Women Perceptions on Environmental Degradation and Farm Yields in Obudu Local Government Area of Cross River State

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Abstract
It has been observed that in spite of the acknowledged important role the environment plays in human sustenance and survival, there is still a discrepancy or inadequate efforts at putting it into proper use and management in order to realize the maximum benefits for present and later generations. This study therefore was intended to find out the relationship between women perception on how the problems of environment are created. The research adopted a survey design. The study was undertaken in Obudu Local Government Area of Cross River State. A multi-staged sampling procedure was adopted for sample selection. The primary data used involved the field data that were collected from the respondents. Results showed that there was a significant relationship between women activities and the different environmental problems confronting the society. The P(.000) < .05 level of significance with the appropriate degree of freedom of 399. The P. (000 <.05 level of significance and a degree of freedom of 399 is significant. That is, variables X1 & X2 (Deforestation and Wild life) are predicted or influenced by variable Y (fuel wood harvest). The P (.000) at .05 level of significance and the degree of freedom of 399, the f-ratio is within the alpha level (.000). The P (.000) at .05 level of significance and degree of freedom of 399 is significant at the alpha level. it is therefore proper to conclude by saying that the socio-economic status of women especially in the rural areas has reduced them to predominantly farming and the very poor of the community. They are often forced by circumstances rather than choice to engage in activities that are extractive in nature. These have serious negative effects on the environment.

Keywords: Women Perception, Environmental degradation, Farm yields.

La Perception des Femmes sur la dégradation de l'environnement et des rendements agricoles dans l'Arrondissement d' Obudu, Etat de Cross River

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Résumé
Il a été observé que, malgré le rôle important et reconnu que l'environnement joue dans la subsistance humaine et la survie, il y a encore un écart ou des efforts insuffisants à sa mise en service et la bonne gestion afin de réaliser le maximum d'avantages pour les générations actuelles et ultérieures. Cette étude visait donc à savoir la relation entre la perception des femmes sur la façon dont les problèmes de l'environnement sont créés. La recherche a adopté une conception de l'enquête. L'étude a été entreprise dans l'Arrondissement d'Obudu, Etat de Cross River. Une procédure en plusieurs étapes d'échantillonnage a été adoptée pour la sélection de l'échantillon. Les données primaires utilisées portaient sur les données de terrain qui ont été recueillies auprès des répondants. Les résultats ont montré qu'il y avait une relation significative entre les activités des femmes et les différents problèmes environnementaux auxquels est confrontée la société. Le P (.000) <.05 niveau de signification avec le degré de liberté de 399. Le P. (000 <.05 d'importance et d'un degré de liberté de 399 est importante. En effet, les variables X1 et X2 (déforestation et de la vie sauvage) sont prévus ou influencés par la variable Y (récolte de bois de chauffage). Le P (.000) au .05 niveau de signification et le degré de liberté de 399, le f-ratio est dans le niveau alpha (.000). Le P (.000) au .05 niveau de signification et le degré de liberté de 399 est significatif au niveau alpha. Il est donc bon de conclure en disant que le statut socio-économique des femmes en particulier dans les zones rurales les a réduit à prédominance agricole et les très pauvres de la communauté. EIles sont souvent contraintes par des circonstances plutôt que le choix de se livrer à des activités qui sont extractives dans la nature. Celles-ci ont des effets négatifs importants sur l'environnement.

Mots-clés: Perception des femmes, dégradation de l'environnement, les rendements agricoles.

Background/statement of the Problem

The last few decades of the 20th century witnessed a burgeoning global environmental awakening to the kind of doom and gloom that is affecting the system. There is in the print and electronic media news that the rain forest is going into extinction. It has also been observed that wild life has been made homeless owing to different activities carried out on the forest. Titilola (2002, p. 2) that stated "several human activities such as bush fallowing, inappropriate technologies, over-population, transhumance, overgrazing, deforestation without adequate reforestation and profligate exploitation of mineral resources are often not in tune with proper environmental management practices". These activities result in the destruction of the environment or environmental degradation.

