

Rural Women Perception of Effects of Deforestation on Their Economic Activities in Ogbomoso Area of Oyo State, Nigeria

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Abstract: Deforestation has been noted to be a problem in the rural areas. This study therefore investigated the rural women perception of effects of deforestation on their economic activities in Ogbomoso area of Oyo State Nigeria. Two hundred respondents were randomly selected and data procured from them through the use of pretested interview schedule. Descriptive was used in data analysis while chi-square (χ^2) was used to test the hypothesis of the study. Rural women perceived that deforestation has resulted to the reduction in soil fertility, scarcity of snails and bush meat. Also there was severe effects of deforestation on marketing of fuelwood, bush meat and snails. The study also established that there is significant relationship between age, level of education, position of the wife among other wives. Also their religion significantly influenced rural women perception of deforestation on their economic activities.

Key words: Deforestation, rural women, perception

INTRODUCTION

Environmental resources are often the only resources available to the poor women of the rural tropics (Davidson, 1990). The fertile soil that women are able to cultivate and what grows naturally are some of the resources available to them. On the larger scale these resources are the basis for the economic development of the agricultural nation. And on a global scale forests are the basis for sustainable and predictable global progress and development (Robert, 1989; FAO, 2000, 2001).

In some African countries, the forests were until recently providing as much as 85% of locally produced animal protein which women trade with. They may also harvest roundwood, sell fuelwood, collect fruits and nuts, grow mushrooms, sell palmwine, manufacture baskets, make mobile cages as handcraft, all from palm trees, as well as raising livestock that graze within forest environment. Forests are of critical importance to the economy of rural women and vital to their well being (Buringh and Dudal, 1987). This dependency on the forest decreases as one moves to other habitats as a result of deforestation (Foggie and Piasecki, 2003).

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 women (Fearnside, 1989). Their workloads are increased as they travel further to seek fodder, water and fuel, hence they have less time for income generation and other activities to improve their standards of living, to invest in natural living or to invest in natural resources management (August *et al.*, 2005).

Resource degradation is already being manifested as a result of population pressure, commercial exploitation, in accessibility of the poor rural women to required resources and inadequate education of the populace on the danger posed by uncontrolled utilization of natural resources. In the forest region, under heavy tropical rains, soil erosion has greatly limited farm size and the amount of land available to rural women for farming (ODA, 1994). A high proportion of the world's productive land is subjected to various degrees of degradation. In addition to their more general environmental costs, soil erosion and reduced fertilities pose a clear threat to women future food supply. Even the maintenance of present levels of food production will be difficult in some regions (Renu, 1990; Falade, 2002).

Agarwal and Deshingkar (1983) reported that, women's perceived difficulty in acquiring fuelwood for

the home has caused them to be seen mainly in their role as fuelwood and fodder gatherers. This suggests that the fuel wood crisis is not the only crisis they face hence there is extreme poverty and chronic unemployment facing the women. In fact most rural women, when questioned, do not see fuelwood shortage as their greatest problem. Lack of wood and the consequent inability to feed adequately are seen as one of the problems resulting from exploitation of natural resources in the environment.

The impact of the fuelwood and fodder crisis on women as the actors in the domestic subsistence economy, in terms of the increasing drudgery in firewood collection with its resultant impact on the nutrition, health and education of family members as well as women's increasing work load, has obscured the equally important role women play in the non-domestic forest economy. Deforestation has vitally affected the working and earning of women who shoulder a major part of the responsibility for the survival of the household (Singh, 1986; Oladosu *et al.*, 2002).

To ameliorate the effects of deforestation, appropriate local, national and global actions are needed to meet these challenges, which required a participatory approach that would take into account of local needs and national priorities that is based on international cooperation is vital to be considered in the process of initiating the deforestation effects (Wiersum, 1984; Gadgil, 2000).

Therefore deforestation resulting in depletion of forests and the reduction of forest cover which is harmful for the entire population as detrimental to future generations. Directly or indirectly, forest affects everyone.

This study is aimed at determining the rural women perception of the effects of deforestation on their economic activities in Ogbomoso area of Oyo State Nigeria.

