# Creation Of Awareness Through Environmental Adult Education As A Solution To The Problem Of Habitat Loss In Ogoni, Rivers State, Nigeria.

**Batombari Gbidum Gimah; Dr. Tombari Bodo**

Department of Adult and Non Formal Education, Faculty of Education,
University of Port Harcourt, Nigeria. +2348034934602
*batomg@yahoo.com*

Department of Geography and Natural Resource Management, Faculty of Social Sciences,
University of Uyo, Uyo, Akwa Ibom State, Nigeria; +2348062894010.
*tombarib@gmail.com*

**Abstract:** The study investigated the relevance of Environmental Adult Education in the prevention of habitat loss in selected Local Government Areas in Ogoni of Rivers State. The fact of deforestation, agricultural practice, industrialization and oil spill leading to habitat loss in Rivers State has raise questions of great concern to stakeholders, particularly communities who have suffered species extinction. The purpose of this study is to find out the human activities that lead to habitat loss, examine the adverse effects of habitat loss on the environment and man; and determine ways through which environmental adult education can minimize the occurrence of habitat loss. Hence, three objectives and one null hypothesis were used for this study. Survey research design was adopted, questionnaires were used for data collection. Responses to the questionnaire were analyzed using mean and grand mean for all the research questions and Z-test for the hypothesis. The result of this study revealed that the Ogoni people are instrumental to the destruction of their God-given environment and the people that are involved in the act of deforestation, bush burning, oil spills, carrying out bunkering business, and practicing artisanal refining of crude oil which degrades the environment are mostly adults. It was recommended that there should massive environmental adult education to curb habitat loss and further environmental degradation.

**Keywords:** Awareness, environmental adult education, habitat loss, human activities, oil spills, environmental degradation.

## 1. Introduction

Habitat loss is a process in which a natural habitat is rendered functionally unable to support the species which previously used the site and are then displaced or destroyed, thus reducing biodiversity [5]. Habitat destruction by human activities mainly for the purpose of harvesting natural resources for industry, production and urbanization has dramatically increased the rate of habitat loss and change. Sprawling development is consuming land at a rate of five or more times the rate of population growth, destroying wildlife habitat and degrading water quality. Dredging, draining, bulldozing and paving the land for housing developments, malls, business parks and new roads; all destroys habitat. Habitat loss poses the greatest threat to species extinction. The world's forests, swamps, plains, lakes, and other habitats continue to disappear as they are harvested for human consumption and cleared for agriculture, housing, roads and for other industrial use. As a result only 0.6% of the world's oceans are protected, and the vast majority of existing marine, parks and reserves suffered from little or no effective management [8]. Without environmental adult education and a strong plan to create terrestrial and marine protected areas, important ecological habitats will continue to be lost. "Protected area" is one of the most effective tools for conserving species and natural habitats. They also contribute to the livelihoods and wellbeing of local communities and society at large. For example, a well planned and well managed "protected area" can help to safeguard fresh water and food supplies, reduce poverty and the impact of disaster. Environmental adult education can be a vital instrument for the planning and management of protected areas. Massive extinctions have occurred five times during the earth's history, the last one was the extinction of the dinosaurs, 65 million years ago [19]. Scientists refer to the current ongoing extinction as the sixth mass extinction [19]. The loss of species is about losing the very web of life on earth [11]. Those who care very much about the environment and try to protect it from destruction had been threatened, sued, jailed and killed. The problem of habitat loss is not just the loss of species. There is also loss of the genetic diversity of different types of ecosystem which can contribute to or hasten the whole species extinction. About 50% of the earth's species will vanish within 100 years and that such a dramatic and overwhelming mass extinction threatens the entire complex fabric of life including homo- sapiens [18]. Every day an estimated 100 plants and animal species are lost to deforestation [18]. A conservative estimate of the current habitat loss indicates that about 27000 species a year are being lost [12]. The quality and quantity of a particular type of habitat determines the number and variety of its inhabitants. Unfortunately, in altering or creating habitat for human uses, people often cause the loss or damage of habitat needed by birds and other wildlife. This loss and degradation of habitat has resulted in wide spread declines and extinction of many species. It is not possible for people to live and prosper without affecting their surroundings. However people do have the ability to consider the need of other species and can choose to modify their activities to decrease the negative effects they have on wildlife habitat. This is where environmental adult education becomes relevant. Habitat loss differs from one geographical area to another. Humans have altered nearly half of the earth's land mass over the past 150 years, and amount could rise to 70 percent within the next 30 years, according to the United Nations. These alterations include farming, logging, and

