

Women Participation in NGOs' Environmental Awareness and Sustainable Agricultural Practices in Cross River State, Nigeria

Agnes I. Ulayi, Ph.D

*Department of Continuing Education and Development Studies
Faculty of Education
University of Calabar, Calabar
ulayiness33@gmail.com*

Sunday David Edinyang, Ph.D

*Department of Social Science Education
Faculty of Education
University of Calabar, Calabar
edinyangs@gmail.com*

Abstract

This study investigated the relationship between women participation in Non-Governmental Organizations' (NGOs) environmental awareness and sustainable agricultural practices in Cross River State, Nigeria. To achieve the purpose of this study, a null hypothesis was formulated and tested at .05 level of significance. Literature review was carried out according to the variable of the study. Correlation research design was adopted for the study. A sample of three hundred and forty-seven (347) respondents was randomly selected for the study. The selection was done through the stratified and simple random sampling technique. An instrument tag: Women Participation in NGOs Environmental Awareness and Sustainable Agricultural Practices Questionnaire (WPNGOEASAPQ) was the main instrument used for data collection. The instrument was faced validated by experts in Measurement and Evaluation and the reliability estimate of the instrument was established through the Cronbach's coefficient alpha reliability method. Pearson product moment correlation analysis was employed to test the hypothesis. The result of the analysis revealed that women's participation in NGOs' environmental awareness significantly relate with sustainable agricultural practices. Based on the findings of the study, it was recommended that women in NGOs should be directly involved in agricultural practices that are sustainable and environmental friendly.

Keywords: Women, Non-Governmental, Organizations, Environmental, Awareness, Agricultural, Practices.

Introduction

In recent times, environmental degradation in the world has become an issue of concern to organizations such as Non-Governmental Organizations (NGOs) and the government alike. The continuous destruction and unsustainable use of our endangered

tropical rain forest, poor management of waste, mismanagement of water resource, unsustainable agricultural practices, ineffective awareness creation and poor biodiversity conservation strategies are problems that have attracted a lot of concern.

Besides, the issue of how to manage environmental resources for the next generations is a thing of worry. It is common knowledge that the awareness campaigns carried out especially by Non- Governmental Organizations (NGOs) and Government Agencies, etc. in Cross River State have really not been able to create the desired impact towards mobilizing community members towards effective sustainable environmental practices. This issue has over the years, elicited concern from both scholars and other individuals.

Concerned with the lack of meaningful development and the attendant consequences, the federal, state and local governments have done a lot to foster environmental awareness and protection by formulating lofty laws/policies “like the National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes Regulations of 1991)”, the Quarries Act, Cap 385, L.F.N of 1990, the National Agricultural Land Development Authority Decree No. 92, etc. Other programmes, such as Green Environment Movement, which is a tree planting advocacy programme, the Nigeria environmental study team, which aims to combat desertification and drought through information dissemination and research as well as other schemes like the environmental protection and sustainability commission, population, environment and development agency have equally emerged.

All these programmes are meant to scale up activities that will bring about environmental protection and effective resource management. Despite all these efforts, observations reveal that community members in Cross River State still lack this awareness and consciousness for sustainable environmental practices. It is in response to this situation that the researchers were motivated to find out if women participation in NGOs' environmental awareness can ensure sustainable agricultural practices in Cross River State.

Ekwe (2003) asserts that from time immemorial, women have been very much involved in contributing their quota to effective sustainable environmental practices, most especially through agricultural practices. As they go out to work in the farm, they do not only work to earn a living and improve the agricultural standards of their communities but also help to improve upon the agricultural environment. According to the author, women agricultural practices are yardsticks for sustainable rural development. Women, either individually or in groups, engage in several agricultural practices like “land clearing, land tilling, planting, weeding, fertilizer application, harvesting, food processing, threshing, winnowing, milling, transportation and

marketing.” They are also involved in raising livestock such as chickens, pigs, sheep, turkey etc. on a modest scale. These domestic animals provide sources of income for socio-economic development. Ekwe (2003) concludes that through these processes, women have significantly contributed to sustainable environmental practices through animal husbandry.