It has been observed that in spite of the acknowledged important role the environment plays in human sustenance and survival, there is still a discrepancy or inadequate efforts at putting it into proper use and management in order to realize the maximum benefits for present and later generations. This stems from the contention that several activities inimical to efficient and effective use and or exploitation of the environment are often embarked upon especially among women in Obudu Local Government Area of Cross River State.

It has been observed that women in this area engage in inappropriate farming practices. These include over-cultivation of the land that often results in the destruction of the soil structure. This

exposes the soil to erosive weathering condition and a reduction or lowering of yields that have become critical in the area. This practice has led to food shortage and serious erosion and capillarity, which are making land unsuitable for use now and even in the future.

There has also been the issue that hinges on exploitation of the forest resources at such proportions that the future appears very bleak for generations yet unborn. These include the harvest of fuel wood, forest vegetable, shrubs and leaves that are often used for medicines. These are done at levels that do not make for sustainable development. This situation is likely to be disruptive to wild life and endanger the animal species, the extinction of the forest, deforestation and the destruction of the ecosystem.

Moreover, there is the perennial issue of bush burning for farming purposes and others liking building residential housing and industries. It is common knowledge that bush burning destroys the soil micro-organisms and often creates atmospheric pollution. These activities are carried out on both the forest and grassland. This practice has implication for both the soil and the atmosphere. Life here has become uncomfortable for wild life. This has implication for oxidation hence its continuous practice spells doom for the environment. Furthermore, bush clearing is a common practice in the study area. This practice is known to have serious effects on the availability of shrubs and the preservation of the ecosystem.

Since a majority of these extractive activities are carried out by women, there is need to find out the extent of damage they have caused to the environment on the one hand and to proffer solutions to make sure there is a balance between the environment and the pressure. This study becomes crucial because the issues raised above have not been scientifically studied in the area. This study therefore is intended to find out the relationship between women perception on how the problems of environment are created. The study also attempts suggesting solutions to improve on the condition based on the findings. The following research questions were framed for this study - Do women engage in extractive activities that degrade the environment? Have farm yields dwindle in the recent past? Has fuel wood harvest affected the availability of forest and wild life? Does Government carry out functions of agricultural extension services and inputs?

Methodology

The research adopted a survey design. This research design allows the collection of quantitative data from a sample or a whole population. The study was undertaken in Obudu Local Government Area of Cross River State. The Local Government Area occupies the North-Eastern part of the state and it covers a large area of about 180 square kilometers with a population of 182,780 (2006 census) it lies between longitude 5^0N and latitude 15^0S of the equator. (Ugbelishor, 1985). All the women in Obudu Local Government Area formed the population of the study. According to the 2006 National census the women in Obudu Local government Area are 142,769, representing 50.4% percent of the population. With such large population, it was not possible to study all of them. Five hundred respondents were therefore selected as the sample for the study.

A multi-staged sampling procedure was adopted for sample selection. The first sampling technique was the stratified sampling which involves the division of the study population into subgroups, each group containing subjects with similar characteristics. The population was therefore divided into the ten political wards in the local Government Area. The simple random sampling method, which involves the selecting of a sample in such a way that all members of the population have an equal chance of being selected, was used.

Five wards were selected including; Obudu Urban, Urban II, Ipong, Begiading, Angiaba,and Begiaka. These wards (five) were further stratified into villages. The cluster sampling was also used where these villages were divided into groups. The cluster sampling is usually used when the population is large and widely spread and group are often randomly selected but not individuals but these groups are made up of intact groupings with similar characteristics (Enumeraka, 1994). From these clusters, a simple random sampling method was adopted in selecting households. The women in these households were determined and one hundred respondents were randomly selected from each ward making up to the five hundred respondents in the study.