urban development [8]. Deforestation is also one of the leading causes of habitat loss in Rivers State. For centuries, human have altered landscapes, through deforestation, fire and over use. Already, around half the world's original forests have disappeared, and they are still being removed at 10 times higher than any possible level of re-growth. As tropical forests contain at least half the earth's species, the clearance of some 17 million hectares each year is causing a dramatic loss of biodiversity [18]. Habitat loss is identified as a threat to 85 percent of all species of both plants and animals. In searching for the causes of habitat loss in Rivers State especially in Ogoni without identifying oil spill as one of its main causes of habitat loss will make this work incomplete. The Ogoni people are a distinct indigenous minority living in an area of 404 square miles (about 100,000 square kilometers) on the Southeastern fringe of Rivers State which is geo-politically referred to as South-South of Nigeria. Oil was discovered in Ogoni territory in early 1957 when Shell Petroleum Development Company (SPDE) found oil in Ogoni Community of Kegbara Dere (K.Dere) and misnormally called it the Bomu Oil Fields (Legborsi, 2005). Subsequently, shell made more discoveries in other Ogoni Communities including Ebubu, Bodo West, Korokoro and Yorla [9]. Ogoni has five major oil fields with one hundred and ten wells, hooked up to five flow stations at Bomu, Korokoro, Yorla, Bodo West and Ebubu by a necklace of inter-connecting pipelines which criss-cross Ogoni villages. According to Legbosi [9], the exploration of oil has been done without due regard to the negative impact of such activities on the habitat and the environment Unfortunately, exploitation of oil in Ogoni was followed immediately with impact of oil spill [7]. In Ogoni, between 1993 and mid-2010, 35 incidences of oil spills were recorded [19]. This is aside from the unnoticed leaks and unreported cases of oil spill. These spillages affect vast stretches of land and water ways thus, polluting not only crops but also marine life, and contaminate water for domestic use. Mangrove forests are particularly vulnerable to oil spill because the soil soak up the oil like sponge and re-release it every raining season. Oil spill also prevents the lentil of mangrove to absorb oxygen resulting in oxygen starvation. The mangrove withers and dies in large numbers due to oil spills. Oil spill results in poor soil fertility which in turn causes poor growth of plants and habitat loss. Oil spillage are common event in Nigeria and occur due to a number of causes including corrosion of pipelines and tanks 28% and oil production operation 21%, with 1% of the spill being accounted for by inadequate or non-functional equipment [4]. Badejo [3] reported that, the largest contributor to the oil spill leading to corrosion of pipes and tanks is the rupturing or leaking of production infrastructure that are described as very old and lack regular inspection and maintenance. The reason corrosion is regarded as the largest contributor to oil spill is as a result of small size of the oil fields in Niger Delta. There is an extensive network of pipe lines between the fields as well as numerous small networks of flow lines and narrow diameter pipes that carry oil from well heads to flow stations which allow many opportunities for leaks and exploitation. In onshore areas most pipelines are flow lines and are laid above the ground. Pipelines which have estimated lifespan of about fifteen years are old and subjected to corrosion. Many of the pipelines are as old as twenty to twenty five years. Most of the facilities were constructed between the 1960s and early 1980s to conform to the old standard [19]. Sabotage is committed primarily through what is known as "bunkering" whereby the saboteurs attempts to tap the pipeline. In the process of extraction, sometimes, the pipeline is damaged or destroyed. Oil extracted in this manner is sold. Oil siphoning has become a major issue in Rivers State, contributing to further environmental degradation [10]. Damaged lines may go unnoticed for days even much longer and repair of damaged pipe take even longer. Oil siphoning has become a big business in Rivers State, particularly in those communities that are close to the seashore where pipe lines are laid and many artisanal refining sites (which we refer to as approved illegal refining sites) are sited and crude oil had been refined and sold there. The ultimate result of this is uncontrolled flow of crude oil into the sea and to the land. This completely destroyed the ecosystem. Mangrove forests have fallen to the toxicity of the oil spill. Fishes are driven away into the deep sea, endangering lives, ultimately causing pockets of environmental devastation. Because of this oil spill, crops are destroyed, farms are no longer fertile, hence, farmers toil in the field, yet they have to buy food to eat. Hunters go home without a catch. Rural folks who have farming and fishing as their only sources of livelihood are forced out of their makeshift shelter with nowhere to go. The longer they wait, the more damage is done to the environment and the people; hence, environmental adult education becomes relevant in the prevention of the prevailing problems of habitat loss in Ogoniland of Rivers State. This is the problem examined in this study.

