

Impact of Oil Spillage in The Ecosystem of Two Communities in Rivers State, Nigeria.

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Abstract: This research study impact of oil spillage in the ecosystem of two communities in Rivers State, Nigeria. The specific objectives were to analyse the impact of oil spillage on fishing activities, and evaluate the Impact of contamination of soil and ground water on farming activities in Ogba and Bodo Communities. A total of 200 respondents were conveniently sampled. The data was collected using structured questionnaire. It was analysed using quantitative method (simple percentage, tabular computation, Likert criterion mean and Pearson Moment Correlation Coefficient with the aid of SPSS) 0.05 significant level. The result showed that oil spillage affects fishing activities in Ogba and Bodo Communities in Rivers State with $R=0.861$, and $N=8$ with statistical significant at $P(0.001)<0.05$, this implies that degradation as a result of oil spillage is very high and has negatively affect fishing activities in Ogba and Bodo. It further revealed that contamination of oil and underground water negatively affect farming activities in Ogba and Bodo communities with $R=0.859$, $N=8$ with statistical significant at $p(0.002)<0.05$. This implies that the soil contamination and underground water is very high and has greatly affected farming activities negatively in Ogba and Bodo, communities from this observation it is seen that oil spillage has negative effect on fishing/farming activities in Ogba and Bodo communities by destroying farmland, crops, vegetables, oil nutrients, low yield etc. In the same vain we observed that contamination of soil and underground water negatively affect farming activities in Ogba and Bodo communities in Rivers State by poisoning the soil, making crops unsafe for consumption, discouraging farmers, destroying sea food, leading to shortage of food and poor living standard. This goes to prove that the people's major source of livelihood has been negatively affected by degradation arising from oil and gas activities. The study concluded that oil spillage has negatively affected farming and fishing activities in Ogba and Bodo communities in Rivers State. And contamination of soil and ground water has also negatively affected farming and fishing activities in Ogba and Bodo communities in Rivers State and is recommended that the need for implementing the appropriate federal laws relating oil exploration to ensure that oil companies operating in the Rivers State communities do so in compliance with proper environmental standards and international best practises. Oil and gas firms in Rivers state should be made to constantly pay huge compensation for degradation arising from their negligence.

Key words: Ecology, Ecosystem, Economics, Environment

INTRODUCTION

It is a truism that activities associated with oil exploration, development and production in the Niger Delta have got the good, bad and ugly sides. The good side is the supposed revenue and subsequent better standard of living for the people. The bad and ugly sides are the environmental degradation which in turn has adverse effect on the ecosystem. (Onyenze, 2015).The effect of degradation can be detrimental to the environment-atmosphere, soils and sediments, surface and groundwater, marine environment, biological diversity and sustainability of terrestrial ecosystems in the Niger Deltaparticularly River State (Snowden and Ekweozor, 1987).

The inadvertent discharges of petroleum hydrocarbons into the environment often pose threats to human health, safety and the environment, and have significant effect on ecosystem. Evidence of acute and chronic toxicity demonstrates the potential toxic and negative impacts of petroleum-derived wastes on the tropical environment. However, some of the multinational oil companies operating in Rivers State like other the Niger Delta states have failed to adopt best practice strategies for risks mitigation and comply with environmental regulations. The poor environmental management practices by the petroleum industries and the failure of Nigeria's environmental regulations contribute towards environmental contamination with direct consequences on the surrounding populations' socio-economic wellbeing, human health and the environment. Environmental contamination,

human health risks, safety and the environment, and negative socio-economic consequences of most petroleum pollution in the world depend on the intersection of the event, the geographic setting, the characteristics of the regional population, corporate governance systems and political economy(Olajire, Altenburger, Küster, and Brack 2005),.