The primary data used involved the field data that were collected from the respondents. Two methods were used in the collection of this information: the questionnaire and in-depth interview. They represent the quantitative and qualitative research instruments respectively. The questionnaire instrument was structured with printed questions used in soliciting information from the sample population. The questionnaire satisfied certain criterion that is crucial to its construction like clarity, short responses, absence of calculations alternatives for multiple choice questions (Ememeruke, 1994). The questionnaire adopted the five point Likert Scale for coding.

Trained enumerators were used to administer the research instruments. They visited each sampled area, administered the questionnaire and collected same after completion. They were allowed a period of between four days to one week before collection. The data collected were cross checked after collection and Analysis of the Variance (ANOVA) was used to analyse them.

Results

As stated earlier, four hypotheses were formulated to guide this study. Frequencies of responses to several statements were analysed using the statistical method of Analysis of Variance (ANOVA).

Hypothesis One

Ho → There is no positive perception on the relationship between the degree of soil cultivation and soil erosion and low farm yields.

Hi → There is a positive perception on the relationship between the degree of soil cultivation and soil erosion and low farm yields.

Independent variable – Soil cultivation y_1–
Dependent variable – x_1 – soil erosion – frequencies for table 5 and 6 are use,
Dependent variable – x_2 – low yields – frequencies for tables 7 x 8 are used.

Table 1 – ANOVA analysis of cultivation and soil erosion.

Model	Sum of squares	df	Mean square	F	Sig
Regression	188.288	1	188.288	48.547	.000[a]
Residual	1543.649	398	3.879		
Total	**1731.937**	**399**			

a. Predictors (constant), soil erosion,
b. Dependent variable- soil erosion

Table 2- ANOVA analysis of cultivation and low yields.

Model		Sum of squares	df	Mean square	F	Sig
	Regression	332.779	1	332.779	103.530	.000[a]
	Residual	1279.299	398	3.214		
	Total	**1612.078**	**399**			

a. Predictors (constant), soil cultivation
b. Dependent variable: Farm yields.

From the tables above (1a and 1b), it can be seen or observed that the P(.000) < .05 level of significance with the appropriate degree of freedom of 399. This shows that the result is significant at this level showing that both variables (X1 and X2 – erosion and yields) are influenced by 'Y' (Soil cultivation). Consequent upon this, the null hypothesis is hereby rejected while the alternative hypothesis, which states that "There is a positive perception on the relationship between the degree of soil cultivation and soil erosion and low farm yields is accepted.

Hypothesis Two

Ho – Fuel wood harvest is not perceived as being significantly related to deforestation and wild life depletion.

H1-- Fuel wood harvest is perceived as being significantly related to deforestation and wild life depletion.

Independent variable y – fuel wood harvest –
Dependent variable 1 – x1 – deforestation
Dependent variable 2 – x2 – wildlife

Table 3: ANOVA analysis of fuel wood and deforestation

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	384.973	1	384.973	145.739	.000[a]
	Residual	1051.324	398	2.642		
	Total	**1436.298**	**399**			

a. Predictors: (Constant) fuel wood harvest
b. Dependent variable: Deforestation

Table 4: ANOVA analysis of fuel wood and wild life

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	705.288	1	705.288	83.099	.000
	Residual	3377.952	398	8.487		
	Total	**4083.240**	**399**			

a. Predictors: (Constant), fuel wood harvest
b. Dependent variable: Preservation of wildlife

Looking at tables 3 and 4 above, it can be observed that the P. (000 <.05 level of significance and a degree of freedom of 399 is significant. That is, variables X1 & X2 (Deforestation and Wild life) are predicted or influenced by variable Y (fuel wood harvest). The null hypothesis (Ho) following from above is hereby rejected. The alternative (Hi) hypothesis which states that "Fuel wood harvest is perceived as being significantly related to deforestation and wild life depletion is accepted.

Hypothesis Three

Ho –The harvest of vegetable is not perceived as being positively related to the loss of rare shrubs and biodiversity.

Hi – The harvest of vegetable is perceived as being positively related to loss of rare shrubs and biodiversity.