## 2. Objective of the Study

This study is design to:

i. Find out the human activities that lead to habitat loss.
ii. Examine the adverse effects of habitat loss on the environment and man.
iii. Create awareness through environmental adult education as a means of proffering solutions to the challenges of habitat loss in Ogoni, Rivers State.

## 3. Hypothesis

**Ho**: There is no significant difference between environmental adult education and the occurrence of habitat loss.

## 4. Study Area

The study covered Gokana and Khana Local Government Areas in Ogoniland of Rivers State. The two Local Government Areas selected share boundary with other Local Government Area like Andoni, Opobo, Tai, Eleme and Okirika. Ogoniland is made up of six kingdoms - Babbe, Eleme, Gokana, Ken-Khana, Nyo-Khana and Tai - with four different although related languages, and is united under one town Bori, which is the capital [17], [7]. The territory is located in Rivers State on the coast of the Gulf of Guinea, east of the city of Port Harcourt [20]. The Ogoni people are indigenous minority living in area of 404 square mile (about 100,000) square Kilometers) on the south eastern fringe of Rivers State [10]; [7]. The

major occupation of the Ogoni people are farming and fishing [6], [16].

## 5. Methodology

The research design used in this study is survey. The survey design is suitable for getting relevant information and data relating to the attitude of Ogoni people, their knowledge of the effects of habitat loss, awareness, causes of habitat loss, and the influence of environmental adult education on the people. Again, the design is considered appropriate for the study because according to Nworgu [13], survey research is one which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The population for the study is 2822 which comprises of the Local Government workers (civil servants), union of timber dealers and farmers in Gokana and Khana Local Government Areas of Rivers State. Below is the distribution of the population.

***Table 1:*** *Distribution of Population*

| **Union of civil servants / farmers / timber dealers** | **Total number of union of civil servants / farmers / timber dealers** |
|---|---|
| National Union of Local Government Employees (NULGE) Gokana Branch | 650 |
| National Union of Local Government Employees (NULGE) Khana Branch | 617 |
| Kilsi Fadama Yam Production Farmers of Gokana | 425 |
| Khana Farmers Association | 450 |
| Kibagha Timber Dealers Organization of Gokana | 300 |
| Bori Timber Dealer Association (BTDA) Khana | 380 |
| **TOTAL** | **2822** |

***Sources****: (2017)*

(1) National Union of Local Government Employee (NULGE) Gokana Branch.
(2) National Union of Local Government Employee (NULGE) Khana Branch.
(3) Local Agric Fadama Gokana III
(4) Agricultural Department Khana Local Government Area
(5) Kibangha Timber Dealers Organization of Gokana.
(6) Bori Timber Dealers Association (BATDA) Khana.

