ENVIRONMENTAL PROTECTION: KNOWLEDGE-BASED PRACTICES OF AGULU WOMEN, ANAMBRA STATE, NIGERIA

Nkechi Eneh
Institute for Development Studies, Enugu Campus, University of Nigeria, Nsukka
Mobile*: +234-803-324-2437;* Email*: enehnkechi@gmail.com*

Abstract
Environmental protection is a growing global concern because of the growing awareness of the dependence of present and future generations on the environment for livelihood. As natural resource managers, women interact more with the environment and are worst hit by environmental degradation. Their level of knowledge of the environmental problems influences their environmental protection practices. The study assessed women's level of knowledge of environmental problems and the attendant environmental protection practices in Agulu, Anambra State, Nigeria, which has been designated by the Federal Government of Nigeria as an ecological disaster zone because of the menace of gully erosion. From the seven towns in Agulu selected for the study, 392 women were randomly selected and reached with a pre-tested interviewer-administered questionnaire eliciting information on knowledge level of environmental problems and environmental protection practices on a 4-point likert scale. Results showed that a majority of Agulu women have knowledge of environmental problems and environmental protection practices. There is a direct relationship between the knowledge level of environmental problems and environmental protection practices among Agulu women. The study recommended increase of activities for environmental awareness, mass education on environmental problems

and mitigation. Women should be made part of any environmental management decision-making and process.

Keywords: *Women, Agulu, Environmental knowledge, Environmental protection practices*

Introduction

Environmental protection remain topical across the globe (Uitto, 2014). There is the realization of the need to protect and conserve the environment which people depend on for livelihood. Efforts towards environmental sustainability in Nigeria are based on the alarming rate of degradation of the environment and depletion of natural resources which is attributed to natural and anthropogenic factors, such as population pressures, bush burning, over grazing, over cultivating, deforestation, and unsustainable irrigation management practices (Ajayi and Ikporukpo, 2005; Sofo, Ali & Pyke, 2003).

Environmental degradation, which is experienced globally in the form of erosion, global warming, deforestation and climate change has raised a lot of concern (Abiolu and Okere, 2012). It constitutes a threat to environmental sustainability and is central to sustainable development. However, countries are responding to the menace at international and local levels because there is the realization among nation states that there is a relationship between the state of a country's environment and its socio-economic status (Davidson, 2005).

Nigeria depends solely on oil for economic development. This places a premium on the management of the environment, including arable land, because mismanagement of the environment negatively impacts economic development (Davidson, 2005). Nigeria is, therefore, working assiduously to diversify its economy.

According to a recent report of the United Nations Commission on Sustainable Development, land degradation remains the greatest problem in Nigeria. The UN report further noted that over 90% of the total land area of Nigeria is under severe sheet, rill and gully erosions with the severest, gully erosion, affecting 80% of Nigeria's total land area. Although forests make up about 10% of Nigeria's entire territory,

deforestation remains a major environmental challenge and human activities are the main driving force for deforestation (FAO, 2001). Erosion is a major environmental problem in Nigeria. Although it occurs nationwide, it is more prominent in southeastern part, which has over 1000 erosion sites, including Agulu community (Abegunde, Adeyinka, Olawuni & Oluodo, 2006).

Nigeria was Africa's largest producer of wood and a major exporter of timber resources in the 1980s. Depletion of forest resources and competition with local timber needs led to the ban on timber export in 1988 (FAO, 2001). Human activities are the main driving force for deforestation in Nigeria. These activities include but are not limited to the clearing of forest for agricultural purposes, logging, extraction of wood for energy, and oil exploration activities. In the southeastern part of the country, where mangrove forests are abundant, deforestation occurs primarily due to the use of wood as a source of fuel. More than 70% of the nation's population depends on fuel wood. Agulu women depend on fuel wood primarily for cooking, hence the incidence of deforestation, which in turn, leads to soil erosion. At the present rate of deforestation, it is estimated that Nigeria will have no forest by 2020 (Federal Government of Nigeria, FGN, 2004).

