

RURAL POPULACE PERCEPTION ON ENVIRONMENTAL DEGRADATION AND EDUCATION FOR SUSTAINABLE DEVELOPMENT

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Abstract

This study examined the perception of rural populace on environmental degradation in Afijio Local Government Area (LGA) of Oyo State. Various activities leading to environmental degradation in the study area were identified and these include burning, overcultivation, deforestation, overgrazing and the use of fertilizer. Questionnaire was used as a tool for collecting data in ten selected areas of the study area and twenty copies of questionnaire were administered in each area. Data collected were subjected to simple percentage method of analysis, and the only hypothesis postulated was tested with chi-square statistical technique. Findings revealed poor and wrong perception of the respondents (the rural populace) about environmental degradation. Based on these findings, it is suggested, that government at all levels, especially local level, should promote environmental education especially in the rural areas. Living standard of rural populace should also be raised so as to reduce pressure on natural resources, amongst others.

Introduction

Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil, the destruction of the ecosystem and the extinction of wild lives. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable (Wikipedia, 2013). In many ways, people have their environment much more hospitable in the past few centuries but in some ways they had made it more hostile. Overpopulation and industrialization have contributed in various ways to the general deterioration of the environment upon which humanity is completely dependent on life and other supporting elements.

Environmental degradation around the globe varies according to the peculiar economic activity in a region. Industrialized countries such as United State of America, Britain, Canada, France and Germany have

noise, smoke from automobile exhaust and harmful emission from industries as their principal environmental degradation; developing and underdeveloped countries like Nigeria and other African countries have more critical environmental problems such as desert encroachment, deforestation, bush burning arising from poor or non-existence of environmental management programmes.

Environmental degradation is a very volatile issue in the social, political and economic administration of Nigeria. This is so because areas like Niger Delta has been one of the most affected areas when oil was discovered in commercial quantities in Oloibiri and Bayelsa State in the 1950's. Then, Nigeria shifted from agricultural based economy to oil explorations and this invariably led to the degradation of the area.

Dasgupta (1995a, 1995b, 1998) had found out that there may be a cyclical

low feedback relationship between population growth, environmental degradation and poverty, particularly in the poorest rural communities of developing countries. The model is based on the observation that families in poor countries depend on child labour as a means of exploiting the local environment and it has long been understood that child labour is an essential part of family life in poor countries. Dasgupta (1995a) and Dasgupta and Maler (1995) also found that children were often required to spend several hours each day fetching fresh water or gathering fire wood. As these local natural resources become more scarce and distant due to over-exploitation, having more children could be seen to provide more helping hands during difficult times. If every family chooses to have more children, then these individual choices would lead to even more pressure on the local environment which would in turn lead to a lower standard of living for every family and can even have greater impact on local environment.

People's perceptions on environmental degradation are important to understand for several reasons. First, perceptions of environmental degradation serve as useful indicators when objective data are not available. Second, perceptions influence grassroot participation in programmes and policies aimed at improving environmental conditions and lower fertility rate in developing countries (Danier & Takahashi, 1999). Third, perceptions of environmental degradation and family size have significant influence on individual's environmental and fertility behaviours. Less empirical research in poor countries focuses on environmental degradation at more local levels such as communities or neighbourhoods in which individuals spend most of their daily life. So, dimensions of environmental quality such as availability of common grazing and

forest land, degree of land productivity, biodiversity and quality of water are most likely to affect the daily lives of any local peoples.

When the environmental school of thought propounded the theories of environmental possibilism and probabilism as being superior concepts to environmental determinism, for explaining man-environment relations, little did they know that the conquest of the environment would lead to its destruction (Ogunsanya, 1999). The quest for people to satisfy their daily needs and to develop has led to the exploration of all resources to their advantage. There are various human activities involved in the process of exploration of these resources. However, it is pertinent to note that, these activities are carried out without giving cognizance to the environment where the entire processes take place. Thus, people are faced with a rapidly deteriorating environment that daily draws disturbing attention.

