



Research Article

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Lumbering and the Loss of Indigeneous Plant Species in Ogbia Local Council of Bayelsa State.

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Abstract: A perception study of the effect of lumbering on indigenous plant species was carried out in selected communities of Anyama, Otuedu and Ologoghe in Ogbia Local Government Area of Bayelsa State. A descriptive survey was adopted in this study using a structured questionnaire administered on respondents with questions framed to elicit the desired response to the study quest. The results obtained indicate that majority of the inhabitants (42%) are farmers steeped in the non-formal education sector (25%), who earn between ₦25,000 and ₦50,000 naira (33%) respectively. Also on biodiversity loss, majority of the respondents (30%) indicate that lumbering was the major cause of deforestation in the area; as about (50%) already allude to the fact that valuable forest resources are increasingly lost to lumbering activities triggered by farming, increasing population, urbanization and their attendant demand for forest resources. These have led to the loss or disappearance of important indigenous plant species, notable amongst which are the Irvingia sp. (Bush Mango tree), raphia palm, timber, numerous medicinal plants etc. Furthermore, as part of their coping strategy to loss of medicinal herbs, natives are now resorting more to dependence on orthodox medicines. There is therefore the need for the people of the study area to adopt a more central management approach that emphasizes the human cost of environmental degradation as expressed in the 'Primary Environmental Care' (PEC) by the United Nations Research Institute for Social Development (UNRISD 1994); which emphasizes the belief that it is essential to focus on the needs of grassroots at the community level when making sustainable development operational.

Keywords: Lumbering, Biodiversity, Environmental Degradation, medicinal herbs.

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INTRODUCTION

The currently available national estimates of forest extent and recent rates of forest destruction for both closed and open forests recently published by FAO between 1981 and 1990 shows that Africa tops the list with a deforestation rate of 1.7 percent per year. This observation has become a source of great worry to researchers because the environment is sustained by the interdependence among the elements of climate, vegetation, soil and fauna. These elements interact in a most intricate and reciprocal manner to maintain a state of environmental equilibrium. Therefore any change affecting any single element within it, must obviously have repercussion throughout the entire ecological system. Historically, the people of Ogbia where this research was carried out had utilized the forest in a manner that sustained the essentially closed system forest cover of the area. Natural rain forests were preserved in sacred groves, while individual families maintained private wood lots where the people could collect fuel wood. The practice of shifting cultivation with long fallow period ensured the sustenance of the forest. However, the increased rate of logging activities on the vegetation of the study area by man has become one of the major environmental problems because, it's a threat to the survival of numerous plants and animals species indigenous to the region causing them to face the possibility of extinction (Ataria, 2005). Consequently,

the loss of indigenous crops and plants has equally affected the good local crafts-life of canoe carving and medicinal herbs for the cures of many of the diseases that plague human race. There is also the issue of loss of natural habitat for animals and the loss of natural shades which potentially leads to soil erosion and extinction of endangered flora owing to alterations in climate and soil conditions. Consequently, a perception study of the effect of lumbering on indigenous plant species was carried out in the selected communities of Anyama, Otuedu and Ologoghe in Ogbia Local Government Area of Bayelsa State in order to identify the threats of lumbering activities to indigenous species, examine the local adaptation and coping strategies by the local community and provide solutions on how to manage the effect of lumbering on indigenous plant species in the study area.

Study Area

The study area is situated around 4.65°N of the Equator and 6.26°E of the Greenwich. Its headquarters is in the town of Ogbia. It has an area of 695km² and population of 179,926. (en.m.wikipedia.org/wiki/ogbia,2015). It is bordered by Yenagoa Local Government Area to the North, Nembe Local Government Area to the South, Southern Ijaw Local Government Area to the West and Rivers State to the East. This region can be categorized as the area that is apex to the Atlantic coast with its land chopping

gradually away from the banks to the back swamps (Ologunorisa, 2004).

Vegetation

Ogbia local government Area falls into two ecological zones; the fresh water and the lowland plain forests. The fresh water swamp forest is a home of several endangered plants and animal species. The forest has three layers with numerous trees species. But a great deal of the forest has been disturbed by lumbers and farmers.

MATERIALS AND METHODS

The study relied heavily on the use of a structured questionnaire designed to illicit information on demographic & socio-economic status of respondents, their perceptions of lumbering effects and their coping strategies going forward. Focus Group Discussions and Oral Interviews were also conducted on the indigenes and lumbers to acquire the required information clearly and promptly. Again, Secondary Sources of Data like books, magazines, journals and reports were equally reviewed on related matters to the research area. The random sampling was used in the study to choose each step while ensuring that all of the populations stood the same chance of being interviewed.

