their responses with regards to the variables under study.

Results

The results of data analyzed and their interpretation are presented below. The presentation is done on research questions one and two, followed by hypotheses and interpretation of results obtained from the analysis of data. The hypothesis is tested at .05 level of significance. The result reveals the data of respondents.

Research Question One: What are the gaming activities in Obubra Local Government Area?

Descriptive statistical tool was used for data analysis and the result presented in table 1. Item 1 revealed that 75.3% (n=339) indicated that Okpambe fishing festival and award exist in the study area. 1tem 2 revealed a similar trend 90.9% (n=409) indicated that Elephant tusk is used for chief/king coronation. Item 3 revealed that 10.2% (n=46) indicated that Lion skin is used for chief/king coronation. Item 6 revealed that 100% (n=450) indicated that Grass cutter/Rabbit is used for meat. Item 12 indicated that 62.9% 9n=283) indicated that there is a best hunter of the year awards in the study area. Based on this report it was established that there are several gaming activities taking place in the study area.

Table 1: Responses on the gaming/hunting activities in Obubra Local Government Area

S/N	ITEMS	Frequency (N)	Percentage %
1.	Okpambe fishing festival and award	339	75.3%
2.	Elephant tusk for chief/king coronation	409	90.9%
3.	Lion skin for chief	46	10.2%
4.	Gorilla hunting for chief	356	79.1%
5.	Anaconda hunting for chief	381	84.7%
6.	Grass cutter/Rabbit hunting for meat	450	100%
	Snail/periwinkle hunting for meat		

S/N	ITEMS	Frequency (N)	Percentage %
7.	Wolf for meat	450	100%
8.	Bush Pig for meat	440	97.8%
9.	Primates for meat	450	100%
10.	Porcupine for meat	440	97.8%
11.	Best hunter of the year award	448	99.6%
12.		283	62.9%

Field work report (2024)

Research Question Two: What are the forest resources degradation available in Obubra Local Government Area?

Descriptive statistical tool was used for data analysis and the result presented in table 2. Item 1 revealed that 93.8% (n=422) indicated that there is aquatic lives/fish variety extinction in the study area. Item 2 revealed that all the respondents indicated that there is Elephant extinction in the study area. Item 3 indicated that all the respondents (n=450) indicated that there is Lion extinction in the study area. Item 7 reported a similar trend; all the respondents indicated that there is forest biodiversity loss including flora and fauna in the study area. Item 10 revealed that 68.2% (n=307) indicated that Primates are endangered in the study area. Item 12 reported a similar trend and revealed that 100% of the respondents indicated that births are endangered in the study area. Based on this report it was established that forest resources degradation are available in Obubra Local Government Area.

Table 2: Responses on the forest resources degradation available in Obubra Local Government Area

S/N	ITEMS	Frequency (N)	Percentage %
1.	Aquatic lives/fish variety extinction	422	93.8%
2.	Elephant extinction	450	100%
3.	Lion extinction	450	100%
4.	Gorilla extinction	401	89.1%
5.	Anaconda extinction	450	100%
		186	41.3%

S/N	ITEMS	Frequency (N)	Percentage %
6.	Grass cutter/Rabbit endangerment	450	100%
7.	Forest biodiversity loss including flora and fauna	450	100%
8.	Wolf extinction	450	100%
9.	Bush Pig endangerment	307	68.2%
10.	Primates endangerment	338	75.1%
11.	Porcupine endangerment	450	100%
12.	Birds endangerment		

Field work report (2024)

Hypothesis One: There is no significant relationship between hunting for sport and forest resources degradation.

In this hypothesis the independent variable is hunting for sport, while the dependent variable is forest resources degradation, in testing this hypothesis, Pearson Product Moment Correlation (PPMC) was used. The result of data analysis is presented in table 3.

Table 3: Pearson Product Moment Correlation (PPMC) of hunting for sport and forest resources degradation

Variables	X	SD	r-ratio	df	p-level	Remark
Hunting for sport(x)	11.888	1.4008	.389 *	448	.004	Significant
Forest resources degradation (y)	26.460	2.1017				

*significant at .05 level; p<.05.

