IMPACT OF DEFORESTATION ON THE ECONOMIC ACTIVITIES OF PEOPLE IN OKUN AREA OF KOGI STATE, NIGERIA

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ABSTRACT
The study examined the impacts of deforestation on the economic activities of the people of Okun Area of Kogi State, Nigeria. One hundred and fifty respondents were randomly selected from a total of 15 towns and villages from three of the five local Government Areas (LGAs) that make up the area. Ten respondents were randomly selected from each of the 15 towns and villages. Both descriptive statistics and Chi square analysis were used in the study. People in the study area perceived that deforestation has caused significant loss in soil fertility, water scarcity as well as non availability of wild fruits and vegetables. The study also showed that there was a significant relationship between age, education level, marital status, religion and their perception of the influence of deforestation on their economic activities. Only their gender was not significant. Hence the null hypothesis that there is no significant relationship between people's perception on deforestation and their socioeconomic characteristics holds for gender and is rejected for age, marital status, education and religion

KEYWORDS: Deforestation, perception, Okun Area, Kogi State

INTRODUCTION

Forestry sector contributes significantly to Nigerian economy, though most of its resources are yet to be tapped. Forests provide products such as fuel wood, chewing sticks, timber, poles, rattans, fruits, seeds, pulp wood, leaves, mushroom and wildlife. They as well provide such services as environmental protection such as soil protection against erosion and strong winds, protection of watershed and enhancement of nutrient cycling for maintaining soil fertility. According to Adeyoju (1981), forest is a tract of land covered by plant association predominantly composed of trees and other woody vegetal. They have been direct provider of shelter and food for people and livestock, water, medicinal plants, building materials and fuel (UNEP, 2002). Forests also provide habitats for many plant and animal species. On a global scale, forests are the basis for sustainable and predictable global progress and development (Robert, 1989; FAO, 2000, 2001).World over, forest is now being increasingly acknowledged for its importance and its resources in the improvement of human welfare (FAO, 1983). Natural and man-made forests have economic, social and environmental benefits and they play important roles in the economic development of any society (Okonkwo, *et al,* 2002).

According to FAO (1994), Forest industry in developing countries contributes about 2.7% of the GDP and so is even more economically important to these countries than it is to the industrialized countries. Hence the increase in demand for forest products, leading to increasing pressure on available forest resources which eventually results in degeneration, deforestation, desertification and subsequent general environmental degradation. The world's forest area unfortunately declined by about 0.2 %(about 15.4 million ha) annually in the 1980s, and about 10 %(about 1.5 million ha annually) of the global deforestation can be linked, at least indirectly to industrial logging (FAO, 1994). However, recent FAO estimates of the deforestation rate, according to Hienrich(1991) are about 17 million ha annually.

Enabor (1986) estimated the rate of deforestation in Nigeria at about 286, 000 ha per annum, however this has increased within the last decade to 400,000 ha per annum (Akachuku, 1997). The mounting pressure on available forest resources for farming, housing, and other infrastructure development activities has also contributed to dereservation and deforestation. Another cause of deforestation in Nigeria is the mining of mineral resources particularly petroleum in the Niger Delta and tin and other mineral resources in Jos Plateau. For example, about 62% of the devegetation in Jos Plateau is caused by mining, while grazing, agriculture and bush fire account for 16%, 18% and 2% respectively (Popoola and Nkwatoh, 1994/95).

Deforestation
Deforestation is the removal of forest cover naturally or by human activities. It may occur abruptly when the forest is cleared for agricultural production, urban development or more gradually as a result of unsustainable logging practices (Houghton, 1995). It as well includes removal of shrubs, lanes, grasses and other plants from tree covers. It is also used to address issues related to biomass loss, shortened fallow length and other types of forest degradation (Kaimowitz and Angelsen, 1998).