Statement of the problem

Erosion, deforestation, bush burning, and flooding are environmental problems confronting Agulu community in Anambra State of Nigeria. Alarming erosion rate has led to loss of farmlands and houses and continues to pose a threat to the habit. Soil erosion is exacerbated by very poor agricultural practices which make land unavailable for farming. Any arable land left becomes inadequate, thereby leading to low level of agricultural productivity.

Gullying started around 1850 and is expanding at 20-50m per year and covers an area of about 100km^2. The development of gullies has caused extensive damage to the environment and has driven many people away from their homes and led to loss of farmlands, human lives and property, especially buildings which collapse into gullies.

The menace of gully erosion in Agulu-Nanka area of Anambra State has led to the declaration of that area as an ecological disaster zone by the Federal Government of Nigeria (Ajaero and Mozie, 2010). Anambra State Government made conscious efforts in checking and containing the menace by planting 2 million economic and erosion control trees and also building drainages. The Federal Government also disbursed funds to tackle ecological problems in Agulu (Emeka, 2010). In spite of these efforts, ecological problems in Agulu seem not to be abating.

Deforestation occurs primarily due to the use of wood as a source of fuel. Rural women are often the gatherers of fuel wood and dependence on this fuel wood seems to be high among Agulu women. This raises some doubts as to whether these women are knowledgeable about the negative effect of deforestation on the environment. Women interact more with the environment and are worst hit by environmental degradation due to their role as natural resource managers. By this role, they remain key in the bid to ensure environmental sustainability. An investigation of their knowledge of environmental problems and the attendant environmental protection practices is essential.

Study objectives

This study was aimed at assessing the knowledge of environmental problems and the attendant environmental protection practices by Agulu women. Specific objectives were to:

1. Assess the knowledge of environmental problems by Agulu women.
2. Assess the environmental protection practices by Agulu women.
3. Relate Agulu women's environmental protection practices to knowledge level of environmental problems.

The hypotheses that guided the study were:

H_{o1}: Agulu women have no knowledge of environmental problems.

H_{o2}: Agulu women have no environmental protection practices.

H_{o3}: There is no relationship between Agulu women's knowledge of environmental problems and their environmental protection practices.

Review of related literature

Denning (2005) defines knowledge as the capacity to obtain information, to sustain it, and to use it. It is a mixture of understanding, experience, discernment and skills. The importance of knowledge and the impact of lack of it in the decision-making process have been demonstrated in numerous studies. Laroche, Bergeron & Barbaro-Forleo (2001) reported that environmental awareness and behaviours were found to be influenced by values, attitudes, and knowledge. Attitudes and motives of recyclers and non-recyclers were not that different except in their operational knowledge. Moisander (2000) showed that knowledge generally influences pro-environmental attitudes, which in turn, motivate ecologically or environmentally responsible consumer behaviour. According to Bogeholz (2006), experience with the environment is the basis of environmental knowledge creation. The experiences will influence one's attitude and environmental practice.

Environment is commonly defined as the system of biological and physical resources and their processes of interaction that affect lives and livelihoods. However, these biophysical systems are also in constant interaction with human and social systems that live in them (Alam, 1999). Women are known to interact more with the environment obviously because of their role in the family as providers of food, water and firewood, hence, women play visible roles in the exploitation of natural resources. Mazrui (2005) espoused on the bond between environment and women, stating that women in sub-saharan Africa have a triple custodial role - custodians of fire, water and earth. Corroborating Mazrui's assertion, a non-governmental organisation (NGO), Conserve Africa, states African women are primary resource users, their responsibilities and activities are directly on land-based resources and they produce 80% of the basic food commodities in

Africa (www.conserveafrica.org.uk.html). Aliyu (2005) opined that women naturally take care of environmental resources and human settlements, as most qualified home managers. Women play significant roles in the sustainability of natural resources and human habitat. Indeed, sustainable development is not possible without the empowerment of women.