The findings in table 3 showed that hunting for sport had a mean score of 11.888 with a standard deviation of 1.401, while forest resources degradation had a means score of 26.460 with standard deviation of 2.1017. The result further showed that the calculated r-value of 0.389 is greater that critical r-value of 0.098, tested at .05 level of significance and 448 degree of freedom. Also, the p<.004 is less than p<.05. With reference to this result, the hypothesis which stated that there is no significant relationship between hunting for sport and Forest resources degradation was rejected while the alternative was upheld. Based on the result it therefore means that, there is a significant relationship between hunting for sport and Forest resources degradation in the study area.

Hypothesis Two: There is no significant relationship between hunting for bush meat and forest resources degradation.

In this hypothesis the independent variable is hunting for bush meat, while the dependent variable is forest resources degradation, in testing this hypothesis, Pearson Product Moment Correlation (PPMC) was used. The result of data analysis is presented in table 4.

Table 4: Pearson product moment correlation (PPMC) of hunting for bush meat and forest resources degradation

Variables	X	SD	r-ratio	df	p-value	Remark
Hunting for bush meat(x)	12.746	1.7757				
			.462 *	448	.000	Significant
Forest resources degradation (y)	26.460	2.1017				

*significant at .05 level; p<.05.

The findings in table 4 showed that hunting for bush meat had a mean score of 12.746 with a standard deviation of 1.7757, while forest resources degradation had a means score of 26.460 with standard deviation of 2.1017. The result further showed that the calculated r-value of .462 is greater that critical r-value of 0.098, tested at .05 level of significance and 448 degree of freedom. Also, the p<.000 is less than p<.05. With reference to this result, the hypothesis which stated that there is no significant relationship between hunting for bush meat and forest resources degradation was rejected while the alternative was upheld. Based on the result it therefore means that, there is a significant relationship between hunting for bush meat and Forest resources degradation in the study area.

Discussions of findings

The statistical report of research question one have established that there are several gaming activities taking place in the study area. The report in research question two established that forest resources degradation are available in Obubra Local Government Area. The result of hypothesis one showed that there is a significant relationship between hunting for sports and forest resources degradation in the study area. With reference to this result, the hypothesis which stated that there is no significant relationship between hunting for sport and Forest resources degradation was rejected while the alternative was upheld. This result is in line with Wright (2009) whose study stated that in India, hunting activities resulted to reductions of 90% of the prey eaten by tigers.

This reduces tiger densities, and also results in their gaming activities smaller prey, thereby causing further detrimental effects on the biological community. The loss of animals from forest ecosystems and the resultant disruption of ecological and ultimately evolutionary processes, changes in species composition and probable reduction in biological diversity are collectively known as the "empty forest syndrome. The result is also in line with Brooks (2014) whose study revealed that a majority of tropical nature reserves may already be considered empty forests meaning that all bird and mammal species larger than approximately two kilograms barring a few gaming activities-tolerant species have either been extirpated or exist at densities well below natural levels of abundance. The disruption of ecological functions caused by the loss of symbionts further compromises the capacity of these reserves to conserve biodiversity over the long term.

The result of hypothesis two revealed that there is a significant relationship between hunting for bush meat and forest resources degradation in the study area. With reference to this result, the hypothesis which stated that there is no significant relationship between hunting for bush meat and Forest resources degradation was rejected while the alternative was upheld. This result is in line with Wright (2009) whose study concluded that in India, hunting activities resulted to reductions of 90% of the prey eaten by tigers. This reduces tiger densities, and also results in their gaming activities smaller prey, thereby causing further detrimental effects on the biological community. The loss of animals from forest ecosystems and the resultant disruption of ecological and ultimately evolutionary processes, changes in species composition and probable reduction in biological diversity are collectively known as the "empty forest syndrome. This result is also in line with Ayeni (2013) whose study observed that as environmental degradation and its consequences come clearly into focus, humans are faced with the prospect that the renewable forest resources may be exhausted and that man stands the risk of destroying his environment if all the impacts of deforestation are allowed to go on unchecked Greater attempts are now being made to rationalize the decision making process with respect to the use of forest resources. There is need to ensure that the forest is managed in a sustainable manner if the resources of the forest will last long. In other words, the production of goods and services need to be balanced with the degradation of the resource base of the forest.