In recent time, the issue of sooth (black sooth) which is a by-product of hydrocarbon emission into atmosphere has become an issue of public concern. The government and multinational companies have been accused of focusing on the wealth maximization aspect of crude oil and being careless about the environment degradation and its ecological effect. The ecological effect of environmental degradation is seen in the areas of gas flaring,

Under normal circumstances, the availability of oil and its subsequent exploration and exploitation are supposed to be a blessing to the people. But whether this is the case in Rivers state remains an issue of debate. This is because the economic impact of degradation has come with the good, the bad, the ugly. Ideally, the discovery of oil in Rivers state is supposed to better the life of the people in terms of improvement in sources of livelihood, human capital development, standard of living, environmental sustainability, revenue generation for the state. But what is currently in place is a situation where environmental degradation arising from oil exploration has made life more difficult for the

people of Rivers State. The core sources of livelihood of the people which include farming and fishing have been destroyed by oil pollution which has adverse effect on the environment. The health of the people is not left out as sources of drinking water have been contaminated; the aquatic animals consume some of the hard-metallic substances which are in turn consumed by humans. In addition, the gas flaring and other hazardous chemicals have put the life of the people at great risk. Some analysts believe that the economic benefit of this environmental degradation does not commiserate with the damage it causes to the ecosystem.

The most worrisome aspect of this menace is the fact that not much academic studies have been carried out on this subject matter thereby creating a knowledge gap. Consequent upon this, it is pertinent that this study be carried out to examine the impact of oil spillage on the ecosystem of two communities in Rivers State, namely Ogba and Bodo.

Objective of the Study

The main objective of this work is to carry out an investigation of the impact of oil spillage on the ecosystem of Rivers State. It will specifically investigate the following, to:

1. analyze the impact of oil spillage on farming activities in Ogba and Bodo communities in Rivers state
2. evaluate the impact of contamination of Soil and Groundwater on farming activities in Ogba and Bodo communities in Rivers state

LITERATURE REVIEW

Man, in his endeavour to satisfy his needs and aspiration for better living condition through resource exploitations, have created an increasing number of environmental problems. In spite of the "blessings" from petroleum products, in particular oil and gas, there are negative impacts on human, ecology and the environment (Oyegun, 1997). The socio-economic problems include, amongst others, poverty, unemployment, ecological deficiencies, health hazards and poor infrastructural development all resulting in low life expectancy rate.

An oil spill according to Osuji, (2004), is a release of a liquid petroleum hydrocarbon into the environment due to human activity, and is a form of pollution. Most human-made oil pollution comes from land-based activity, but public attention and regulation has tended to focus most sharply on seagoing oil tankers (Nwilo, and Badejo, 2001).

For instance, on January 20, 1997 oil spill occurred at the Awoba flow station (now Bille II) and a large quantity of crude oil spilled into the entire Emo-Pepelye creek causing extensive damage to the aquatic lives therein. Even the connecting creeks and mangrove forests were devastated. Shell's contractors cleaned the spill, but no compensation was paid. The negotiation for compensation broke down between Shell and the community peoples and other events subsequently over took the process. (Wokocha, 2011).

Ageing oil and gas production facilities often discharge significant volumes of petroleum hydrocarbon into the agricultural land. For example, there have been several cases of crude oil spillages at farmland in Ogba and Bodo and so on, resulting from leakages of aged and corroded wellhead. There are several cases of petroleum contamination of soils and sediments in the Niger Delta area that are linked to accidental or operational discharges of either crude oil and/or petroleum-derived chemical wastes.

In 2006, the Federal Government of Nigeria launched the assessment to identify, evaluate and minimize the immediate and long-term environmental, human health, socio-economic impacts of oil contamination in Ogoni community. It is widely known that high concentrations of organic and inorganic contaminants in soil environment often cause contamination of groundwater, degradation of land, pose significant adverse effects on human health and other ecological receptors. Although effective management of contaminated land is essential for risks mitigation, environmental contamination associated with petroleum exploration and production in the Ogoni community has not yet been addressed properly. (Kamalu, &Wokocha, 2012).