In their examination of the link between beliefs, attitudes and behavior, Coutts and Hardy (1995) propounded the Knowledge Attitude and Practice (KAP) model, based on the assumption that knowledge precedes attitudes and that both knowledge and attitude protect and precede behavior and practice.

Knowledge → Attitude → Practice.

In other words, increase in knowledge about a problem will positively influence the behaviour or practice. The KAP model suggests that the right information will influence attitude positively and thus change behaviour. The model has been used in research to understand what people know, believe and do with regard to environmental protection. The central focus is quite clearly the attitude change strategy which is designed to galvanize the individual action through environmental knowledge.

Environmental knowledge level of Agulu women certainly determines their responses to environmental problems. Performing acts detrimental to environmental sustainability is often based on ignorance. Increase in knowledge will improve environmental protection practices.

Using a cross-sectional survey design and a quota sampling procedure, Jamilah & Imran (2012) carried out an investigation of environmental knowledge and environmental practices among Malaysians. The objectives of that investigation were to assess the level of environmental knowledge among Malaysian residents in Sabah and Sarawak, to examine the sources of their environmental knowledge, and to analyse the relationship between knowledge, attitude and environmental practice. Findings showed that respondents had basic environmental knowledge, but not specific environmental

terms or locations. This indicates that respondents possessed only a low level of complex environmental knowledge, which may not encourage them to be more actively involved in environmental activities. This, in turn, could slow down government efforts to encourage environmentally friendly practice among Malaysians.

Akwa (2009) investigated women's involvement in environmental management in Nasarawa State, Nigeria. Study objective was to assess the level of women's participation in environmental management. There was a high proportion of married women in the study area, suggesting that they were more likely to be more responsible in protecting the environment because of their role as home keepers.

Due to differences in demography, socio-economic status and educational levels, Aliyu (2005) used the stratified sampling method in investigating the level of perception and attitude towards the environment and skills available to women in Kano State of Nigeria. Findings revealed that women were scarcely informed and enlightened about the problems plaguing their environment. The research also discovered that the women were constrained by poverty, inadequate awareness and poor access to vital resources. City women do not know that they can contribute significantly towards achieving environmental sustainability. The study, therefore, recommended that the government, civil societies and educational managers and planners and curriculum experts should recast approaches to both formal and informal education to reflect fundamentals of environmental sustainability through integration and promotion of skills, awareness and change of attitudes.

Methodology

Study Area

Agulu is a community in Anaocha Local Government Area of Anambra State, Nigeria. It is the home of the famous Agulu Lake which is a potential tourist site and is home to an estimated three hundred crocodiles and water turtles which are declared sacred.

Agulu lies in the humid tropical rainforest belt of Nigeria. Its geographical co-ordinates are 6^{o} 6' 0" North and 7^{o} 3' 0" East. Agulu is located at altitude 6.11 and longitude 7.0724 at an elevation/altitude of 146 meters. Twenty (20) villages make up Agulu town with a population of 79,021 (National Population Commission, NPC, 2006). Agulu indigenes are predominantly farmers. Those into commercial activities still engage in one type of farming activity or the other. Agulu-Nanka region of Anambra State is faced with several environmental challenges, including erosion. As such, it has been listed as one of the ecological disaster zones in Nigeria. This lends relevance to this study.

Study Design and Sampling

The cross sectional survey study targetted randomly selected 392 women between 18 to 60 years of age in seven (out of twenty) purposively selected villages in Agulu, Anaocha Local Government Area, Anambra State, Nigeria. Women of this age bracket were mostly mothers and were mentally alert to accurately respond to the study questions. Purposive sampling was based on villages listed in the sample frame as the worst hit by gully erosion.

Data Collection Tool and Procedure

Pre-tested interviewer administered questionnaire was used to elicit information from 392 randomly selected women. Answer options to the questions were scaled on four-point. The set of questionnaire eliciting information on knowledge of environmental problems designated the scales as "Very Great Extent" (VGE, 4), "Great Extent" (GE, 3) "Low Extent" (LE, 2), "Very Low Extent" (VLE, 1). The second set of questionnaire eleicited information on the practice of environmental protection by Agulu women and had answer options designated as "Strongly Agree" (SA, 4), "Agree" (A, 3), "Disagree"(D, 2), "Strongly Disagree" (SD, 1). A section of the questionnaire sought respondent's demographics as well.