Environmental degradation is a human induced or natural process which negatively affects the capacity of environmental components to function effectively within an ecosystem by accepting, storing and recycling water, energy and nutrients (Eswaren, et.al, 2001). Hence, different terms are associated with the term degradation for example soil degradation and forest degradation. Olofun (2002) opined that anything that can degrade the environment is hazardous. Therefore, the agents that determine the rate of, and the biophysical processes and attribute that determine the rate of degradation may as well be types of environmental degradation and they include: geologic soil erosion, earthquake, desertification, flooding, pollution, drought and deforestation.

The factors responsible for environmental degradation through human

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activities as categorised by Ukpong (1994) are capable of causing environmental nuisance and degradation; destructive logging of forests, overgrazing and over-cropping of arable lands, and strip mining. This may be extended to include oil exploitation, industrialization, improper disposal of domestic solid wastes and human excretal including liquid wastes, over utilization of non-degradable materials for packaging among others. Environmental degradation is a result of the dynamic inter-play of socio-economic, institutional and technological activities. Environment degradation may be driven by many factors including economic growth, population growth, urbanization, intensification of agriculture, rising energy use and transportation and more importantly poverty.

Human activities and the environment are inter-related. This is because any activity of people is done in the environment and the resultant effect is either positive or negative to them. Human activities are diverse. According to Uchegbu (1988), negative effects on people arise from the economic and domestic activities. For instance, the use of pesticides pollutes the atmosphere or enter drainage system and this eventually has negative effects on the ecological system.

According to Encyclopaedia Britannica, the environment is the complex of physical, chemical and biotic factors that act upon organisms or an ecological community and ultimately determines its form and survival. Canter (1975) categorized the environment into air, water, noise, biological, cultural and socio-economic environment. However, in a physical sense, Holderness and Lambert (1982) claimed that, the physical environment is made up of air, water and

land. From all indications, human activities impinge on the environment which may either be positive or negative. However, the positive effects would be well taken by people not minding the negative effects especially as it concerns degradation.

The issues of development is to bring about positive and sustainable changes which lead to improvement in physical, emotional and spiritual well-being, which give people encouragement and confidence to realise their potentials (Karim, 2005). In the course of development, some threats are imposed on the environment and it has also been confirmed that economic development depends on the environment (Abang, 1995; Agabi, 1995; Omotor, 2000; DFID, 2001 and DFID, 2002). Also the poor people rely on the natural environment for many of their activities. They depend on it for food, shelter, clothing and even medicine. This has led to the degradation and even destruction of the natural environment and this destruction of the environment eventually led to hunger and malnutrition in such nations thus worsening poverty rate.

The unpleasant situation of the environment presently has necessitated for an urgent understanding, and conservation strategies of both environment and the resources for the prosperity of the future. It was in this line that Olofin (2002) stated that an earth summit was organised in Rio de Janeiro in 1992 to reduce the effects of people's mismanagement and greed which culminated in the catastrophic drought, floods, land degradation, rising sea levels, climatic change, depletion of water resources among others. Environmental degradation is one of the pressing environmental problems facing the world over both rural and urban areas aren't exempted from this social evil.

Land degradation is one of the problems of environment in which over 40 million are affected in Nigeria. Some of the causes of land degradation, as noted by Ukpong (1994), include improper resource management; destructive logging of forest; overgrazing and over-cropping of arable lands; flooding and wind erosion menace; strip mining in some parts of Nigeria; land degradation with pesticides and fertilizers; some known natural land slide etc. and destruction of wetlands and marches for development.

Ukpong (1994) also identified other indirect causes of land degradation to include population growth and population influx, property ownership issues, lack of control, enforcement measures and jurisdictional overlap which are due to lack of authority and the use of inappropriate technology for farming and even for producing manufactured goods.