Obinna (2003) carried out an investigation on women agricultural practices and environmental development using six communities in the Central Senatorial District of Cross River State. 560 respondents were however used as sample size, and Pearson Product Moment Correlation Coefficient was applied to evaluate the relationship between women agricultural practices and environmental development. His findings revealed a relationship between women agricultural practice and environmental development. His general conclusion was that in most parts of developing countries such as Nigeria, women are largely involved in agricultural practices. They are producers of food, stock breeders, suppliers of fuel (wood) and water, and collectors of forest products. Therefore, women play a significant role in agriculture and this cannot be under-estimated.

Mkpa (2006) carried out a study on women associations' activities in “Southern Senatorial District of Cross River State, Nigeria”. One of the hypotheses was that the contribution of women to agricultural practices is not significantly high in enhancing sustainable environmental practices. The research design employed was the survey design. Five hundred (500) respondents were involved in the study. The result showed that rural women who were into agricultural practices significantly contributed to sustainable environmental practices through their agricultural activities which was significantly high.

Bender and Cain (2001) report that women self-help projects in agriculture have contributed significantly to sustainable environmental practices. They observed that in most countries of the world, women were involved in self-help agricultural projects. Beck and Keddle (2009) argue that women in all societies, as they clean the house, give birth, raise children and look after the comfort of their husbands, also think about their unborn children and how the future generation will be like. Therefore, as they engage in farming as well as product making, they ensure that they preserve for the future. The authors stress that by these activities, women have also contributed greatly to the sustainability of the environment in their localities.

To Kabeer (2009), there is an increasing need to strengthen women capabilities to participate in NGOs' environmental awareness, as dynamic instruments to invoke social changes, grasp of decision-making and the ability to change unequal power relations for environmental resource development process to be socially sustainable.

Dankelman and Davidson (2009) add that, "women, especially those living in the remote areas of developing countries, play a key role in managing natural resources". In addition, "their tasks in agriculture and animal husbandry, as well as in the household, make them the daily managers of the living environment". "Through their management and use of natural resource, women provide sustenance to their families and communities. As consumers and producers, caretakers of their families and educators, women play an important role in promoting sustainable development through their concern for the quality and sustainability of life for present and future generations" (Iwena, 2002).

Mivanyi (2003) in his study found out that women self-help projects, both in rural and urban areas, contributed to agricultural as well as effectively managing the environmental resources of their communities. This is in addition to the upkeep of their families. In his study titled "Women in agricultural projects and community development", Mivanyi discovered that women formed themselves into groups to carry out agricultural practices which have helped to raise the awareness and level of sustainable agricultural practices in rural communities. National Environmental Study Team (NEST) (2001) stated that in as much as there is high dependence on agriculture for the production of food and crops, women know the techniques of preservation and how to ensure that these crops are not extinct, but continue to sustain human life.

According to Spore (2003), women contributes 70 per cent of the labour force, produce 80 per cent of food, contribute 100 per cent of the food processors and undertake 60-80 per cent of marketing in the local communities. Therefore, when it comes to the share of agriculture practices towards sustainable environment, women should be counted first as major facilitators (Spore, 2003). NEST (2001) observes that women involvement in agriculture is enormous. Apart from their own share in food production, they also participate actively in other types of farm work in the community at different levels of agricultural production. They occupy prominent positions which come as a result of men's migration to the city in search of white collar jobs. These men abandon their traditional roles of growing cash crops to the women who take up the challenge. Hence, women embark on agricultural projects which could be found in the production of both food and cash crops and also taking key decisions in agricultural production.

Mkpa (2006) states that the transformation of women mentality to form NGOs towards agricultural development in Cross River State actually started in 1987 when the Better Life for Rural Women was launched in the state. These programmes serve as a rallying point for women empowerment crusades, nationwide. Authors reports that the activities of women groups in agriculture include educating other women as well as other members of the community on proper method of food processing activities even

within their homes and how to sustain the environment. In other words, they sit in groups and teach each other the easiest way through which grains such as rice, maize, can be processed into flour, melon seeds, and palm nuts, ground nuts into oils for both domestic consumption and for sale. It is also observed that some crops, animal products and fish are smoked or sun-dried by women (Okoje, 2011).