Tool for data analysis and test of hypotheses

Average Mean Score technique (Eneh, 2014) was used to analyse the data and test the hypotheses. The decision value (DV) was obtained from the mean of the value of the scale-points:

$$\frac{4 + 3 + 2 + 1}{4} = \frac{10}{4} = 2.5$$

The calculated value (CV) was obtained from the formula:

$$\text{Calculated value (CV)} = \frac{\sum fx}{\sum f}$$

Where f is frequency
x is scale-point

The CV was compared with the decision value (DV). If CV was greater than DV, then the answer was regarded as being in the affirmative, otherwise it was regarded as being in the negative.

Decision rule

Null hypothesis is rejected if CV > DV, and accepted if CV < DV.

Hypothesis 3 was tested by use of chi-square on cross-tabulation statistics of the knowledge of environmental problems and environmental protection practices.

Results and discussion

Table 1.1 shows data on knowledge level of environmental problems by Agulu women. From the Table, 192 (63.6%) respondents strongly agreed, 75 (24.8%) respondents agreed, 23 (7.6%) respondents disagreed, and 12 (4%) respondents strongly disagreed that erosion, deforestation and depletion of natural resources are some environmental problems in Agulu community. The CV was 3.48, which was greater than the DV of 2.5. Therefore, the null hypothesis (Agulu women have no knowledge of environmental problems) was rejected for the alternative hypothesis (Agulu women have knowledge of environmental problems).

Table 1.1*: Knowledge level of environmental problems by Agulu women*

Questions	SA(%)	A(%)	D(%)	SD(%)	CV
Scale	**4**	**3**	**2**	**1**	
Erosion, deforestation and depletion of natural resources are some environmental problems in Agulu community	192(63.6)	75 (24.8)	23 (7.6)	12(4.0)	3.48
Gully erosion is a major environmental problem in Agulu	201(66.6)	83(27.5)	11 (3.6)	7 (2.3)	3.58
Gully erosion is increasing	161(53.3)	100(33.1)	35(11.6)	6 (2.0)	3.38
Environmental problems result from harmful aspects of human activity on the environment	128(42.4)	130(43.0)	25 (8.3)	19(6.3)	3.22
Erosion occurs due to poor agricultural practices	120(39.7)	99 (32.8)	58(19.2)	25(8.3)	3.04
Deforestation degrades the environment	131(43.4)	105(34.8)	48(15.9)	18(6.0)	3.16

Source: Field Survey, 2014

Also, 201 (66.6%) respondents strongly agreed, 83 (27.5%) respondents agreed, 11 (3.6%) respondents disagreed and 7 (2.3%) respondents strongly disagreed that gully erosion is a major environmental problem in Agulu. The CV was 3.58, which is greater than DV of 2.5. Therefore, the null hypothesis (Agulu women have no knowledge of environmental problems) was rejected for the alternative hypothesis (Agulu women have knowledge of environmental problems).

Again, 161 (53.3%) respondents strongly agreed, 100 (33.1%) respondents agreed, 35 (11.6%) respondents disagreed, 6 (2%) respondents strongly disagreed that gully erosion was increasing in Agulu. The CV was 3.38, which is greater than DV of 2.5. Therefore, the null hypothesis (Agulu women have no knowledge of environmental problems) was rejected for the alternative hypothesis (Agulu women have knowledge of environmental problems).

Table 1.1 also shows that 128 (42.4%) respondents strongly agreed, 130 (43%) respondents agreed, 25 (8.3%) respondents disagreed, 19 (6.3%) respondents strongly disagreed that environmental problems result from harmful aspects of human activity on the environment. The CV was 3.22, which is greater than DV of 2.5. Therefore, the null hypothesis (Agulu women have no knowledge of environmental problems) was rejected for the alternative hypothesis (Agulu women have knowledge of environmental problems).

