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Human Activities and Biodiversity Loss in Sourthern Educational Zone in Cross River State

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Keywords

Human activities, biodiversity loss.

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Abstract

The main purpose of this study was to examine the influence of human activities on biodiversity in southern Cross River State. To achieve this study two research question was posed and two null hypothesis was formulated to guide the study and was tested at 0.5level of significance. The study adopted ex-post factor design. The population of study is eight hundred and six (806), a sample of 403 community member was used. The instrument for data collection was 12 items questionnaires (HABLQ) served as the instrument for data collection. One way analysis of variance (ANOVA) satisfied technique was used for data analysis of data analysis of data revealed that, intensity of bush burning, mining activities has a significant influence on biodiversity in southern Cross River State. Based on this finding revealed that the variable under study significantly influenced biodiversity. The following recommendations were made: Environmental Education awareness should be promoted, biodiversity conservation, environmental impact assessment must be carried out in any given area before mining activities.

Introduction

Since the earth summit in Rio 1992, the loss of biodiversity has been one of the hottest environmental issues in intergovernmental for school and media, reasons been that human have become more of predators rather than protectors of the biodiversity. Biodiversity is important to man and other forms of life. The continual existence of life form and survival of man depends on biodiversity. Mining/ quarrying activities, bush burning and game hunting are destroying the natural landscape at a high scale.

Ajake and Eja (2012) observed that in Cross River State, farming, bush burning, exploitation for variety of products, industrialization, commercialization, urbanization and infrastructural development for enhancement of social political and economic benefits to the vagary of climate. Changes are still being carried out at an unprecedented rate.

Edwin (2006) observed that rampant bush fires cause significant damage in the ecological zones, and its most pronounced where the savannah vegetation predominates and the incidence remain the highest. Awudu (2000), G nado (2004) and Edwin (2006) maintained that bush is burned in order to hunt for games or bush meat and to clear the land for farming. The crushing and quarrying of rocks and stones is a global phenomenon and has been the cause of concern not only in the study area but the world over. Anand (2006) stated that one of the biggest negative impacts of quarrying on the environment is the damage to biodiversity. However, Akabzaa (2000) noted that operations of mining whether small or large scale are inherently disruptive to the environment.

Christ, Hillel, Matus and Sweefing (2003) stated that biodiversity is the wealth of life forms found on the earth, animals, plants and microorganism in their millions and their differences, the gene that contain and the intricate system they form. They are fundamentally two reasons for preserving biodiversity. The first is the moral justification and the second is the value to human existence. Biodiversity is essential to human development because of the goods and services it provides.

Bisong (2001) noted that conservation practices all over the world are changing from traditional management approach with emphasis on tree to managing natural resources in a way that ensures greater flow to all stakeholders especially local communities. The biological diversity helps in the regulation of fresh water, food fuel, fibre, wood, nutrients, as well as climate roles.

Siyanbade (2007) noted that they benefit from biodiversity are multi-dimensional. He categorized them under the heading of supporting, regulating, provisioning and cultural roles. Given that multi-dimensional usefulness of biodiversity diversity and the unprecedented rate at which biodiversity is reducing in the study area, drastic precautions are required in order to state the ecosystem for further destructions.

The need for communities to invest in natural resources conservation and to rescue the effect of environmental degradation is in disputable particularly in southern Cross River State. The people in the study area are dependent on the forest ecosystem for its diverse used. It is against this background that this study sought to investigate the intensity of human activities on biodiversity in southern Cross River State, Nigeria.

Methodology

The design employed in conducting this research was the ex-post facto, this because the research involved the collection of data accurately and objectively describe existing phenomena studies that makes use of design that are employed to obtain a picture of the present condition of a particular phenomenon.

The study population consists of all respondent in the research area; farmers, businessmen, women, hunters, loggers, students and civil servant which is the local point of this research. The selected respondent had a total population (806). The sample for the study comprises 403 respondents in the research area satisfied and simple random sampling technique was adopted for the study.

Two research questions was raised to guide this study;

i. How does bush burning influence biodiversity loss.
ii. What is the influence of intensity of mining activities on biodiversity loss.