The sample for this study is 1834 which is 65% of the population of 2822. The proportion of the sample size is first determined before getting the number of elements from each of the group. This is in relation to the population and is being multiplied by the size of each of the group by this proportion. 65% of (2822) becomes 1834 as a result and is being multiplied by the proportion of each group to get the sample size for each group. Six groups have been chosen for this study from the area of study. This is done for proper and easy collection of information / data. Below is the table that shows the distribution of sample according to the said group.

***Table 2:*** *Distribution of Sample*

| **Names of Civil Servants Groups, Farmers and Timber Dealers Union** | **Population** | **Sample size** |
|---|---|---|
| National Union of Local Government Employees NULGE (Civil Servants) Gokana Branch | 650 | 423 |
| National Union of Local Government Employees (NULGE) Khana Branch | 617 | 401 |
| Kilsi Fadama Yam Production Farmers of Gokana | 425 | 276 |
| Khana Farmers Association | 450 | 292 |
| Kibagha Timber Dealers Organization of Gokana | 300 | 195 |
| Bori Timber Dealer Association (BTDA) Khana | 380 | 247 |
| **TOTAL** | **2,822** | **1,834** |

***Sources****: (2017)*

(1) National Union of Local Government Employee (NULGE) Gokana Branch.
(2) National Union of Local Government Employee (NULGE) Khana Branch.
(3) Local Agric Fadama Gokana III
(4) Agricultural Department Khana Local Government Area
(5) Kibangha Timber Dealers Organization of Gokana.
(6) Bori Timber Dealers Association (BATDA) Khana.

The copies of the questionnaire were administered with the help of five research assistants. The instruments were administered to the respondents after a careful explanation of the content to them. The data analysis involved sample distribution of frequency mean, grand means and Likert type scale. The responses to the questionnaire were scored on four point scale in an increasing order as follows;

| | | | |
|---|---|---|---|
| Strongly Agreed | (SA) | = | 4 |
| Agreed | (A) | = | 3 |
| Disagreed | (D) | = | 2 |
| Strongly Disagreed | (SD) | = | 1 |

The date so generated was organized, analyzed and presented in table for the purpose of clarity. The mean ( $\bar{x}$ ) for each item was obtained using the formula: $\bar{x} = \frac{\sum fx}{N}$ where

$\bar{x}$ = Mean, $\sum$ = add together, f = frequency of occurrence,

N = number of events or observation

For any item in the questionnaire to be accepted, it must score a mean ( $\bar{x}$ ) weight of not less than 2.5. The points on the rating scale in the questionnaire were added and the sum divided by 4 (since it is a four-scale). The average is 2.5. Thus, 2.5 is the separating mean (7) time from which accepted and rejected responses were determined. The null hypothesis was test at 0.05 or 5% level of significance using z-test. The z-test is usually adopted in testing hypothesis about difference between two population

means where the sample size is large [13]. The Z-test statistic is computed using the formula below;

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{SD_x}$$

Where $SD_x$ = standard error of difference between means

$$SD_x = \sqrt{\frac{S^2}{\frac{1}{n}} + \frac{S_2^2}{n_2}}$$

$$\therefore Z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

The null hypothesis was rejected if the Z calculated is greater than Z critical O. Otherwise, it will be accepted.