A total number of 60 copies Questionnaires were purposively developed and administered to the selected communities of Anyama, Otuedu and Ologoghe. These communities were adopted as sampling points

because they represent the hub of lumbering activities in the study area. The questionnaire was sub-divided into three strata dealing respectively with;

- Demographic and socio-economic characteristics
- The people's perception and effect of the lumbering
- Coping mechanism in the face of the degrading land and dwindling forest resources in the study area.

RESULTS AND DISCUSSIONS

Demographic and Socio-economic Characteristics of Respondents

Data on respondent's biometrics are contained in Table 1 and Figures 1 and 2. Results indicated that of all the respondents polled, 55% were males while 45% were females. This observation was not predetermined; it was indeed the direct outcome of a simple randomization of the indigenous people and loggers.

Table 1: Sex of Respondents

Sex of Respondents	Percentage (%)
Males	55
Females	45

On the educational attainment of respondents, results revealed that majority were those steeped in the informal sector (25%) and jointly followed by those in the formal sector (Primary 20%, Secondary 20% and Post-primary 20%) respectively. This observation is fare reflection of target populations across communities particularly where logging is predominant.

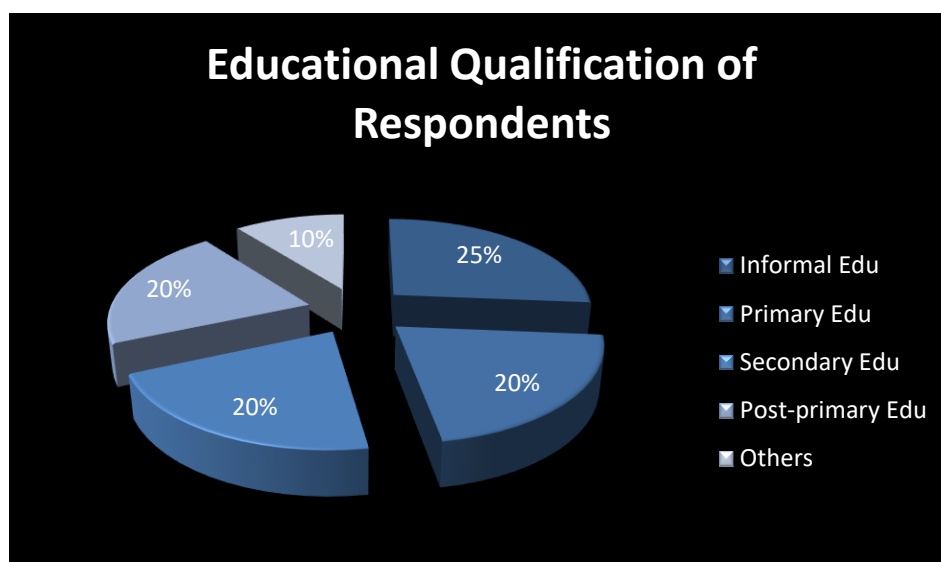


Figure 1: Educational Qualification of Respondents

On the income of respondents, results indicated that majority of respondents earn between 25,000 - 50,000 represented by 33.3%, followed by those who earn between 10,000 to 25,000 represented by 25% and those who earn below 10,000 are 16% and less

respectively, as income. Although this statistics may be reflective of the average economy of the people of the study area, exceptional differences may exist to indicate higher individual earnings.

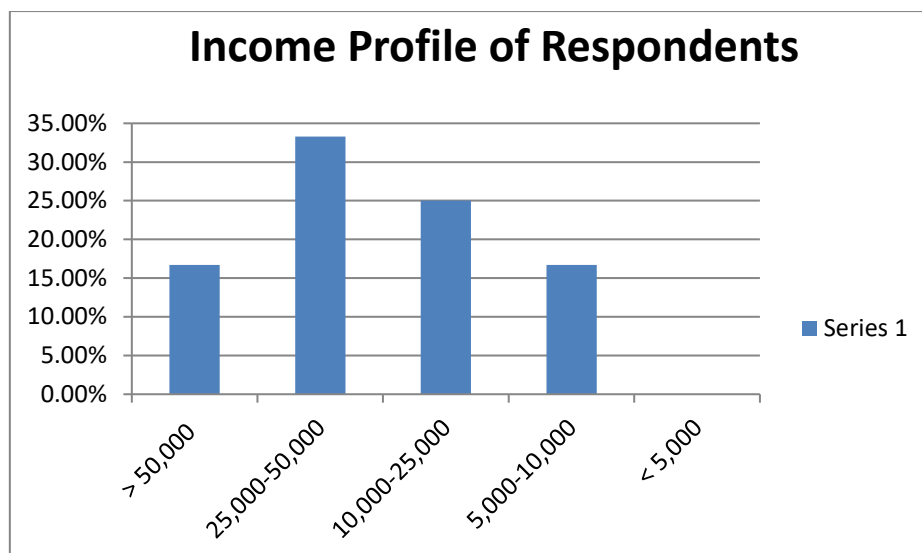


Figure 2: Income Profile of Respondents

Causes of Deforestation in the Study Area

Data on the perceived causes of loss of vegetation in the study area is presented in Figure 3. Results indicated that majority of respondents polled represented by 30%, attested to the fact that lumbering is the major cause of deforestation in the study area. This was jointly followed by farming and bush burning (24% respectively). Population growth and Urbanization were

a distant 12% and 10% respectively. This outcome corroborates the report of EL-KHOULY, 2004 who stated that irrespective of the immense ecological values of forest species to biotic organisms, man's activities such as deforestation, habitat destruction and degradation by physical and chemical means is causing significant and irreversible loss to this unique resource.