The use of fuel wood for energy to cook, boil water, heat and light the home contributes to environmental degradation. The rising cost of gas and electricity for domestic use encourages greater use of biomass sources by the low income group (Puerto, 1985). According to Adedipe (1992), more than 8% of the population of Africa still relies on fuel wood for cooking and heating.

The relationship between environmental degradation and human living conditions are of even greater bearing when one considers that the victims of environmental degradation tend to belong to the vulnerable sectors of the society, who regularly share an uneven burden of environmental pollution. In the words of late Ken Saro-Wiwa when he received the Goldman Environmental Award in Scotland in 1994, "The environment is man's first right". Indeed, it is the right of individuals and people to live in an ecologically sound

environment. According to Odiette (1993), to achieve sustainable development involves a judicious use of natural resources such that the carrying capacity and the productive capacity are not over-exploited.

Environmental sustainability is the rates of renewable resources harvest, pollution creation and non-renewable resources depletion that can be continued indefinitely, if they cannot be continued indefinitely then, they are not sustainable. It allows for the needs of people to be met without jeopardizing the ability of the future generations, improvements in the standard of living that do not cause long-term damage to the environment.

Statement of the Problem

In recent years, Oyo State has witnessed great expansion in terms of population, Afijio Local Government Area inclusive. The consequence of this development has led to a great environmental degradation in both urban and rural areas of the state. It is the concern of this study to investigate the perception of rural dwellers about environmental degradation. Despite the efforts of government to ameliorate the effects of environmental degradation, this social menace is going on rapidly, hence the need to examine the perception of the rural populace on environmental degradation.

Objectives of the Study

The following are the objectives of the study

- (i) To examine the level of perception of rural populace on environmental degradation
- (ii) To examine various activities that lead to environmental degradation in the study area
- (iii) To examine the impacts of environmental degradation in the study area

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- (iv) To evaluate the physical measures put in place to reduce the effects of environmental degradation in the study area

Research Questions

The following research questions are put forward to be answered in the course of this study;

- (i) What are the levels of perception of people in the study area on environmental degradation?
- (ii) What are the activities leading to the environmental degradation in the study area?
- (iii) Is environmental education effective in solving environmental degradation problem in the study area?
- (iv) What are the impact of environmental degradation on the study area?
- (v) What are the physical measures put in place to ameliorate the effects of environmental degradation in the study area?

The stated hypothesis guided the study

H₀: Level of education of the respondents has no significant influence on the perception of environmental degradation in the study area.

Scope of the Study

This research work covered ten (10) rural areas/viliages in Afijio Local government area of Oyo state and the

selected areas include: Fiditi, Iware, Jobele, Ilora, Imini, Ijaye-Ojutaye, Apenpe, Ilu-Aje, Omotunde and Aba Layonu.

Methodology

The design for this study was a descriptive survey. The researcher used simple random sampling to collect data from the selected areas in Afijio Local Government Area of Oyo State. Two hundred (200) respondents were randomly selected from ten areas, namely: Fiditi, Iware, Jobele, Ilora, Imini, Ijaye-Ojutaye, Apenpe, Ilu Aje, Omotunde and Aba Layonu. The four-point Likertscale model of Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D) was adopted to measure the respondents' responses on their perception of environmental degradation. The researcher employed one research assistant based on the need for interpretation of the questions for most of the respondents due to low level of education. The questionnaire was drawn and given to a senior colleague in the Department for vetting in order to ensure content and construct validities. Reliability co-efficient of 0.81 was obtained after trial testing of the instrument on the perception of the respondents on the environmental degradation. The questionnaire was categorised into two sections, one sought for respondents' personal information while the second dealt with perception on environmental degradation. Percentage methods and chi-square statistical techniques were applied to answer and test the data collected.