Besides, 120 (39.7%) respondents strongly agreed, 99 (32.8%) respondents agreed, 58 (19.2%) respondents disagreed, 25 (8.3%) respondents strongly disagreed that erosion occurs due to poor agricultural practices. The CV was 3.04, which is greater than DV of 2.5. Therefore, the null hypothesis (Agulu women have no knowledge of environmental problems) was rejected for the alternative hypothesis (Agulu women have knowledge of environmental problems).

Table 1.1 also shows that 131 (43.4%) respondents strongly agreed, 105 (34.8%) respondents agreed, 48 (15.9%) respondents disagreed, 18 (6.0%) respondents strongly disagreed that deforestation degrades the environment. The CV was 3.16, which is greater than DV of 2.5. Therefore, the null hypothesis (Agulu women have no knowledge of environmental problems) was rejected for the alternative hypothesis (Agulu women have knowledge of environmental problems).

Table 1.2 shows environmental protection practices of Agulu women.

Table 1.2: ***Environmental protection practices***

Questions	VGE (%)	GE (%)	LE (%)	VLE (%)	CV
Scale	4	3	2	1	
Agulu women plant trees to help control gully erosion	210(69.5)	77(25.5)	10(3.3)	5 (1.7)	3.63
Agulu women discourage deforestation	93(30.8)	140(46.4)	43(14.2)	26 (8.6)	2.99
Agulu women practice bush fallowing to protect the environment	146(48.3)	106(35.1)	27(8.9)	23 (7.6)	3.24
Agulu women practice pit digging for water collection	173(57.3)	98(32.5)	25(8.3)	6 (2.0)	3.45
Agulu women engage in shifting cultivation	171(56.6)	109(36.1)	16(5.3)	6 (2.0)	3.47
Agulu women discourage bush burning	111(36.8)	110(36.4)	44(14.6)	37 (12.3)	2.98

Source: Field Survey, 2014

Table 1.2 shows that 210 (69.5%) respondents agreed to a very great extent that Agulu women plant trees to help control gully erosion, 77 (25.5%) respondents agreed to a great extent, 10 respondents (3.3%) agreed to a low extent and 5 (1.7%) respondents agreed to a very low extent. The CV was 3.63, which is greater than the DV. Therefore, Agulu women practised tree planting to help control erosion.

Again, 93 (30.8%) respondents agreed to a very great extent that Agulu women discourage deforestation, 140 respondents (46.4%) agreed to a great extent, 43 respondents (14.2%) agreed to a low extent and 26 respondents (8.6%) agreed to a very low extent. The CV was 2.99, which was greater than the DV of 2.5. this means that Agulu women discourage deforestation.

Also, 146 (48.3%) respondents agreed to a very great extent that Agulu women practice bush fallowing to protect the environment, 106 (35.1%) respondents agreed to a great extent, 27 (8.9%) respondents agreed to a low extent, and 23 (7.6%) respondents agreed to a very low extent. The CV was 3.24, which was greater that DV of 2.5. Therefore, Agulu women practice bush fallowing to protect the environment.

Besides, 173 (57.3%) respondents agreed to a very great extent that Agulu women practised pit digging for water collection, 98 respondents (32.5%) agreed to a great extent, 25 respondents (8.3%) agreed to a low extent and 6 respondents (2%) respondents agreed to a very low extent. The CV was 3.45, which was greater than the DV of 2.5. Therefore, Agulu women practised pit digging for water collection.

Table 1.2 also shows that 171 (56.6%) respondents agreed to a very great extent that Agulu women engage in shifting cultivation, 109 (36.1%) respondents agreed to a great extent, 16 (5.3%) respondents agreed to a low extent and 6 (2%) respondents agreed to a very low extent. The CV was 3.47, which was greater than the DV of 2.5. Therefore, Agulu women engage in shifting cultivation to help protect the environment.