## 6. Result

### 6.1 Human activities that leads habitat loss

***Table 3*** *Analysis of responses from respondents on how human activities cause habitat Loss.*

| S/No | Research Items | Khana $\bar{X}$ | Gokana $\bar{X}$ | Grand Mean | Remarks |
|---|---|---|---|---|---|
| 1 | Human activities such as industrial undertaking including agriculture, artisanal refining of crude oil cause habitat loss | 3.34 | 3.38 | 3.36 | Accept |
| 2 | Some traditional farming methods such as bush burning and bush fallowing cause habitat loss | 3.17 | 3.29 | 3.23 | Accept |
| 3 | Deforestation and oil spill caused by human are the major causes of habitat loss | 3.59 | 3.18 | 3.39 | Accept |
| 4 | An environmentally illiterate person whose activities causes habitat loss cannot save the environment from depletion | 3.02 | 3.42 | 3.23 | Accept |
| 5 | Lack of awareness of environmental adult education in Ogoni causes habitat loss | 3.37 | 3.39 | 3.39 | Accept |

Table 3 above shows the grand mean of responses of respondents in the two Local Government Areas to research questions one. The entire items were accepted. Items 3 had the highest gran d mean of 3.39, closely followed by item 5 with grand mean of 3.38 indicating that deforestation, oil spill and lack of awareness of environmental adult education are the major causes of habitat loss in Ogoni. From this result it can be concluded that deforestation, oil spill, lack of awareness of environmental adult education, artisanal refining of crude oil and bush burning are the major causes of habitat loss in Ogoni of Rivers State.

### 6.2 The effects of habitat loss on humans

***Table 4:*** *Analysis of Responses from Respondents on the Effect of Habitat Loss on Human.*

| S/No | Research Items | Khana $\bar{X}$ | Gokana $\bar{X}$ | Grand Mean | Remarks |
|---|---|---|---|---|---|
| 6 | Habitat loss affect human health | 3.41 | 3.72 | 3.57 | Accept |
| 7 | Hunger due to loss of farming space and poor standard of living is the effect of habitat loss on human beings. | 2.81 | 3.30 | 3.06 | Accept |
| 8 | Habitat loss reduces the quality and quantity of air for human consumption. | 2.72 | 3.19 | 2.96 | Accept |
| 9 | Habitat loss decreases plants species that could have been a potential medicine sources which in turn affect human health. | 3.30 | 3.46 | 3.38 | Accept |
| 10 | Habitat loss vastly increase or exposes areas to natural disaster like flood and drought, crop failure, spread of disease, and water contamination. | 3.31 | 3.51 | 3.41 | Accept |

The analysis of data on research objective 2 as contained in Table 4 revealed that all the responses indicate that habitat loss affect humans. All the responses have the criterion mean above 2.5. Specially, habitat loss affect human health, causes hunger and poor standard of living, reduces the quality, quantity of air, decrease plant species and increases spread of disease through water contamination. The mean of 3.57, 3.06, 2.96, 3.38 and

3.41, were recorded respectively. This implies that all the above effects caused by habitat loss affect people of Ogoni. A closer look at table 4 further revealed that while habitat loss reduces the quality and quantity of air for human consumption, the grand mean is a little bite higher than the criterion mean. The grand mean of the effect of the habitat loss on human health, hunger caused by habitat loss and spread of disease through contaminated water is far higher than the criterion mean. From this result, it can be concluded that the depletion of plants species, loss of farming space, flood, drought, crop failure, spread of disease and water contamination which are caused by habitat loss have health implication on man.

**Environmental adult education as a means of proffering solutions to the problems of habitat loss**

***Table 5*** *Analysis of Responses from Respondents on the Minimization of Habitat Loss to Reduce Damage to Environmental Health through Environmental Programmes.*

| S/No | Research Items | Khana $\bar{X}$ | Gokana $\bar{X}$ | Grand Mean | Remarks |
|---|---|---|---|---|---|
| 11 | Environmental adult education can increase public awareness on how the forest and oil spill which increases the occurrence of habitat loss can be sustainably managed. | 3.66 | 3.42 | 3.54 | Accepted |
| 12 | Through environmental adult education people can modernize their approach to environmental issues and consumption pattern which contradict the concept of environmental protection. | 3.26 | 3.31 | 3.26 | Accepted |
| 13 | Environmental adult education can sensitize both the public and policy makers on the importance of making and enforcing environmental laws and policies. | 3.55 | 3.29 | 3.42 | Accepted |
| 14 | Acquisition of environmental adult education helps the public to appreciate and understand the impending danger of habitat loss. | 3.33 | 3.35 | 3.35 | Accepted |
| 15 | Awareness creation through environmental adult education will encourage people to embank upon environmental programmes or act in environmental friendly ways. | 3.46 | 3.60 | 3.53 | Accepted |