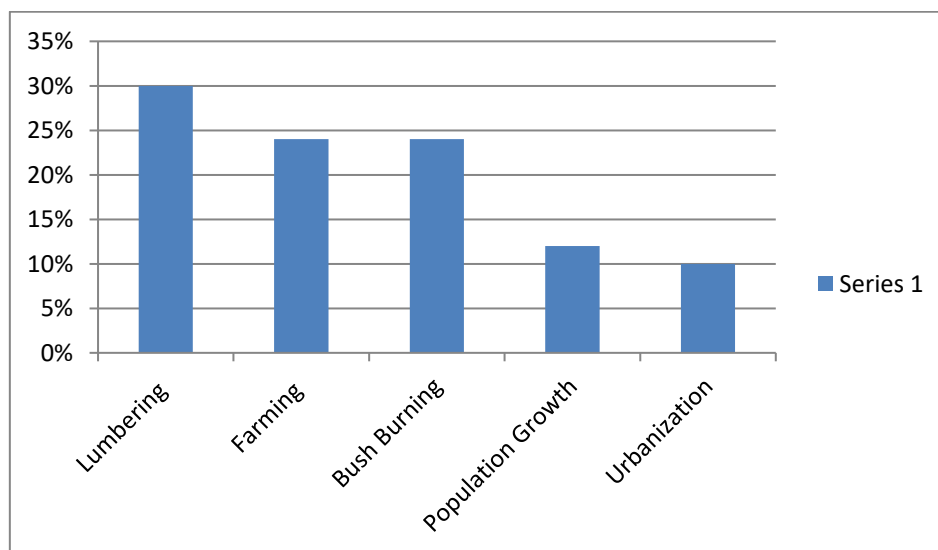


Figure 3: Causes of Deforestation in the Study Area

Respondents Perception of Lumbering Effects

Data on the effects of lumbering is illustrated in Figure 3. Results indicated that majority of respondents polled (50%) strongly agreed and another 33 % agreed to the fact that lumbering was largely responsible for the disappearance of most plant species indigenous to the

study area. This observation was clearly corroborated in the report of Ataria (2016 p17) who wrote that every year lumber harvesters in the study area engage in the devastation of the environment by the unethical cutting of trees in the forest.

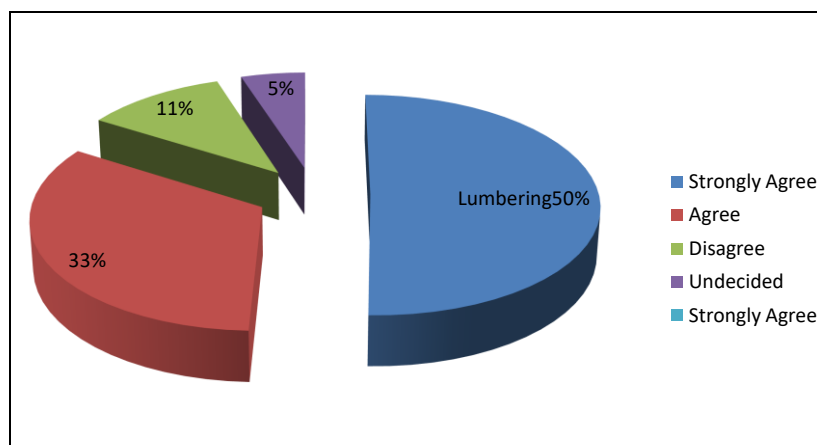


Figure 4: Respondents Position on the Loss of Indigenous Plant Species

Coping Mechanisms

Data on the coping mechanisms adopted by natives as alternatives to the impact of lumbering of medicinal and other indigenous plant species is presented in Figure 5. Results indicated that majority of respondents representing 33% opted for the use of modern medicine in place of herbs. 25% of the respondents spend more money purchasing construction materials such as ropes, stakes and other building materials obtained from the wild as well as devote more time fetching more fuel wood owing to challenges to

other livelihood options. Also, 16.7% indicated that they now patronize the use of the corrugated iron sheets in place of the local thatch from raffia palms.