Independent variable: y –
Dependent variable I – x_1 –
Dependent variable 2 – x_2

Table 5 : ANOVA analysis of vegetable and rare shrubs

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	485.776	1	485.776	155.350	.000[a]
	Residual	1244.534	398	3.127		
	Total	**1436.298**	**399**			

a. Predictors (constant), vegetable harvest
b. Dependent variable: loss of rare shrubs

Table 6: ANOVA analysis of vegetable and biodiversity

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	110.763	1	110.763	42.267	.000
	Residual	1042. 987	398	2.621		
	Total	1153.750	399			

a. Predictors (constant), vegetable harvest
b. Dependent variable: Biodiversity loss

The tables above (5 and 6) present data on the harvest of vegetables and its relationship with rare shrubs and biodiversity. From the tables however, the P (.000) at .05 level of significance and the degree of freedom of 399, the f-ratio is within the alpha level (.000). This shows that the relationship is significant hence the null hypothesis is rejected. The alternative hypothesis is accepted and its states that "the harvest of vegetable is perceived as being positively related to loss of rare shrubs and biodiversity."

Hypothesis Four

Ho – There is no perceived relationship between bush burning and the destruction of soil micro-organism and oxidation.

Hi – There is a perceived relationship between bush burning and the destruction of soil micro-organism and oxidation.

Independent variable – Bush burning
Dependent variable 1 – x_1 – soil micro – organisms
Dependent variable 2 - x_2 – Oxidation

Table 7: ANOVA analysis of bush burning and Micro-organism

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	314.717	1	314.717	89.194	.000
	Residual	1404.323	398	3.528		
	Total	1719,040	399			

a. Predictors (constant), Bush burning.
b. Dependent variable. Destruction of soil micro-organism.

Table 8: ANOVA analysis of bush burning and oxidation

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	106.843	1	106.843	35.463	.000
	Residual	1199.094	398	3.013		
	Total	**1305.938**	**399**			

a. Predictors (constant) Bush burning
b. Dependent variable, Oxidation.

The tables above (tables 8 and 9) present the data for hypothesis four. The data as shown depict that the P (.000) at .05 level of significance and degree of freedom of 399 is significant at the alpha level. Following from here therefore, the null hypothesis (Ho) is rejected while the alternative hypothesis (Hi) is accepted and it states that "There is a perceived relationship between bush burning and the destruction of soil micro-organism and oxidation."

Discussion of Findings

The first hypothesis sought to find out the perception of relationship existing among cultivation, soil erosion and lowering farm yields. The in-depth interview as analyzed validates this assertion that, there is more erosion now. Farm yields have also declined over the years as a result of short fallow periods and high degree of cultivation of the soil or farm land that is available.

The hypothesis from the quantitative instrument also followed the above argument. The null hypothesis was rejected in the face of daunting facts that depicted soil erosion and low farm yields (variables x) as being predicted or influenced by the degree of cultivation (variable Y). This was done within the framework of using about seven frequencies of responses to test this hypothesis. The findings validated the first specific objective which sought to relate women's activities (cultivation) to soil erosion and low yields.

The findings or results were also in line with the postulations of authors quoted in the literature review like Titilola (2002), Brown & Wolf (1985) who severally maintained that sustained overuse of biological systems (including farmland) can set in motion changes that are self-reinforcing and in which each stage of deterioration hastens the onset of the next. At the final stage, however, biological production is destined to collapse and families will no longer be able to provide enough food for themselves and livestock. Others are profligate exploitation of resources among others causes soil erosion which cause the loss of flora and fauna, decline surface and underground water supply and food scarcity as a result of low yields (Titilola, 2002).