Deforestation is one of the major environmental issues, not only in directly affected countries and locations, but also from a global perspective. The degree of international attention to deforestation is commensurate with the role of forests in the global, national and local ecosystems. Forests provide a wide variety of highly valuable ecological, economic and social services, including: the conservation of biological diversity; carbon storage; soil and water conservation; provision of employment and enhanced livelihoods; enhancement of agricultural production systems; and improvement of urban and peri-urban living conditions (FAO, 1999). Deforestation is increasing worldwide due to commercial logging, agricultural development, migration, resettlement and demand for charcoal and fuelwood. It has environmental consequences, which impinge directly on the lives of poor rural people (Fearside, 1989).

Therefore to ameliorate the effects of deforestation, appropriate local, national and global actions which require a participatory approach that would take into account, local needs and national priorities that is based on international cooperation is crucial to be considered in the process of mitigating effects of deforestation(Wiersum,1984; Gadgil, 2000).

In view of this, the study was aimed at determining the perceived effects of deforestation on the economic activities of the people in Okun Area of Kogi State, Nigeria, with a view to examining the socioeconomic characteristics of the people, examining their economic activities before and now, examining the extent of the deforestation effects on their economic activities as well as determining the ways by which the effects of deforestation can be mitigated. Meanwhile, economic activities in this context refer to agricultural production. Forest therefore plays important roles in economic development and environmental stability, as leaves from forest tree fix nitrogen and add organic matter (biomass) to the soil and this enhances soil fertility and increases agricultural productivity (Rocheleau and Malaret, 1988). Increase in agricultural yield could substantially improve economic benefits of the farmers.

METHODOLOGY
Study Area
The study was carried out in Okun Area of Kogi State, Nigeria. The area was divided into five local government areas(LGAs), which are Ijumu, Mopa/Amuro, Kabba/Bunu, Yagba East and Yagba West. Okun area is agrarian and well suited for arable crops like maize, cassava, cocoyam and yam.

Sampling Technique
Data obtained were mainly from primary sources and were collected from three LGAs out of the five LGAs that make up Okun land. A multistage random sampling procedure was adopted in selecting the LGAs. The LGAs that were selected were Kabba/Bunu, Yagba East and Ijumu. The second stage involved simple random selection of 5 towns and villages from each of the selected LGAs, making a total of 15 towns and villages. Ten respondents were randomly selected from each of the 15 towns and villages, leading to a total selection of 150 respondents. Structured questionnaire was used to source for the required information from the respondents. Only 144 copies of the administered questionnaire were retrieved and analyzed. Descriptive statistics and Chi-square analysis were used in analyzing the data.

Chi-square equation is
Chi Square(X^2) =$\sum$ (O-E/E)^2

Where O = Observed frequency
E = Expected frequency
$\sum$ = Summation sign

This was done through test of goodness of fit for deciding whether the probability distribution is a close enough approximation to sample frequency distribution for the population from which the sample was drawn.

Hypothesis: There is no significant relationship between people's perception on deforestation and their socioeconomic characteristics

RESULTS AND DISCUSSION
Table1 shows that 53.3% of the respondents were 56 years and above. This implies a declining productivity stage, owing to the growing age of the respondents. Therefore majority (53.3%) of the respondents will not be expected to be productive because of their old age. Fifty four percent of the respondents were male while about 55% of them were married. Majority (about 65%) of the respondents had no education and the remaining had one form of education or the other.

Table1: Distribution of Respondents by their Socio-economic Characteristics

Variable	Frequency	Percentage
Age		
36-40	6	4
41-45	8	5.3
46-50	20	13.3
51-55	36	24
56-60	51	34
>60	29	19.3
Gender		
Male	81	54
Female	69	46
Religion		
Christianity	82	54.7
Islam	57	38
Traditional	11	7.3
Marital Status		
Married	103	68.7
Widowed	22	14.7
Separated	12	8
Divorced	8	5.3
Single	5	3.3
Education		
No formal education	98	65.3
Primary education	29	19.3
Secondary education	18	12
Postsecondary	5	3.3