The objectives of this study are to:

- Examine rural women socio-economics characteristics.
- Examine rural women economic activities before and now.
- Examine the extent of the deforestation effects on rural women economic activities.
- Determine the strategies for ameliorating the effects of deforestation.

Hypothesis for the study: There is no significant relationship between rural women perception on deforestation and their socio economic characteristics.

MATERIALS AND METHODS

The study was conducted in Ogbomoso area of Oyo State Nigeria. The area was divided into 5 local government areas. Orire, Ogbomoso North, Surulere, Ogo-Oluwa and Ogbomoso South local government areas. The multi-stage random sampling technique was used for this study by sub-divided each local government area into 10 wards, 5 rural based wards were randomly selected in each local government area. Thus 25 rural based wards were selected. There after one community was randomly chosen for data collection in each ward to make a total of 25 communities, eight rural women were randomly selected from each community. Thus a total of 200 women constituted the sample size for the study. Data collected through the interview schedule with the assistance of employed enumerator was subjected to descriptive analysis while hypothesis for the study was analyzed by chi square (χ^2).

RESULTS AND DISCUSSION

Demographic characteristics of respondents: Table 1 shows that 70.5% of the respondents were within the age

Table 1: Distribution of respondents by their demographic characteristics

Age of rural women (Year)	Frequency	(%)
36-40	01	0.5
41-45	01	0.5
46-50	18	9.0
51-55	39	19.5
56-60	96	48.0
61 and above	45	22.5
	200	100.0
Religion		
Christianity	138	69.0
Islam	55	27.5
Traditional	07	3.5
	200	100.0
Marital status		
Married	163	81.5
Widowed	27	13.5
Separated	7	3.5
Divorced	2	1.0
Single	01	0.5
	200	100.0
Educational background		
No formal education	122	61.0
Primary education	69	34.5
J.S.S. education	3	1.5
S.S.S. education	3	1.5
Adult literacy class	3	1.5
	200	100.0
Position of rural women in polygamous marriage		
1st wife	162	81.0
2nd wife	36	18.0
3rd wife	2	1.0
	200	100.0

Source: Field survey (2005)

Table 2: Distribution of respondents by their economic activities in the past

*Economic activities	Major		Minor	
	Frequency	(%)	Frequency	(%)
Farming activities	166	83.0	34	17.0
Gathering of leaves	01	0.5	64	32.0
Collection of snails	-	-	59	29.5
Collection of wild vegetable	01	0.5	108	54.0
Gathering of fodder	-	-	35	17.5
Gathering of fuelwood	20	10.0	91	45.5
Collection of wild fruits and nuts	02	1.0	81	40.5
Collection of mushroom, root and tuber	03	1.5	93	46.5
Collection and gathering of medicated plant	06	3.0	53	26.5
Marketing of Bush meat	05	2.5	34	17.0

Source: Field survey (2005), *Multiple responses

Table 3: Distribution of respondents by their economic activities now

*Economic activities	Frequency	(%)
Selling smoked fish, kerosene, provision etc	54	27.0
Movement to city to stay with their children	53	26.5
Working as labourer in rural area	44	22.0
Some rent shops in nearby market act as intermediary between farmers and buyers	31	15.5
Movement to urban area to seek for job	30	15.0

Source: Field survey (2005), *Multiple responses

of 56 and 61 years and above. This is a declining productivity stage. Thus majority (70.5%) of the respondents will not be expected to be productive because of their old age, 69% of the respondents were Christians while 81.5% were married. Majority (61%) of the respondents were illiterate. The remaining 39% had one form of education or the other, while 81% of them were the 1st wife of their husband.

Rural women economic activities in the past: Data in Table 2 revealed that 83% of the respondents indicated that their major occupation was farming, about 17% claimed that farming was their minor occupation, while 10% indicated gathering of fuelwood as their major occupation and 45.5% of them claimed gathering of fuelwood as their minor occupation.