The discharges of petroleum hydrocarbon and petroleum-contaminated production wastes in freshwater environments and overflowing of oily wastes in burrow pits during heavy rains has had deleterious effects on soil and several sources of controlled waters (Ebeku, 2002). According to Ayotamuno et al. (2006), groundwater contamination resulting from the leakage of crude oil and refined petroleum products during Groundwater evaluation is increasingly tilting toward a watershed approach due to large-scale contamination, resulting from urban development, rapid population growth, and land use changes (Ophori,2016). Contamination of controlled water sources in the Niger Delta have made the people to resort to drilling borehole for drinking water, therefore, the protection of groundwater supply is importance to help mitigate potential risks associated with petroleum contamination. The specific communities where degradation has affected specifically are discussed below:

Pollution of soil and ground water is a major problem with up the 60 sites needing urgent treatment across Ogbaland which is one of the largest oil producing tribes in the Niger Delta region of Nigeria and made up of three groups Usomini, Igburu and Egi (which differ in customs, traditions and speech not-with-standing the universal territorial spread of the Onubdos) in Rivers State of Nigeria. Millions of tonnes of hazardous waste are added to soil and even reach underground water. Several dumping sites become veritable health hazards and unrecoverable loss of the concerned land results. The problem is severely felt by Ogba people today and will be apparent elsewhere as the industrial progress and economic growth occur. (Ononugbo, 2016).

On the 22 of August 2014, the Chairman of the Governing Board of the National Oil Spill Detection and Response Agency (NOSDRA), Major Lancelot Anyanya (Rtd), has said oil spills caused ecological damage in Omoku and Ogbaland in Rivers State. Major Anyanya spoke when he led a delegation from NOSDRA to assess the impact of oil spills in Omoku. He noted that Omoku and Ogbaland were among the areas in the Niger Delta that had suffered extensive ecological damage as a result of oil spills. According to him, across Ogbaland, negative medical conditions, hitherto unknown to the locality, are being observed due to colossal environmental degradation from oil spills. (Vanguard Newspaper, 2014).

The oil originates from leaking pipelines, wellheads, and flow stations; from spills in connection with transport of mostly stolen oil; from illegal tapping of the wells; and from artisanal refining under very primitive conditions. As a result of the contamination

of oil in mangroves and wetlands as well as on land, oil has penetrated into soils down to several meters and has contaminated ground waters over large areas. This has resulted in the contamination of water wells as a particularly serious concern from a human health perspective (Moffat and Linden 1995; Ana et al. 2009; Mmom and Arokoyu 2010; UNEP 2011).

During 2009–2011, at the request of the Federal Government of Nigeria, the United Nations Environment Programme (UNEP) carried out a survey of the nature and extent of oil pollution in Ogoniland. The assessment covered contaminated land, ground and surface water, sediments, vegetation, air pollution, public health, industry practices, and institutional issues. The assessments were made in collaboration with a number of partners in the region including experts from Rivers State University of Science and Technology, Nigerian Government, agencies at national, state, and local government levels, traditional rulers, and various community groups. An additional objective was to determine appropriate remediation measures to rehabilitate contaminated sites to the level of international standards. The full report including the results from all the assessments and the recommendations regarding rehabilitation and remediation was published in 2011 (UNEP 2011). The results presented in this report were collected as a part of the UNEP assessment and focus on the petroleum hydrocarbon contamination of surface waters, drinking water from wells, sediment, and biota.

The 2012 report of the United Nations Environment Programme on the pollution of Ogoni land remains the most significant confirmation of the devastation caused by oil exploitation in the Niger Delta region. According to reports, it was observed that apart from the farmlands and fishing grounds, the devastation is already having a telling effect on the mangrove forests of the Niger Delta and its eco system. Many residents in Ogoniland, many of whom are farmers and fishermen have been complaining that they are suffering as a result of the spillage which has destroyed most of their means of livelihood.