Conclusion

The statistical report of research question one have established that there are several gaming activities taking place in the study area. The report in research question two established that forest resources degradation are available in the study Area. It was also concluded that there is a significant relationship between gaming activities and forest resources degradation in the study area. Based on results of the data analyses of research questions and hypotheses, it was concluded that there is a significant relationship between hunting for sports, hunting for bush meat and forest resources degradation in Obubra Local Government Area of Cross River State.

Recommendations

Based on results of the study, the following recommendations were made:

i. The government and other environmental stakeholders should ensure that community dwellers participate on mobilization and awareness against unsustainable gaming activities.
ii. Hunting for bush meat should be ban and enforced by government while local community dwellers are educated on the important of ranching of wildlife for personal and commercial consumption.
iii. Finally, government should promulgate and enforce a better policy against the unholy gaming activities of wild life. Fine and jail term can be given to defaulters to help conserve the wildlife.

References

Aiake A. O. & Anyandike R. N. C. (2012). Assessment of Forest Management Institutions and Their Initiatives in the Rainforest Communities of Cross River State, Nigeria, *Journal of Geography and Geology*, 4 (1)

Ajake, A. O. (2012). The Role of Forest Trees in Indigenous Farming Systems as a Catalyst for Forest Resources Management in the Rural Villages of Cross River State, Nigeria. *Global Journal of Humnan Social Science Geography & Environmental Geo-Sciences*, 12(13), 14-24

Ajake, A. O., & Enang, E. E, (2012). Demographic and socio-economic attributes affecting forest ecosystem exploitation and management in the rural communities of Cross River State, Nigeria, Am. *International. Journal of Contemporary Research,* 2(1), 174-184.

Ayeni, O. (2013). Risk Assessment of Raw Effluents Discharged From an Industrial Estate in Lagos, Southwestern Nigeria, Environmental Science Bioresource technology.

Brooks, E. G. (2014). The degradation impact of commercial wildlife farming of porcupines in Vietnam. Biological Degradation 143:2808-2814

Bruner, A. (2001). Effectiveness of parks in protecting tropical biodiversity. Science 2001 Jan 5;291(5501):125-8.

Dau, J.H., Mati A. & Dawaki, S.A. (2015). Role of Forest Inventory in Sustainable Forest Management: A Review. *International Journal of Forestry and Horticulture (1JFH),* 21 (2)

Ezebilo E. E. (2004). Threats to Sustainable forestry Development in Oyo State, Nigeria .published master's thesis in the Department of Southern Swedish Forest Research Centre Alnarp

FAO. (2015). Global Forest Resources Assessment 2015: How are the World's Forests Changing?. Food and Agriculture Organization of the United Nations

Griffiths, J. (1986). What Is Legal Pluralism? *Journal of Legal Pluralism and Unofficial Law*, 18, 1-55. http://dx.doi.org/10.1080/07329113.1986.10756387

Olujobi O. J. (2015). Evaluation of the contributions of Ikere Forest Reserve to sustainable livelihood of adjoining communities in Ekiti State. *Journal of Research in Forestry, Wildlife and Environment*, 7 (2)

Usang, N. O., Unimtiang, U. S., Nwagbara, M. O., Rose, U. O. Amadi, J. O. & Chinwemeri, B. C. (2024). Firewood extraction and forest resources degradation in Yakurr Local Government Area of Cross River State. *Journal of Environmental and Tourism Education (JETE). 7(1).* ISSN: 2659-0794(Print), 2659-0808. www.openaccessglobal.com

Peres C A. (2009). Synergetic effects of gaming activities and habitat fragmentation on Amazonian vertebrates. Degradation Biology 15:1490-1505

Wright, J. S. (2009). Tropical forests in changing environment, Trends in Ecology & Evolution 20(10):553-600.