Rural women economic activities now: Table 3 showed that 27% of the rural women are now traders selling smoked fish, kerosine, provision etc. 26.5% claimed that rural women had moved to the city to stay with their children and 22% revealed that some rural women are still living in rural area but working as labourers. This findings agrees with ODA (1994) that in the forest region under heavy tropical rains, soil erosion has greatly limited farm size and the amount of land available to rural women for farming.

Effects of deforestation on rural women economic activities: Result in Table 4 reveals that 85.5% of the

Table 4: Distribution of respondents by the perceived problems associated with deforestation

*Problems of deforestation	Frequency	(%)
Reduction of soil fertility	171	85.5
Scarcity of fuelwood	162	81.0
Scarcity of bush meat	146	73.0
Shortage of fodder	126	63.0
Disappearance of wild vegetables	123	61.5
Reduction of crop yield	120	60.0
Disappearance of wild fruit	116	58.0
Extinction of mushrooms	107	53.5
Scarcity of snails	101	50.5
Soil erosion	72	36.0
Scarcity of water	36	31.5

Source: Field survey (2005), *Multiple responses

Table 5: Distribution of the respondents by quality of fuelwood used

Quality of fuelwood	Frequency	(%)
The same as before	01	0.5
Not the same	199	99.5
	200	100.0

Source: Field survey (2005)

Table 6: Ranking order of effect of deforestation on the marketing of Forest product

Marketing of	Ranking order of the effect
Fuelwood	2.90
Bush meat and snails	2.79
Wild fruits	2.49
Medicinal plants	2.28
Wild vegetable	2.16
Leaves	2.12
Mushrooms	2.06
Animals	1.42

Source: Field survey (2005)

respondents claimed that reduction in soil fertility was the major problem they perceived with deforestation. About 73% indicated scarcity of bush meat as the problem they perceived with deforestation. While 50.5 and 31.5% of the respondents, respectively claimed that scarcity of snails and scarcity of water are the problem perceived with deforestation in the area of study. This findings agrees with WWF (1989) estimated that over 90% of the natural vegetation and other forest resources has already been cleared in Nigeria. Okafor (1980) also, stated that deforestation is now resulting in substantial loss of plant diversity of indigenous germplasm.

Data in Table 5 shows that 99.5% of the respondents indicated that, the quality of fuelwood they are now using is not of the same quality with the one they used in the past. This implies that fuel wood collected now are not of the same quality as the one used in the past. This may due to the fact that they are no longer matured on the field before women begin to cut them for use. Also a bundle of firewood that is used for 2 days now could be use for more than 7 days in the past, due to increase in population and the age and texture of the woods.

Perceived severity of deforestation on rural women economic activities: Table 6 shows that deforestation

Table 7: Ranking order of effect of deforestation on the rural women economic activities

Attitude statement	Ranking order
Gathering of fuelwood behind on their farm and behind their houses	4.95
Now there is a serious competition for water among rural women	4.83
Trek for four hours before obtaining fuelwood	4.79
Rural women now buy fuelwood for cooking	4.79
Bundle of firewood is now N100.00	4.76
Deforestation had serious effect on nutrition intake	4.61
Deforestation had reduced water availability for Agriculture and natural habitat	4.56
Bundle of firewood was N5.00 15 years ago	4.37
Deforestation had serious effects on children schooling	3.73

Source: Field survey (2005)

Table 8: Frequency and percentage distribution of respondents ameliorating methods for the effects of deforestation

*Ameliorating methods	Frequency	(%)
Government policy on forests	166	83.0
Environmental sustainability issue	100	50.0
Afforestation and agroforestry	55	27.5
Ban on setting forest on fire (avoidance of bush burning)	48	24.0
Ban on illegal mining in the forest	40	20.0
Women should be fully involved in formulation of policy on forest fencing of forest land in the area.	09	4.5
Organize conferences and seminars	06	3.0
Other: Arrest of people that trespass in the forests and NGOs activities	1	0.5

Source: Field survey (2005), *Multiple responses

effects on marketing of fuelwood was the highest with weighted mean scores of (2.90). This is followed by bush meat and snails with weighted mean scores of (2.79). Next is wild fruits (2.49). While the effects on marketing of other forest products are in the following order; Medicinal plants (2.28) wild vegetable (2.16) leaves (2.12) mushrooms (2.06) and the Least being Animals with weighted mean score of (1.42).