Analysis of data on research question three as shown on Table 5 revealed that responses to all items indicate that environmental adult education can help in checking or reducing the occurrences of habitat loss. All the items recorded grand means scores that are above the criterion mean. Specifically, the increase of public awareness on the ills of oil spill and deforestation on habitat loss, modernization of approach to environmental issue, sensitizing of both public and law makers on the importance of making and enforcing environmental laws and policies, acquisition of environmental literacy all through environmental adult education recorded grand mean score of 3.54, 3.26, 3.42, 3.34 and 3.53 respectively. This means that there is significant relationship between environmental adult education and the occurrence of habitat loss.

**Test of Hypothesis**

**Ho**: There is no significant difference between environmental adult education and the occurrence of habitat loss.

***Table 6: Z****-Test Analysis of Scores on Environmental Adult Education and the Occurrence of Habitat Loss in Khana and Gokana Local Government Areas.*

| Source of Variance | No | Grand Mean | SD | Z-Cal | Z-Crit | Level of Significance |
|---|---|---|---|---|---|---|
| Khana | 940 | 3.45 | 0.33 | 3.8 | 1.9 | 5% |
| Gokana | 894 | 3.39 | 0.36 | | | 0.05 |

Table 6 above shows the grand mean, standard deviation; Z-calculated and z-critical of data collected from Khana and Gokana Local Government Areas on the difference between environmental adult education and the occurrence of habitat loss. The table indicated that the grand mean of Khana Local Government Area was 3.45 while that of Gokana was 3.39. The data were further subjected to Z-test analysis. The result of the analysis showed that Z-calculated (3.8) is greater than the Z-critical table value of 1.9 (z cal. > z-crit) at 05 or 0.5 level of significance. Based on this result, the null hypothesis is rejected. This implies that there is significant relationship between environmental adult education and the occurrence of habitat loss.

## 7. Discussion

Table 3 revealed that responses to all items indicated that human activities cause habitat loss in Ogoni. All the items recorded or grand mean scores that is above the criterion mean. This implies that all human activities contain in the item 1-5 cause habitat loss in the area of study. Closer look at the table, item 3 which specified deforestation and oil spill to be the major causes of habitat loss recorded the highest grand mean. This indicated that oil spill and deforestation are the major causes of habitat loss. This finding also discovered that artisanal refining of crude oil and agricultural practices contributed to the problem of habitat loss as it recorded a high grand mean score. Other human activities that causes habitat loss in Ogoni as stated in the items include lack of awareness of environmental adult education and illiteracy. From the finding, these scored grand mean that are above the criterion mean