Also, 111 (36.8%) respondents agreed to a very great extent that Agulu women discourage bush burning, 110 (36.4%) respondents agreed to a great extent, 44 (14.6%) respondents agreed to a low extent and 37 (12.3%) respondents agreed to a very low extent. The CV was 2.98, which was greater than the DV of 2.5. Therefore, Agulu women discourage bush burning to check environmental degradation.

Hypothesis 3 was tested by use of chi-square on cross-tabulation statistics of the knowledge of environmental problems and practice of environmental protection among Agulu women (Table 1.3) in order to establish the relationship.

Table 1.3: ***Cross-tabulation of knowledge and practice of environmental protection***

		Practice			
		Low Extent	Great Extent	Very Great Extent	Total
Knowledge	Low Extent	1 (5.9)	13 (76.5)	3 (17.6)	17 (100.0)
	Great Extent	7 (5.0)	86 (61.4)	47 (33.6)	140 (100.0)
	Very Great Extent	1 (0.7)	63 (43.4)	81 (55.9)	145 (100.0)
Total		9 (3.0)	162 (53.6)	131 (43.4)	302 (100.0)

Source: Field Survey, 2014

The results are $X^2_{calculated}$ = 21.901, $X^2_{critical}$ = 9.488, and p-value = 0.000. Based on the set decision rule, since $X^2_{calculated}$ (21.901) > $X^2_{critical}$ (9.488), the null hypothesis (There is no relationship between Agulu women's knowledge of environmental problems and their environmental protection practices) is rejected. This result is significant as p-value = 0.000 < 0.05. The alternative hypothesis (There is a relationship between Agulu women's knowledge of environmental problems and their environmental protection practices) is accepted.

Finding on the knowledge of environmental problems by Agulu women is in contrast with the report of Aliyu (2005) that women of Kano city were scarcely informed and enlightened about the problems plaguing their environment, nor aware that they could contribute significantly towards achieving environmental sustainability. Although, the study by Jamilah and Imran (2012) is not gender biased, it showed that respondents possessed only a low level of complex environmental knowledge which may not encourage them to be actively involved in environmental activities. Agulu women knew that erosion was a continuous challenge and increased in their community

due to harmful aspects of human activities such as deforestation and poor agricultural practices.

The finding that Agulu women practised environmental protection prove that women are actively involved in environmental protection and have proven themselves to be a great ally and asset in the campaign on environmental protection. This agreed with the report of Akwa (2009) that women are main actors in environmental sustainability through sanitizing of homes and communities on daily (70% of the women), weekly (19%) and occasionally (1.6%).

To fight and prevent erosion, particularly gully erosion, women in Agulu practise tree planting and discourage deforestation and bush burning. They also dig pits to collect rain water. Therefore, there is an association between their knowledge of environmental problems and practices of environmental protection. This clearly shows that knowledge precedes attitude and that both knowledge and attitude would protect and precede behaviour and practice, in accordance with KAP model. Therefore, if environmental knowledge is improved, environmental practice will increase.

Conclusion

The study found out that Agulu women have knowledge of environmental problems, as well as engage in environmental protection practices. There is a direct relationship between Agulu women's knowledge of environmental problems and their environmental protection practices. As knowledge level of environmental problems increased, environmental protection practices improved. To help control erosion, Agulu women practised tree planting, discourage deforestation, practice bush fallowing, practice pit digging for water collection, engage in shifting cultivation, and discourage bush burning.

Recommendations

1. Since environmental degradation is continuous and on the increase, environmental awareness creation, environmental campaigns and mass education on environmental problems and

the mitigation mechanismsin should also be stepped up in frequency and magnitude to inform and remind women on environmental sustainability.

2. Women should be involved in decision-making and any process that is related to environmental management, since they, as resource managers, play significant roles in the sustainability of natural resources and human habitat.

References

Abegunde, A. A., Adeyinka, S.A., Olawuni, P.O. and Oluodo,O.A. (2006). An Assessment of the Socio Economic Impacts of Soil Erosion in South Eastern Nigeria.*Proceedings of XXIII FIG Congress,*Ts 56, at Garching Centre, Munich, October, 8-13.