Chinswan (2008) reported that agricultural projects carried out by women groups have boosted Nigeria's economy and the development of the rural environment. He saw a significant positive relationship between women agricultural projects and sustainable environmental practices. Wiliki-Sagbesma (2005) in a study on women NGOs and sustainable environmental practices in Cameroon, used a sample size of 1150 respondents including members of the Village Development Associations (VDAs) to ascertain the extent to which their agricultural activities took into consideration the wellbeing of the future generation, among other objectives. He found out that women NGOs and their agricultural projects have greater potentials for assisting communities and households in improving their standard of living with their own resources.

Onah (2003) enumerates the usefulness of women NGOs agricultural practices to effective sustainable environmental practices to include the following: help women irrespective of their profession or career, age, religion, etc to live long and healthy; it helps to promote the study of women in agricultural practices with the aim of educating and protecting women from hazards associated with the environment; it provides them with the means of alternatives to survival; it provides a forum for women to express themselves; it also educates on the relevant issues in the environment; and it contributes significantly to the development of rural communities.

Onah (2003) further stresses that the strength, vitality, sustainability and contributions of these women NGOs to agricultural practices vis-à-vis sustainable environmental practices are totally geared towards making people feel their impact. Women NGOs have contributed immensely to food production in their various countries. In as much as they remain productive, women continue to maintain the resources. Through sustainable agricultural practices, women succeed to satisfy human needs while at the same time help to maintain and promote quality environment and the conservation of natural resources. Women NGOs engage themselves in “long term maintenance of natural resources through agricultural productions. They ensure insignificant adverse environmental impact and adequate economic returns to farmers”.

Gibbs (2006) states that in the rural areas, women belong to associations to maintain the environment. These women know how to protect the soil from erosion and chemical deterioration. Oguntala (2001) posits that women are the ones principally engaged in food production. Maina (2009) states that when Kenya was faced with high

food crises, the women of the Inland Church, Nakuru District, registered as Non-Governmental Organization under the name Farmers Systems Kenya Limited (FSK). The women used this NGO to assist the farming community with extension, credit and marketing advisory services. They were able to motivate and teach farmers on how to become successful farmers and above all taught the people on how to maintain the soil and other conservative mechanisms that will protect the environment.

Women in Ireland have learnt to use agricultural technologies that have high potential sustainability such as agro forestry, use of tree crops, diversities of crops or mixed cropping, nutrient, recycling and integrated pest management as ways of protecting the environment (Laird, 2003). On his part, Sauchez (2001) stated that through sustainable agricultural practices, women were able to improve upon their productivity and conserve soil, water and biotic resources as well as provide the people with alternatives to agricultural production. Besides, the potential of sustainable agricultural practices is to reduce deforestation.

In order to bring about sustainable agricultural practices, women in NGOs have been fighting against unsustainable farming practices such as bush burning and deforestation. According to Lah (2001), in Africa, forests are cleared through burning. This makes the soils' physical and chemical properties to undergo drastic changes, leading to nutrient depletion, increased rates of soil erosion and poor yields. Through their participation in NGOs, women were able to advocate better ways of farming practices, using modern methods. They introduce a range of technologies which made use of synthetics chemical pesticides and fertilizers to full implementation of more ecological sound systems such as organic farming.

Hypothesis

Ho1: There is no significant relationship between women participation in NGOs environmental awareness and sustainable agricultural practices in Cross River State.

Methodology

Correlation research design was adopted for this study. It plays a major role in “exploring quantitative research in terms of exploring the nature of the relations among a collection of variables. This design is conducted when researchers want to explore the extents to which two or more variables co-vary that is, where changes in one variable are reflected in the others”. The population of the study comprises all registered women in non-governmental organizations (NGOs) that have environmental resource management background. In all, the total population for the study is 2617. This comprises 758 women in non-governmental organizations (NGOs) from Northern senatorial district; 801 from Central senatorial district and 1058 from Southern senatorial district. The researcher used stratified sampling techniques to

select the sample from the study population. The stratified technique delineates the population into three strata using three senatorial districts: North, Central and South senatorial districts. In each senatorial district, two (2) Local Government Areas were selected through the use of simple random sampling technique. Altogether, twelve (12) communities were used as the sample, from which the respondents were drawn. A total of 347 respondents were selected.