Results

Table 1
Analysis of Responses

S/N	ITEMS	SA	%	A	%	SD	%	D	%
1.	Environmental degradation is not caused	70	35	94	47	24	12	12	05
2.	Environmental degradation is an act of God	18	09	52	26	96	48	34	17
3.	Environmental degradation is only happen in urban are	78	39	88	44	14	07%	20	10
4.	Environmental degradation does not have anything to do with farming activities	20	10	80	40	78	39	22	11
5.	Environmental degradation is not an issue in rural area	40	20	92	46	42	21	26	13
6.	Level of education does not influence positive perception on environmental degradation	40	20	66	33	64	32	30	15
7.	Environmental degradation is not known in the rural areas because of low level of education	66	33	48	24	46	23	40	20
8.	Educated rural populace now move about environmental degradation	126	63	70	35	04	02	00	00
9.	Environmental education brings awareness about environmental degradation	76	38	108	54	12	06	04	02
10.	Environmental degradation may be liken to soil erosion	100	50	86	43	14	07	00	00
11.	Environmental degradation leads to soil erosion, soil infertility and drought	90	45	88	44	14	07	08	04
12.	Environmental degradation affects crops yields in immediate environment	66	33	96	48	18	09	20	10
13.	Environmental degradation is manifested in rural areas due to the various activities taking place	68	34	104	52	28	14	00	00
14.	People are aware of the incidence of environmental degradation in the rural areas	58	29	90	45	36	18	16	08
15.	Burning, over cultivation, use of fertilizers, overgrazing, deforestation account for environmental degradation	76	38	68	34	42	21	14	07
16.	Perception of people on environmental degradation is positive in the rural areas	48	24	10	05	72	36	70	35
17.	Poor environmental management results to environmental degradation	124	62	62	31	08	04	02	01
18.	Poverty accounts for environmental degradation	96	48	84	42	16	08	04	02
19.	Environmental degradation result to species loss	110	54	80	40	10	05	00	00
20.	Environmental degradation result to infectious diseases	90	45	100	50	10	05	00	00
21.	Environmental degradation result to global warming	80	40	106	53	14	07	00	00

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Based on the data collected, the research questions posted were answered as follows:

Research Question 1: What are the levels of

perception of the respondents on environmental degradation?

Table 2

Responses on the Causes of Environmental Degradation

S/N	ITEMS	SA	%	A	%	SD	%	D	%
1.	Environmental degradation is not caused	70	35	94	47	24	12	12	05
2.	Environmental degradation is an act of God	18	09	52	26	96	48	34	17
3.	Environmental degradation is only happen in urban are	78	39	88	44	14	07	20	10
4.	Environmental degradation does not have anything to do with farming activities	20	10	80	40	78	39	22	11
5.	Environmental degradation is not an issue in rural area	40	20	92	46	42	21	26	13

Five items of the questionnaire answered the research question, items 1, 2, 3, 4, and 5 on the Table 2 clearly pictured the perceptions and believes of people of the study area on environmental degradation. For example, item 1 which states that environmental degradation is not caused by man's activities has strongly agreed of 35% and 47% of agreement which means rural populace agreed that environmental degradation is not totally caused by man's activities; this perception is a wrong one, knowing fully well that environmental degradation issue cannot be divorced from various activities of man in his environment. Also, item 2 on the table one which says the environmental degradation is an act of God has 52% of agreement and that shows the primitive believe of the rural populace. On item 3, environmental degradation is only happening in urban areas has 39% of

strongly agreed and 44% of agreement. This shows erroneous perception of rural dwellers that, it is only urban areas that have factories, industries and large population that can experience environmental degradation. Coupled with this is on item 4, which says environmental degradation does not have anything to do with farming activities with 40% of agreement and lastly, item 5, environmental degradation is not an issue in rural area has 20% strongly agree and 46% of agreement. In all the items discussed above, they all signify to the poor and wrong perception of the rural dwellers concerning environmental degradation.

Research Question 2: What are the activities that led to the environmental degradation in the study area?