indicating that the people are not environmentally literate and they need environmental adult education. This will help the farmers know the implication of their activities and will in turn act in environmentally friendly ways. Again awareness of environmental adult education would help in reducing the rate of deforestation artisanal refining of crude oil which causes oil spills in Ogoni. The trace of the problem of habitat loss has it root from environmental illiteracy and not until the objectives of environmental adult education are achieved, the problem of habitat loss in Ogoni will remain unsolved. This can only be through the introduction or teaching of environmental adult education and the creation of awareness of environmental adult education in Ogoni. This is in accordance with Aniya- Obi [2] suggestion that in order to create awareness among the rural populace, there should be immediate adoption of environmental adult education as a compulsory subject all level of educational system. This is very vital because from the findings, lack of awareness of environmental adult education in Ogoni cause habitat loss. Petters [14] stressed that awareness creation is necessary among the rural farmers to encourage agro forestry to practice cropping poly-culture and afforestation. Objective 2 examined the effects of habitat loss on human. The result obtained showed that habitat loss affect human health greatly. This stems from the fact that habitat loss decreases plants species that could have been a potential medicine source; it vastly increases or exposes areas to natural disaster like flood and drought, spread of disease and water contamination. Also hunger due to loss of farming space and poor standard of living is quite common as a result of habitat loss. The problem of habitat loss from the finding is not just the loss of a species, there is also loss of the genetic diversity of different types of ecosystem which contribute to or hasten the whole species extinction. This is in line with Leakey's observation, that 50% of the earth species will vanish within 100 years and that such dramatic and overwhelming mass extinction threatens the entire complex fabric of life including homo sapiens [18]. Objective 3 examined the ways through which environmental adult education can minimize the occurrence of habitat loss in Ogoni. Responses to all items indicated that environmental adult education can help in checking or reducing the occurrence of habitat loss. All the items recorded grand means score that are above the criterion means. This implies that all the ways through which environmental adult education can help in checking habitat loss as mentioned above are effective. Hence there are ways through which environmental adult education can help to minimize the occurrence of habitat loss in Ogoni. A closer look at Table 5 further revealed that while through environmental adult education people can modernize their approach to environmental issues recorded grand mean, score that is little bit higher than the criterion mean, public awareness on how the forest and oil spill can be sustainably managed, environmental adult education can sensitize both the public and policy makers on how importance is making and enforcing environmental laws and policies. Awareness creation through environmental adult education will encourage people to embark upon or act in environmentally friendly ways as the recorded grand mean scores are far higher than the criterion mean. This confirmed that environmental adult education is the solid foundation through which the people can be aware of how to check the occurrence of habitat loss in Ogoni. This is in line with Raven [15] who saw increased public awareness as a major way of solving the problem of habitat loss. Anthony [1] also submitted that the gospel of sustainable forest management cannot be effectively propagated without adequate awareness about the environment. Through environmental adult education, the individual and the community will gain better awareness about their environment and thereby acquire the knowledge, values, skill and experience that will spur them to act individually and collectively to solve the present and future environmental problem.

## 8. Summary and Conclusions

The human activities that cause habitat loss include oil spill, deforestation, bush burning and artisanal refining of crude oil. Environmental illiteracy and lack of awareness of environmental adult education is the contributing factor in Ogoniland. The effects of habitat loss on humans include poor quality and quantity of air for human consumption, spread of diseases through water contamination and decreases plants species that could have been a potential medicine source. The relationship between environmental adult education and the occurrence of habitat loss is that, through environmental adult education, deforestation and oil spill can be sustainably managed. Also environmental adult education enhances people's awareness on environmental issues. Environmental adult education sensitizes both the public and policy makers on the importance of making and enforcing environmental laws and policies; help people to understand the impending dangers of habitat loss and encourage people to act in environmentally friendly ways. Based on the findings of the study, it is concluded that, there is significance relationship between environmental adult education and the occurrence of habitat loss in Ogoni. The Ogoni people are instrumental to the destruction of their God-given environment. This is with particular reference to people that are involved in the act of deforestation, causing oil spill, carrying out bunkering business, practicing artisanal refining of crude oil which degrades the environment as no oil company has been in operation in Ogoni since 1994 till date. The ultimate result of habitat loss includes poor health, poor standard of living, and unsustainable management of their natural resources.

## References

[1]. Anthony, G. B. (2002). Sustainable Development Through Environmental Adult Education: Calabar. Glad Tiding Press Ltd

[2]. Anijah-Obi, F. N. (2002). Fundamental of Environmental Education and Management: Calabar University of Calabar Press Ltd.

[3]. Badejo, C. (2004) Endangered Species. Retrieved June 8, 2017. http://endong/fivs.gov.us/fish/wildlife/serve.