Abiolu . A., and Okere.O., (2012). *Environmental Literacy and emerging roles of information professionals in developing economies*.International Federations of Library Associations and Institutions. 38(1) 53-59

Ajaero, C. and Mozie, A. (2010). *The Agulu-Nanka Gully Erosion Menace in Nigeria: What Does the Future Hold for the Population at Risk?*Unpublished manuscript, Department of Geography, University of Nigeria, Nsukka.

Ajayi, D.D. and Ikporukpo, C.O. (2005). An analysis of Nigeria's environmental vision 2010.*Journal of Environmental Policy & Planning*, 7(4), 341-365.

Akwa, L. (2009). Women involvement in environmental protection and management: A case study of Nassarawa State. *Journal of Sustainable Development in Africa*, 10(4), 78-99.

Alam, M. S. (1999). Environmental problems and social movements in Bangladesh.*Social Science Review*, 16(2), 275-282.

Aliyu, S.B. (2005). *An appraisal of the women's level of environmental education in Kano, Nigeria*.Seminar paper submittted to Department of Geography, Federal College of Education, Kano. Retrieved on 23/8/2012 from http://resourcedat.com/2013/03/an-

appraisal-of-the-womens-level-of-environmental-education-in-kano-nigeria/

Bogeholz, S. (2006). Nature experience and its importance for environmental knowledge, values and actions: Recent German empirical contributions. *Environmental Research*, 12, 65-84

Courts, L.C. and Hardy, I.K. (1995). *Teaching for health*: *The health education perspective*. Livingstone: Edinburgh press.

Davidson, K. (2005). *Will the concept of sustainable development provide any solutions for the 21st century*? Queensland: Social Change in the 21st Century.

Denning, S. (2000). *The springboard: How storytelling ignites action in knowledge-era organizations*. Butterworth: Heinemann.

Emeka, E. (2010, August 19). "Ecological fund: Trapped in the Web of Endless Controversy." Retrieved on 4/20/2012 from http://olusegunadekoya.wordpress.com/2010/08/19/nigeria-ecological-fund-issues/

Eneh, O.C. (2014). "An appraisal of handler awareness of electrical and electronic equipment toxicity in Nigeria." *African Journal of Environmental Science and Technology*, 8(7): 442-447.

Federal Government of Nigeria, FGN (2004). "Environment and energy for poverty reduction program." United Nations Development Program. Retrieved on 4/21/2011 from http://web.ng.undp.org/environment.shtml

Food and Agriculture Organisation, FAO (2001). "Forestry Outlook, Studies in Africa: Country Report - Nigeria. Forestry Division. Retrieved on 1/13/2013 from http://www.fao.org/DOCREP/004/AB592E00.HTM

Jamilah, A., and Imran, A. (2012). "An investigation of environmental knowledge and environmental practices among Malaysians." *Far East Journal of Marketing and Management*, 2 (1): 1-12.

Laroche, M., Bergeron, J. and Barbaro-Forleo, G. (2001). "Targeting consumers who are willing to pay more for environmentally friendly products." *Journal of Consumer Marketing*,18:503-520.

Mazrui, A. (2005). *The African Renaissance: A triple legacy of skills, values and gender*. Paper presented at The African Renaissance Conference, Manchester, United Kingdom. Retrieved from http://www.africacentre.org.uk/. on 23/03/2012.

Moisander, J. (2000). "Complexity and multidimensionality of ecologically responsible consumer behavior." Retrieved on 1/13/2013 from http://www.lancas.ac.uk/user/scistud/esf/mois.htm

National Population Commission, NPC (2009). *Nigerian national population census report 2006*, Abuja: NPC.

Sofo, C., Ali-Akpajiak, A. and Pyke, T. (2003). *Environment and Poverty in Nigeria*. Retrieved on 8/5/2012 from greenfuse.org/ecofem.htm

Uitto, J.I. (2014). "Evaluating Environment and Development: Lessons from international Cooperation." Evaluation office, United Nations Development Programme (UNDP), USA.