The second hypothesis was aimed at finding out the extent to which the people perceive fuel wood harvest as causing deforestation and its effect on the preservation of wild life. The tested hypothesis rejected the null hypothesis and the alternative hypothesis which stated that fuel wood harvest affect or causes deforestation and the preservation of wild life was upheld. This finding was also corroborated by the in-depth interview where respondents were of the opinion that firewood is no longer readily available like it use to be. Besides, the animals that were readily seen are no longer there. They asserted that the disappearance of the forest was responsible for this state of affairs. The findings align itself to the validation of the second specific objectives which sought to show or find out how fuel wood harvest cause deforestation and wild life depletion. It has therefore showed that fuel wood harvest is one of the factors responsible for the disappearing forest. This has serious implications for the depletion and or preservation of wild life.

The findings are in line with the assertions of scholars like Armitage & Schramm, (1994) Denkelman & Davidson (1988), and Bamba (1985) who maintained that, the use of fuel wood or derived charcoal accounts for between 40% to over 90% of the total number of energy consumed in the various countries of sub-Saharan Africa (where Nigeria is also found). For them therefore, the increasing population which accelerates land clearing for agricultural purposes and increase the consumption of fuel wood is causing drastic reduction of forest cover, with subsequent deleterious effects on the environment through increased run off, filtration and flood damage.

The third hypothesis focused on the harvest of vegetables, loss of rare shrubs and the loss of biodiversity. The test showed that there is a positive relationship among the variables. This study validates the findings of scholars and the qualitative instrument. The interviewee severally maintained that there was a drastic reduction in the availability of certain vegetable that were readily seen a few years ago.

This finding is also in line with the postulations of scholars like Sagio et al (1999), Earthscan (2000) and Edet (2004) who are of the opinion that over- harvesting is responsible for biodiversity depletion or the extinction of many species. Edet (2004) held that biodiversity depletion is a concomitant of series of inter-dependent man-induced processes, including the harvest of vegetables. This situation has also been said to have effect on the quality of vegetables that are presently produce. Jennings (1980) stated that vegetables of few years ago are different from the ones of today. This is because the tissues of these plants are now lush and susceptible to diseases. Edet (2002) held that agricultural practices that have extensive use of artificial fertilizers accounts for the destruction of biodiversity.

The fourth hypothesis sought to find out the perception on the effect of bush burning on microorganisms in the soil and oxidation. The findings or results from both the indepth interview and questionnaire validated the assertion that bush burning causes nutrient depletion through the destruction of soil micro-organism and oxidation. The respondents stated that, the preponderance of farming practices that involve bush burning causes the depletion of nutrient through micro-organism destruction. The hypothesis test at the $p\ (.000) < 0.05$ showing a significant relationship, led the researcher to upholding the alternative hypothesis. It states that bush burning is significantly is related to micro-organism destruction and oxidation.

This result is also in agreement with the position of several scholars like Titilola (2002) and Agabi (2001) who held that the system of farming in some communities that require the burning of the bush before cultivation causes serious environmental crisis. Bush burning according to them besides exposing the soil to direct sun light and rainfall destroys the soil micro-organisms whose activities it is to add or create nutrient infusion into the soil. This practice is also said to destroy the environment and drives animals and insects away from the area. These animals are said to be crucial in the cross-pollution of certain crops.

Conclusion

After an exhaustive exposition on the perception of women on the environment, it is proper to conclude by saying that the socio-economic status of women especially in the rural areas has reduced them to predominantly farming and the very poor of the community. They are often forced by circumstances rather than choice to engage in activities that are extractive in nature. These have serious negative effects on the environment.

This has led to serious environmental problems that are taking its toll on the women folk. The hope for them is therefore empowerment through mass literacy and vocational training that will take them away from the ground. This will give them the opportunities to explore their

potentials in other areas. The need to increase farm yields through artificial means has become very crucial here. When this is done the pressure on the environment will be reduced. The government comes in here to provide the needed inputs that will encourage mass production. It also calls for the extension and reinforcement of extension services to the rural areas. This is done in order that those practices that are not environment friendly will be discarded in preference of modern and environment friendly methods. When all these are done, the environment will be the better for it. Human kind will also be made more comfortable in this planet.

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