The research instrument Tag:Women Participation in NGOs Environmental Awareness and Sustainable Agricultural Practices Questionnaire (WPNGOSEASAPQ) was used to obtain information from the respondents. It is divided into two parts. The first part of the questionnaire focuses on gathering information about the demographic characteristics of respondents. The second part of the questionnaire is a four-point Likert scale. Respondents were expected to indicate their choices by ticking one of these options. The validity of this instrument was ascertained by expert in Measurement and Evaluation in the University of Calabar. The experts were asked to assess the relevance of each item in relation to the objectives of the study and the hypothesis tested as well as the comprehensibility of each item in relation to the cognitive level of the respondents. The Cronbach Alpha reliability method was used to determine the reliability of the instruments. The reliability was found to be 0.78.

The questionnaire was the major instrument for data collection. Copies of the questionnaire were administered in each of the sampled area in Cross River State. The respondents were informed of the exercise and the essence of giving objective responses to the items. They were also told to be honest in their responses to the items as the information obtained would be treated with all amount of confidentiality and be used as data for the research only. At the end of the exercise, three hundred and forty-seven (347) copies of the questionnaire were successfully completed and retrieved from the sampled area.

Presentation of Result

Ho1: There is no significant relationship between women participation in NGOs' environmental awareness and sustainable agricultural practices in Cross River State.

The dependent variable is sustainable agricultural practices in Cross River State; while the independent variable is women participation in NGOs' environmental awareness. Pearson's product correlation analysis was employed to test this hypothesis. The result of the analysis is presented in Table 1.

Table 1: Pearson Product Moment Correlation analysis of the relationship between women participation in NGOs' environmental awareness and sustainable agricultural practices in Cross River State (N=347)

Variables	Mean	SD	ΣX ΣY	ΣX^2 ΣY^2	ΣXY	R
Environmental awareness	16.13	2.19	5597	15461		
					137564	0.66*
Sustainable agricultural practices	15.85	2.38	5500	14686		

*Significant at .05 level, critical r = .133, df =345

The result in Table 1 reveals that the calculated r-value of 0.66 is higher than the critical r-value of .133 at .05 level of significance and 345 degree of freedom. With this result the null hypothesis was rejected. This result therefore means that sustainable agricultural practices in Cross River State have a significant relationship with women participation in NGOs' environmental awareness.

Discussion of findings

The result of this tested hypothesis showed that Sustainable agricultural practices in Cross River State significantly relate to women participation in NGOs' environmental awareness. The findings is in line with the view of Ekwe (2003) who asserted that from time immemorial, women have been very much involved in contributing their quota to effective sustainable environmental practices, especially through agricultural practices. As they go out to work in the farm, they do not only work to earn a living and improve the agricultural standards of their communities but also help to improve upon the agricultural environment. According to Ekwe (2003) women's agricultural practices are yardsticks for sustainable rural development. Women either individually or in groups engage in several agricultural practices like "land clearing, land tilling, planting, weeding, fertilizer application, harvesting, food processing, threshing, winnowing, milling, transportation and marketing." They also involve in raising livestock such as chickens, pigs, sheep, turkey etc. on a modest scale. These domestic animals provide sources of income for socio-economic development. The author further concludes that through these processes, women have significantly contributed to sustainable environmental practices through animal husbandry.

Obinna (2003) also found a relationship between women agricultural practices and environmental development. His general conclusion is that in most parts of developing countries such as Nigeria, women are largely involved in agricultural practices. They

are producers of food, stock breeders, suppliers of fuel (wood) and water, and collectors of forest products. Therefore, women play a significant role in agriculture and this cannot be under-estimated. Mkpa (2006) posits that rural women who are into agricultural practices significantly contribute to sustainable environmental practices through their agricultural activities, which are significantly high.

NEST (2001) also observed that women involvement in agriculture is enormous. Apart from their own share in food production, they also participate actively in other types of farm work in the community at different levels of agricultural production. They occupy prominent positions which come as a result of men's migration to the cities in search of white collar jobs. These men abandon their traditional roles of growing cash crops to the women who take up the challenge. Hence, women embark on agricultural projects which result in the production of both food and cash crops and also take key decisions in agricultural production.