[4]. Baird, J. (2010 July 26). Oil Shame in Africa. New Week 27. Retrieved March 8, 2017. Htp//en wikipedian//wiki/environment News –Week

[5]. Barbault R and Sastrapradia, S. D. (2003).Generation Maintenance and Loss of Biodiversity. Global Biodiversity Assessment. Cambridge University Press. Combridge.

[6]. Bodo, T (2018). Community understanding of the environmental and socio-economic consequences of petroleum exploitation in Ogoni, Rivers State. International Journal of Advanced Research and Publications. 2(11): 51-55

[7]. Bodo, T. and David, L.K (2018). The petroleum exploitation and pollution in Ogoni, Rivers State, Nigeria: the community perspective. European Scientific Journal. 14(33): 33-40.

[8]. Gorman, J. (2010). The Total Penguin. New York Prentice Hall Press.

[9]. Legborsi, P. (2005). The Impact of Oil Spills on Biological Diversity. The Ogoni Experience FF03/2005/ws/02/ih. Retrieved March 7, 2011 htt://www.unep.org/pdf/fdf/misgess r-1 polf.

[10]. Legborsi, P. (2007). August 27-29). The advert impacts of oil pollution on the Environment and Well Being of a Local Indigenous Community Experience of the Ogoni People of Nigeria. Retrieved March 2, 2017. http//www.urup.org/pdf/fmallmks Loss x – 8 Polf.

[11]. Lockley, R. (2010). Penguins Seabirds of the World. New York.

[12]. National Wildlife Federation (2008). Back Yard and Habitat Programmes Retrieved June 29, 2017. http//www.nwf.org/habitats

[13]. Nworgu, B. G. (1991). Educational Research Basic Issues and Methodology: Ibadan Wisdom Publishers Limited.

[14]. Petters, W. (2000). Nigerian Environmental Education and Management: Calabar. Centre press Ltd.

[15]. Raven, P. (2000). Environment (3rd Ed): U.S.A Library of Compress in Cataloging in Publication Data.

[16]. Saro-Wiwa, K. (1995) Complete statement by Ken Saro-Wiwa to Ogoni Civil Tribunal, Available (online) http://www.ratical.org/corporations/KSWstmt.html.

[17]. UNEP (2011). Environmental Assessment of Ogoniland. Nairobi, Kenya: United Nations Environment Programme.

[18]. Wikipedia the Free Encyclopedia (2009). Effects of Deforestation on Wild Life Retrieved June 8, 2011.http://en.forest.wikipedia/wiki/environment.of/Wildlife.

[19]. Wikipedia the Free Encyclopedia (2010). Environmental Issues Niger Delta of Nigeria Retrieved March 1, 2011. http://ebwikipedia.org/mkd//environmental/Issue/niger/delta.

[20]. Wikipedia (2012). Rivers State Geo-Political Zones: Retrieved April 2, 2012.www.nd/wiki/rivers/state/gov.com

## Author 1 Profile

Gimah, Batombari Gbidum obtained B.Sc in Adult and Community Education from the Rivers state University; M.Ed in Adult and Non Formal Education (Environmental Adult Education) from the University of Port Harcourt. He is currently serving as a researcher with the Department of Adult and Non Formal Education at the university of Port Harcourt.

## Author 2 Profile

Dr. Tombari Bodo received the Bachelor of Science (B.Sc) in Geology, Postgraduate Diploma (PDGEM) and Master of Science (MSc) in Geography and Environmental Management from the University of Port Harcourt. He has Doctor of Philosophy (PhD) in Environment and Development from the Department of Geography and Natural Resource Management of the University of Uyo. He also has a Postgraduate Diploma in Education (PGDE) from the National Open University of Nigeria. He is an environmental consultant and currently working as a researcher with the Department of Geography and Natural Resource Management of the University of Uyo.