Table 3

Responses on the Awareness of Environmental Degradation

S/N	ITEMS	SA	%	A	%	SD	%	D	%
14.	People are aware of the incidence of environmental degradation in the rural areas	58	29	90	45	36	18	16	08
15.	Burning, over cultivation, use of fertilizers, overgrazing, deforestation account for environmental degradation	76	38	68	34	42	21	14	07

In answering research question 2, it is important to first establish the point that people of the study area were aware of the incidence of environmental degradation but giving another meaning to it. Item 14 answered the question, there is 29% strongly agreed and 45% of agreement of the awareness of environmental degradation in the study area. Based on this, 38% of strongly agreed and 34% of agreement

confirmed that the activities that lead to environmental degradation include the following: burning, over cultivation, use of fertilizers, over grazing, deforestation and mono-cropping.

Research Question 3: Is environmental education effective in solving environmental degradation problem in the study area?

Table 4

Responses on the Need for Environmental Education.

S/N	ITEMS	SA	%	A	%	SD	%	D	%
9.	Environmental education brings awareness about environmental degradation	76	38%	108	54%	12	06%	04	02%
22.	There is need to raise the level of awareness of rural populace on environmental degradation	120	60%	72	36%	08	04%	00	00%

Items 9 and 22 answer research question 3. In item 9, environmental education brings about awareness on environmental degradation which has 38% strongly agree and 54% agree. In item 22, there is need to raise the level of awareness of rural populace on environmental degradation has 60% of strongly agree, and 36% of agree. These two items point to the fact that environmental education as an effective tool can be used to create awareness and at the same time suggest various measures to be taken in ameliorating the negative consequences of environmental

degradation in the study area as environmental education is a process that allows individual to explore environmental issues, engage in problem solving and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible reasons.

Research Question 4: What are the impacts of environmental degradation in the study area?

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Table 5

Responses on the Impacts of Environmental Degradation.

S/N	ITEMS	SA	%	A	%	SD	%	D	%
11.	Environmental degradation leads to soil erosion, soil infertility and drought	90	45	88	44	14	07	08	04
12.	Environmental degradation affects crops yields in immediate environment	66	33	96	48	18	09	20	10

Items 11 and 12 answered research question 4 as environmental degradation leading to soil erosion, soil infertility, drought has 45% of strongly agree; 44% of agree while 7% strongly disagreed with 4% disagreed. In the same line, item 12 which says environmental degradation affects crop yields in the area has 33% of strongly agreed and 48% agree with 9% of strongly disagree and 10% disagreement. Even though the respondents have poor and negative

perception on environmental degradation, after thorough explanation, they were able to account for the negative impacts of environmental degradation in the area.

Research Question 5: What are the various measures that can be put in place to ameliorate the negative effect of environmental degradation in the study area?

Table 6

Responses on the Control of Environmental Degradation.

S/N	ITEMS	SA	%	A	%	SD	%	D	%
22.	There is need to raise the level of awareness of rural populace on environmental degradation	120	60	72	36	08	04	00	00
23.	Education of people about the harmful effects of environmental degradation is needed in rural areas	60	30	78	39	54	27	08	04
24.	Formulation and implementation of environmental policies will be okay to avoid the problems of environmental degradation	118	59	76	38	04	02	02	01
25.	Encouragement of a forestation and discouragement of deforestation will be a good measure to checkmate environmental degradation	118	59	56	28	14	07	12	06

Items 22, 23, 24 and 25 addressed the question. Item 22 has 60% and 39% of strongly agree and agree on the need to raise the level of awareness of rural populace on environmental degradation while item 23 has 30% and 39% respectively of strongly agree and agree on the need to educate

people about the harmful effects of environmental degradation in the rural areas. Item 24 has 59% and 38% of strongly agree and agree respectively on the need to formulate and implement environmental policies to avoid problems of environmental degradation. While item 25 has 59% and

28% respectively of strongly agree and Agree on the need to encourage afforestation and discourage deforestation which will be a good measure to checkmate environmental degradation especially in the rural areas.