This finding agrees with NEST (1991), Keshiro (1986) and Gbile (1981) reported that the role forests plays in household nutrition has changed with their diminishing availability, which leads to a poorer quality diet. However many indigenous food plants exist in tropical forest some of them have been used for centuries but are little appreciated now.

Table 7 revealed the ranking order of the effect of deforestation on rural women economic activities, with the gathering of fuelwood on their farm and behind their houses was the highest (4.95) weighted mean score, next is competition for water among rural women with (4.83) weighted mean score. This is followed by trek for 4 h before obtaining fuelwood and rural women now buy fuelwood for cooking with (4.79) Weighted mean score, respectively. While the extent of effects on other rural women economic activities are in the following order:

Bundle of firewood is now N100.00 (4.76), serious effect on nutritional intake (4.61), reduced water availability for agriculture and natural habitat (4.56), Bundle of firewood was N5.00 15 years ago (4.37) and the least being the effects on children schooling with weighted mean score of (3.73).

These findings agree with Nagbraham (1983) who reported that firewood is now scarce that even a small weed on the road side is collected and women spend long hours before obtaining firewood, similarly Renu (1990) established that the maintenance of present levels of food production is difficult and that the impact the crisis has on nutrition and health is devastating and poor families have often had to cut down from three to two or one major meals a day. The negative effect of this according to Cecelski is the possibility that the education of children especially female children might suffer. This is because female children are usually engaged in fuelwood gathering.

Suggested methods of ameliorating the effects of deforestation: Result in Table 8 present the suggested method of ameliorating the effect of deforestation. Majority (83%) of the respondents indicated that promulgation of government policy on forest is the method to stream deforestation effects on rural women economic activities while 50% also claimed that it is formulation of policy that should involve women on environmental sustainability issues.

Government policy on forests should emphasize the need for rural women education on how to practice afforestation and agroforestry in order to improve and maintain their farmland including soil fertility which could be done by organizing seminars and Extension training. Raymond (1992) corroborates this finding that balance conservation and development goals, aims at sustainable development protects the interest of current and future generations in the use of forests resources and links consumption to the needs of society. Some sustainable development requires reduction in population growth and poverty, particularly in areas where natural resources and the environment are already under stress.

Testing of hypothesis

Establishing relationship between rural women perception of deforestation and socio-economic characteristics: In testing the relationship between rural women perception on deforestation and their socio-economic characteristics. Positive and significant relationship were found between.

Age ($X^2 = 636.970$), Religion ($X^2 = 171.16$), Marital Status ($X^2 = 483.80$) Educational level ($X^2 = 327.56$) Wives position ($X^2 = 458.350$) and rural woman perception on deforestation at 0.01% level of significant.

The implication of these results is that Age, Religion, Marital Status, Educational level and Wife's position in the family significantly influenced rural women perception of the effects of deforestation. Age can be linked with experience since the older the more history the individual can relate. The older women are expected to have better information regarding deforestation than the younger ones. Similarly wife's position, level of education also affect their perception of deforestation since responsibility for fending for firewood and other forest products falls more on the junior wives than the senior ones. The length of marriage will also give better experience. Better educated women are bound to adopt better and easier cooking methods like kerosine stoves than the uneducated ones.

CONCLUSION

The study established that majority of the rural women involved in the study were at their old age, able to give information on the situation of the forest in the past fifteen years. The claim that rural economic activities were dependent on the forest have been replaced by other activities.

It was revealed that socio-economic characteristic of rural women significantly influenced their perception of deforestation. However, deforestation effect resulted to the reduction of soil fertility, scarcity of bush meat, scarcity of snails, scarcity of water which directly severely affects rural women economic activities.

RECOMMENDATION

We therefore recommend that deforestation effect could be ameliorated by promulgation of government policies that we regulate the use of forest product, it should also include dissemination of information on forest, environmental sustainability issues, education on afforestation and agroforestry in order to improve and maintain their farm land including soil fertility and the forest.

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