The analysis indicate that people now patronize modern medicine because of the forest destruction of indigenous plant species that were cure to some diseases affecting the people of the study area. A traditional medicine man popularly called Amekene indicated that he now engages on wider searches to obtain herbs that he uses to cures his patience.

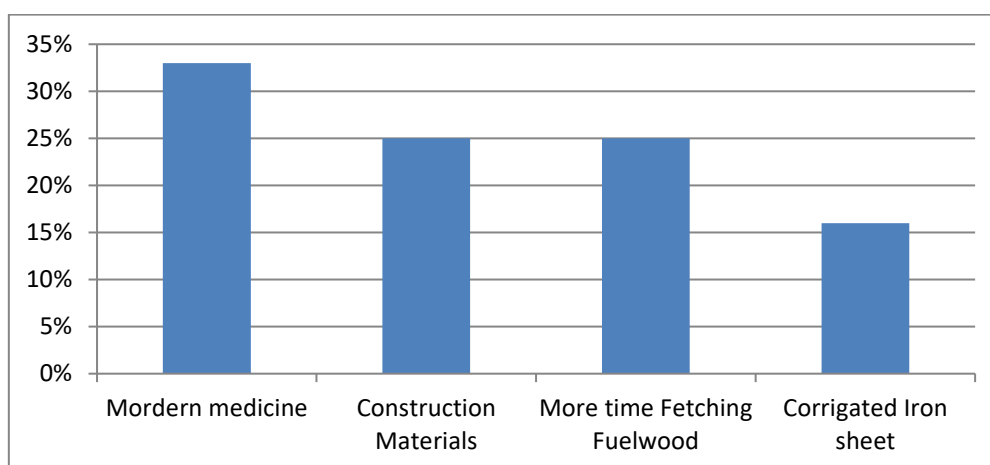


Figure 5: Coping Mechanisms to Lumbering Effects on Indigenous plant Species

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

Summary

Emanating from the results obtained from the study and the subsequent discussions that followed, it has become pertinent to state that valuable forest resources are increasingly lost to lumbering activities triggered by farming, increasing population, urbanization and their attendant demand for forest resources.

Lumbering in the study area has led to the loss/disappearance of important indigenous plant species, notable amongst which are the *Irvingia* sp. (Bush

Mango tree), raphia palm, timber, numerous medicinal plants etc.

Furthermore, as part of their coping strategy to loss of medicinal herbs, natives have resorting more to dependence on orthodox medicines in recent times.

Conclusion

Understanding our environment and our role in it is the first step towards living in harmony with nature. Lumbering has many social, economic and ecological effects which result in many negative consequences. As noted by Stephen Hui (1997). Human kind is the cause of deforestation, but just as humans are able to create

such widespread of destruction, they can have a positive effect on the crisis.

This research joins the crusade for making the human environment more sustainable. In other words, there is need for adequate management of the environment in order to live in better harmony with nature. But found no meaningful effort by government or groups to address lumbering in the study area. Therefore, there is need to set out measures to cope with the dwindling resource base to ensure sustainable management of the land and forest of the study area. Emanating also from the results obtained from the study the subsequent discussions, the following recommendations are made:

The people of the study area are encouraged to adopt the 'Primary Environmental Care' (PEC) propounded by the United Nation's Research Institute for Social Development (UNRISD 1994). It is a more central management approach that emphasizes the human cost of environmental degradation and; It emphasizes the belief that it is essential to focus on the needs of grassroots at the community level when making sustainable development operational.

Recommendations

The study made the following recommendations from the data collected and analyzed.

1. There is an urgent need to develop measures for strengthening forest resource protection and regulation. This can be achieved through government actions to ensure stricter regulations on logging and the transportation of timber. A monitoring taskforce should be set up to curb illegal lumbering activities and ensure that forest exploitation passes through environmentally friendly process.
2. As a matter of urgency, there is a need to promote alternative livelihoods. As the study showed that lumbering and farming are the fastest causes of vegetation loss in the area, a good intervention scheme should introduce other livelihood programs such as agroforestry, beekeeping, and non-timber forest product businesses.
3. A good way to curb continued lumbering in the area is to start Community led Forest Management system. This system will ensure that local people are involved in conservation program by working closely with traditional institutions already in place, this will promote a sense of ownership of conservation programs.
4. As much as possible government should promote afforestation programs in the area focusing on native and fast growing tree species. Such a scheme will aid the restoration of forest and promote the growth of biodiversity in the communities affected.

5. The role of education and awareness of environmental issues must be explored, this can be achieved through increased awareness campaigns to educated members of the communities especially farmers and loggers, on the harmful and long term effect deforestation.
6. Academics and researchers should be encouraged to carryout research and document indigenous plant species in the areas. Proper documentation will help future regeneration effort to know tree species native to the area.
7. Government should partner with ngos and community leaders to start a botanical gardens to aid preservation of native species for future generations.

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