Testing of Hypothesis

H₀: Level of education of the respondents has no significant influence on the perception of environmental degradation in the study area.

The hypothesis was tested using item 6, level of education does not influence

positive perception on environmental degradation, item 7, environmental degradation is not known in the rural areas because of low level of education attainment, item 8 educated rural populace know more about environmental degradation and item 9, environmental education brings awareness about environmental degradation. The application of chi-square statistical technique. Below is the result of the calculation to test for the hypothesis which says the level of education of the respondents has no influence on the perception on environmental degradation.

Table 7

Influence of Education on Environmental Degradation

N	Calculated value	Table value	Level of Significance	Remark
200	211.78	2.26	0.05	NS

Since χ^2 calculated is greater than critical table value at 0.05 significant level, H₀ is not accepted, that is, the level of education of the respondents had influence on their perception of environmental degradation.

Discussion of Findings

The general observation was that the respondents who happened to be the inhabitants of the study area felt the negative impacts of environmental degradation but were not convinced that various activities in the area contributed to this. Also, poverty was identified as a major factor in the rural areas which has aggravated the incidence of environmental degradation. For example, item 28 supports this claim as it has 48% of strongly agree and 42% of agreement on the issue that poverty accounts for the incidence of environmental degradation, and this observations is supported by the view of Dasguta (1995a, 1995b, 1998) which found

a positive relationship between population growth, environmental degradation and poverty.

There is general low and poor perception of the people of the study of the environmental degradation this points to the fact that majority of the inhabitants neither had elementary education nor no education at all and since the causes of environmental degradation is attributed to natural sources them, hardly can majority of them suggest ways of ameliorating the effects of environmental degradation which have adverse effects on the inhabitants of the study area.

Poverty really contributed to over utilization of the natural resources which invariably lead to environmental degradation in most of the rural areas of developing nations for example burning, over cultivation, overgrazing, deforestation account for largest causes of

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environmental degradation and the situation where every man strive to survive and utilize all the available resources around him not minding the negative consequences of his actions calls for sober reflection, and the government is not helping the matter by her insensitivity and failure to provide the basic needs of life for the citizenry, this view support the view of (Ogunsanya, 1999) that superior concepts of environmental possibilism and probabilism to environmental determinism in man-environmental interaction has given power to man to explore his environment to his own advantages and damn the negative consequences of his action to the environment.

The study revealed that the perception of the people in the rural areas was very poor and unenlightened concerning environmental degradation, and this really account for nonchalant and poor attitude towards environmental management and their various activities which contribute to environmental degradation in the areas. The study also revealed the neglect of governmental and non-governmental organizations in ameliorating the negative effects of human activities in the environment of rural areas knowing fully that in developing countries Africa and Nigeria in particular it is the rural areas that supply the bulk of foods and other agricultural products to urban centre and since agricultural activities involved exploration of the environment, then, the presence of the efforts of the government or non-governmental organization in reducing to the barest minimum the negative impacts of this activities in rural areas are needed.

These results depict the essence of environmental education in solving problems of environmental degradation in the rural areas if rural populace are well

aware of the implications of various activities on the environment, then there will definitely be a turnaround from these poor habits towards the environment. Sada and Odemerho (1998) as reported in Ajibade (2000), argued that the first step in effective control and management of the environment is in the development of public environmental awareness most especially in the area of conception, interpretation and perception of environmental issues. Environmental education (EE) is the teaching of individuals and communities, in transitioning to a society that is knowledgeable of the environment and its associated problems, aware of the solutions to these problems, and motivated to solving them.

Conclusion

Environmental degradation is a challenge to both urban and rural dwellers but it seems the awareness of the incidence is not felt much in the rural settings of the study areas. However, for a country like Nigeria to experience physical, social and economic development, the incidence of environmental degradation must be put under control.