Mkpa (2006) also states that the transformation of women mentality to form NGOs towards agricultural development in Cross River State actually started in 1987 when the Better Life for Rural Women was launched in the state. This programme served as a rallying point for women empowerment crusades, nationwide. The activities of women groups in agriculture include educating other women as well as other members of the community on proper methods of food processing activities, even within their homes and how to sustain the environment. In other words, they sit in groups and teach each other the easiest way through which grains such as rice and maize can be processed into flour, melon seeds, palmnuts, ground nuts into oils for both domestic consumption and for sale. It was also observed that some crops, animal products and fish are smoked or sun-dried by women.

Conclusion

Based on the results of the study, it could be concluded that women's participation in NGOs environmental awareness significantly relates with sustainable agricultural practices in Cross River State.

Recommendations

On the basis of the statistical analysis and findings of the study, the following recommendations were made:

Demonstration techniques in which environmental resources can be managed properly should be organized by NGOs in conjunction with agricultural extension staff to demonstrate to the farmers in the community on modern farming techniques. Also women in NGOs should inform farmers on the effects of different types of agricultural practices and activities which they carry out in their operations. This can be done only through environmental awareness creation.

References

- Beck, D. & Keddle, P. (2009). *Ethics and environmental education*. Oxford: Ablem and Mowbray Press.
- Bender, G. & Cain, O. (2001). *African biodiversity and the future generation*. Washington D.C: Oxford University Press.
- Chinswan, A. (2008). *Sustainable development and the challenge of Information Technology*. McGraw Hill, United Nations
- Dankelman, S. & Davidson, M. (1997). *Social justice and environmental consciousness*. Switzerland: Conservation for Development Center.
- Ekwe, R. (2003). Team work in environmental management. In V. C. Uchendu & F. N. Anijah-Qbi (Eds.). *Planning and process in environmental management*. Lagos: Macmillan Nig. Publisher.
- Gibbs, W. (2006). What is sustainable agriculture? In P. Allen & D. Van-Dusen (Eds.), *Global perspectives on Agro ecology and Sustainable Agricultural systems*. Proceedings of the 6th International Scientific Conference of the International Federation of Organic Agriculture Movements. Santa Cruz: Agro ecology Programme, University of California.
- Iwena, O. A. (2002). *Essential agriculture concept, agriculture ecology and animal production*. Lagos: Torid Publishers.
- Kabeer, T. (2009). The relation of environmental attitudes and environmentally responsible behaviours among undergraduate students. *Bulletin of science technology and society*, 19(5), 426-438.
- Lah, O. (2001). *Sustainable agriculture and environment in the Tropic*. Washington, D.C: National Academy Press.
- Laird, S. A. (Ed.) (2003). Biodiversity and traditional knowledge: Equitable partnership in practice.
- Maina, P. N. (2009). Farming system in Kenya. *Journal of African Development Foundation*, 2, 44-45.
- Mivanyi, P. (2003). Clearing a tropical forest: effects on crop performance. *Field Crop Research*, (4), 345-354.
- Mkpa, K. (2006). New perspectives on African urban management. *Environment and Urbanization*, 3(1), 5-12.
- Nigerian Environmental Study Action Team (NEST) (2001). *Nigeria's threatened environment. A national profile*. Ibadan: A NEST Publication
- Obinna, K. (2003). Environmental management in Nigeria. *New Survey Evidence. Management Decisions*, 46(2), 264-283.
- Okoje, R. (2011). Environmental problems in Nigeria: Initiatives progress and prospects. In *environmental workshop and seminar proceedings*. Ibadan: Ibadan University Press.

- Onah, M. (2003). Promoting community consciousness in environmental resource conservation ethics. In Francis E, Bisong (Ed). *Natural resources use and conservation systems for sustainable rural development*. Calabar: BAAJ international.
- Sauche, S. (2001). *Foundation of environmental education*. Lagos: Macmillan.
- Spore, W. (2003). *Environment, people and organizations*. London: EarthScan Publications.
- Wiliki-Sagbesma, H. (2005). Major factors contributing to environmental awareness among people in a third world country. *Jordan Environment Development Sustain*, 12, 135-145.