Two researcher hypotheses was formulated to help provide an answer to the research hypothesis;

i. Intensity of bush burning does not have any significant influence on biodiversity loss.
ii. Intensity of mining activities does not have any significant influence on biodiversity loss.

In analysing the data, the hypothesis has re-stated followed by the statistical tool employed. The data was analysed using one-way analysis of variance (ANOVA) at 0.5 significant levels.

Results

Intensity of bush burning does not have any significant influence on biodiversity loss. The summary of data and one-way. Analysis of variance (ANOVA) on the influence of human activities and biodiversity loss in southern educational zone.

One-way analysis of variance of intensity of bush burning and biodiversity loss

Bush burning	**N**	**Mean**			**SD**
Low	48	25.9169			7.04041
Moderate	268	27.8134			4.64172
High	87	31.1609			4.31567
Total	403	28.3102			5.16692
Source of variance	**Sum of square**	**DF**	**Mean square**	**F**	**P-Value**
Between groups	1048.143	2	524.071	21.647	000
Within group	9684.085	400	24.210		
Total	10732.228	402			

*significant at .05 alpha level P ≤ .05, critical f = 3.02

The result of the above showed that the calculated f-ratio of 21.647 is significantly higher than the critical ratio of 3.02 at 0.5 level of significance with the hypothesis was rejected. This shows that intensity of bush burning significantly influence on biodiversity loss in southern education zone.

Result

Intensity of mining activity does not have any significant influence on biodiversity loss. Summary of data and one-way analysis of variance (ANOVA) on the influence of human activities and biodiversity loss in southern education zone.

One-way analysis of variance of intensity of mining activities and biodiversity.

Bush burning	**N**	**Mean**			**SD**
Low	50	27.1400			6.70367
Moderate	275	27.5055			4.61936
High	78	31.8974			4.31425
Total	403	28.3102			5.16692
Source of variance	**Sum of square**	**DF**	**Mean square**	**F**	**P-Value**
Between groups	1250.287	2	625.143	26.372	000
Within group	9481.941	400	23.705		
Total	10732.228	402			

The result of the above showed that the calculated f-ratio of 21.647 is significantly higher than the result above showed that the calculated f-ratio of 26.851 is significantly higher that the critical f-ratio of 3.02 at 0.5 level of significance.

The hypothesis was rejected.

This shows that the intensity of mining significantly influence on biodiversity loss in southern education zone.

Discussion of findings

The result of the hypotheses states that intensity of both bush burning does not have any significant influence on biodiversity loss in southern educational zone. The finding of hypothesis is in agreed with the view of Anijah-obi (2001) who observed that bush burning destroys the plants and causes biodiversity, especially during the dry season by exposing the soil to erosion and destroying the soil nutrients. According to National Resource Conservation Service (2011) bush burning as a result of wildlife or a controlled burning, affect not only the disappearance of the landscape, but the quality of the soil.

Secondly, result of the hypotheses states that intensity of mining activities does not have any significant influence on biodiversity loss in line with the work of Eni, Out and Ajake (2010) submitted that the machineries used to extract laterite disturbs the vegetation cover and exposes the area to erosion and degradation. The human activities in form of quarrying and bush burning has reduced most part of the forested area to secondary forest thereby showing that a large number of species were destroyed, their vulnerable rates very high which indicates that were at a point of extinction.

Conclusion

Based on the result of the study, has shown evidently that, in order to address the threat of mankind is posing to biodiversity and his encroachment, they should be controlled exploitation of biodiversity. The analysis of using ANOVA has further review the study in the area of bush burning, mining activities and other environmental exploitation activities should be well managed in order to achieve this, citizen participation in biodiversity conservation should be encourage and non-governmental organizations, community based organization and international agencies and government at all level should be involved.

Recommendation

Based on the findings obtained from analysis of data the following recommendations were made;

i. Formulation and implementation of environmental laws for achieving of sustainable environment.
ii. Environmental impact assessment must be carried out in any given area before mining activities is carried out.
iii. Existing forest need to be identified and protected to improve biological diversity status with appropriate sanctions on defaulters and incentives for promoters of free planting campaigns.

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