Source: Field survey, 2011

Table2 shows some of the economic activities of the respondents in the past 20 years as well as their present economic activities. Among the economic activities in the past 20 years were farming, collection of fuelwood, gathering of snails and many more. Some of the current economic activities include riding commercial motorcycle, selling of smoked fish as well as selling of building materials. From this, it was observed that there was a marked difference between the past and present economic activities of the people. This was due to the impact of deforestation, as perceived by the respondents; and this explains why 95% of the respondents perceived that deforestation has caused loss in soil fertility, leading to sharp decline in agricultural productivity. About 77% of them indicated scarcity of bushmeat as the problem they perceived with deforestation, while 88% and 50% of the respondents claimed shortage of fuelwood and soil erosion respectively were the problems they perceived with deforestation in the study area, as shown in Table3.. Findings from this were in conformity with http://rainforests.monabay.com/20nigeria.htm   estimate that about 55.7% of the primary forests have already been lost in Nigeria to deforestation. This is also in line with the submission of Otegbeye and Onyeanusi(2006) that deforestation could lead to low crop yield, low returns on investment and food security.

Table2: Economic Activities of Respondents

Activities in the last 20 years	Activities Now
Farming	working as labourers in rural areas
Collection of wild fruits and vegetables	selling of kerosene
Gathering of fodder crops	selling of provisions
Collection of fuelwood	riding commercial Motorcycle
Gathering of snails	Movement to cities in search of job
Collection of root and tuber crops	molding of building blocks
Hunting and selling of bushmeat	selling of building materials
Collection and selling of chewing sticks	selling smoked fish
Gathering of medicinal plants	

Source: Field survey, 2011

In testing the relationship between people's perception on deforestation and their socioeconomic characteristics, it was discovered that a positive and significant relationships were found between age, marital status, religion, education and people's perception on deforestation at 5% level of significance. This implies that age, marital status, religion and educational level significantly influenced people's perception about the influence of deforestation on their economic activities in the study area. Age can be linked with the experience of individuals, since the older an individual is, the more history the individual will be able to relate. Therefore the older ones are expected to have better information regarding deforestation than the younger ones. The length of marriage will also give better experience.

Table3: Distribution of Respondents According to their Perceived Effects of Deforestation

Effect	*Frequency	Percentage
Loss in soil fertility	142	94.7
Scarcity of bushmeat	116	77.3
Shortage of fuelwood	132	88
Shortage of fodder crops	96	64
Non availability of wild vegetables	93	62
Non availability of wild fruits/nuts	85	56.7
Reduction in crop yield	139	92.7
Non availability of mushroom	77	51.3
Soil erosion	75	50
Scarcity of snails	97	64.7
Water scarcity	54	36

*Multiple Responses
Source: Field survey, 2011

Table4: Chi-square analysis showing the relationship between socioeconomic characteristics of respondents and their perceived impacts of deforestation on their economic activities

Variable	df	P-value	X^2	Decision
Age	5	P<0.05	59.520	Significant
Sex	1	P>0.05	0.960	Not significant
Religion	2	P<0.05	51.880	Significant
Marital status	4	P<0.05	227.533	Significant
Education	3	P<0.05	137.840	Significant

Source: Computer Analysis

CONCLUSION AND RECOMMENDATION
The study revealed that larger proportion of the respondents in the study were at their old age and were able to give information on the situation of the forest in the last 20 years. Their claim that their economic activities were forest-dependent has now been replaced by other activities like selling of kerosene, riding of commercial motorcycle, selling of smoked fish and many more. It was also shown that socioeconomic characteristics of respondents significantly influenced their perception of deforestation. Nonetheless, deforestation impacts

resulted to loss of soil fertility, water scarcity, non availability of bushmeat and these directly impact negatively on the economic activities of the people of the study area.

Sequel to these, it is therefore recommended that deforestation impacts could be mitigated by the promulgation, by the government at different levels, policies that will regulate the use of forest products. Adequate enlightenment on dissemination of information on forest, environmental sustainability as well as requisite education on afforestation and agroforestry practices should be encouraged in order to improve and maintain soil fertility and the forest.

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