Recommendations

Based on the findings of the study, the following recommendations are put forward:

There is an urgent need for environmental education in the rural areas of the study area so as to create awareness of environmental problems and various activities that lead to them. Bill boards, posters and the likes should be produced using local languages based on the cultural affiliation of people, warning the populace of their various activities that lead to environmental degradation.

Government at all levels, as a matter of urgency, should encourage rural farmers by supplying them environmental friendly equipment so as to boost their farming activities, without hindering or disturbing ecological system. Governments should also sell to the farmers in the rural areas best farming techniques.

Government at all levels should also strive to raise the standard of living especially of the rural dwellers so that much pressure would not be on the local resources.

There is also an urgent need to find lasting solution to over dependency or overuse of environmental resources.

References

- Abang, S.O. (1995). The Nigerian environment and social-economic pressure. In J.A. Agabi, S.O. Abang, & A.I. Animasaun, (Eds.), *Nigerian environment*. Lagos: Conversation Foundation.
- Adedipe, N. O. (1992). The African environment: A changing and scary scenario.
- Agabi, J.A. (1995). *Biodiversity loss in Nigerian environment*. Lagos: Macmillan.
- Ajibade, L. T. (2000). The environmental systems. In H.I. Jimoh & C.P. Fabiyi (Eds.), *Contemporary issues in environmental studies*. Ilorin: Haytee Publishers.
- Canter, L.W. (1975). *Environmental impact assessment*. New York: McGraw Hill.
- Daniere, A.G., & Takahashi, L.M. (1999). Environmental behaviour in Banakar Thailand: A portrait of attitudes, values and behaviours. *Economic Development and Cultural Change*, 47(3), 525 – 557.
- Dasgupta, P. (1995a). Population, poverty and the local environment. *Scientific American*, 272(2), 40 – 46.
- Dasgupta, P. (1995b). The population problem: Theory and evidence. *Journal of Economic Literature*, 33(4), 1879 – 1902.
- Dasgupta, P. (1998). The economics of poverty in poor countries. *Scandinavian Journal of Economics*, 100(1), 41 – 68.
- Dasgupta, P. & Maler, K.G. (1995). Poverty, institutions and the environmental resource – base. In J. Behrman & T.N. Svinivasan (Eds.), *Handbook of development economics*, Vol. 11A Amsterdam: Elsevier.
- DFID (2001). *Poverty and the environment “what the poor says, environment policy”*. Key Sheet No. 1 UK, DFID.

Rural Populace Perception on Environmental Degradation and Education...

- DFID (2002). *Making connections' infrastructure for poverty reduction*. London: DFID.
Encyclopaedia Britannica Vol. 4.
- Holderness, A., & Lambert, J. (1982). *A new certificate chemistry*. Ibadan: Heinemann Educational Books Nigeria Ltd.
- Karem, S. (2005). *Planning for sustainability*. Footsteps, No. 64, pp. 1 – 16.
- Ogunsanya, A. (1999). Contemporary issues in environmental studies. In H.I. Jimoh & I.P. Fabiyi (Eds.), *Contemporary issues in environmental studies*. Ilorin: Haytee Publishers.
- Olofin, E.A. (2002). *Maintaining a sustainable environment for development in the 21st century*.
- Omotor, D.G. (2000). Environmental problems and sustainability development in Nigeria. *Journal of Development Studies*, 2(1), 146 – 149.
- Puerto, H. (1985). Rural women and social structure in change. A case study of women's work in West Java Indonesia.
- Sada, P.O. & Odernerho, F.O. (1988). Environmental management and development. Introduction of the main issues. In P.O. Sada, & F.O. Odemerho (Eds.), *Environmental issues and management in Nigerian development*. Ibadan: Evans Brothers (Nigeria Publisher Ltd).
- Uchegbu, S. N. (1988). *Environmental management and protection*. Nigeria: Spotlight Publishers.
- Ukpong, S.J. (1994). *Global and Nigerian environment problem analysis SIRE*, Calabar. Retrieved from <https://www.thwink.org.sustain> on November 3, 1994.