“The devastation caused by oil spillage has destroyed many lives and livelihoods and is clearly one of the reasons many people in that region lost faith in government and resorted to the many criminal activities we are seeing in the region today. “The action our government took to implement UNEP’s recommendations has given the indigenes of the region hope that there are better days ahead. Let me, therefore, express appreciation on behalf of the Government of Nigeria to UNEP and other development partners for their cooperation and support on this very delicate matter and also request for their continued support as we implement the recommendations and transform the fortunes of the region.

Artisanal fishermen in these communities incurred higher costs of production and poor fish harvest presumably as a result of oil exploitation activities leading to lower profit for fishing activities. (Chindah&Braide). Oil canals and network of pipelines is making it impossible and dangerous for people to undertake economic activities on it. This ugly trend have increased the vulnerability of households and hence leading household heads to seek non-existent means of livelihood. Mendie (2014).

Even though the Nigeria government has taken steps to the reduction of the effect of degradation through the launching of the UNEP report in Ogoniland, it is the perception of the writer that more efforts still need to be put in place particularly now that the “black suit” issue is threatening the health of Rivers people. (Onyenze, 2016).

Ejiba, Onya and Adams (2012), studies the negative impact of oil pollution in Nigeria with particular reference to the Niger Delta region. It took a look at the fact that the region provides a majority of Nigeria’s revenue and foreign exchange earnings but bear an exclusive brunt of oil exploration and exploitation is quite an irony. They maintained that oil spillage and gas flaring over the years has been at the heart of environmental degradation in the Niger Delta with an average of about 700 spills recorded annually; while gas flaring has continued unabated in spite of been an illegal activity as prescribed by law. In spite of the report(s) by oil companies that majority of oil spills in the region is due to sabotage; neglect on the part of IOC’s and ageing infrastructure have equally contributed to the high incidence of oil spill and gas flaring as experienced in the region.

Atubi, (2015), examined the effects of environmental degradation on human health innine selectedoil communities in Delta State, Nigeria. Each community agreed that they werevulnerable toenvironmental degradation. InAfiesere(33.3%)were vulnerable,82.2%werevulnerableinOkpai,77.8%inKwale,72.5% atBenekuku,82.6%atErhoike,73.3%atEkakprame,97.7%atUbeji,95.2% at Uzereand86.7% at Bomadi.

In a study, Dung et al (1998)investigated the spatial variability effects of gas flaring on the growth and development of cassava (*Manihotesculenta*), waterleaf (*Talinumtriangulare*), and pepper (*Piper spp.*) crops commonly cultivated in the Niger Delta, Nigeria. The results suggest that a spatial gradient exists in the effects of gas flares on crop development. Further, assessment of the PAH compound ratios, phenanthrene/ anthracene and fluoranthene/ pyrene, suggested that predominant present of PAHs of pyrogenic sources in surface soils is an indication that oil leakage and/or gas flaring contributes to soil contamination¹.

Oyebamiji, Adekola& Igwe1 (2013) assessed the effects of oil spillage on community development in the Niger Delta Region of Nigeria with a view to determine its adverse effects on poverty and hunger and its eradication in the region.

METHODOLOGY

The correlational design is adopted in this research with a population of two communities, namely: Ogba andBodo.

Sampling involves selecting a representative number from a given population where it is believed that a common feature exists among the elements of a given population. (Baridam, 2001).

The sample to be used for this study is 100 community members from the two communities under consideration. The non-probability convenient method was adopted in this work. The non-probability convenience method is a method where the writer determines his sample based on familiarity, availability and easy access to such sample (Baridam 2005). So in this work, the researcher will take into consideration the willingness of the available aging population to co-operate with the researcher.

So in this work, the researcher conveniently selected 50 respondents from each of the two communities, so that a total of 100 respondents will be selected. This is analyzed in the table below:

| s/n | Name of communities | Number of questionnaire to be distributed | Number of questionnaire retrieved |
|-----|---------------------|---|-----------------------------------|
| 1 | Ogba | 50 (50%) | 50 (100%) |
| 2 | Bodo | 50 (50%) | 50 (100%) |
| | Total | 100 (100%) | 100 (100%) |

Source: author's computation

The primary data method of data collection will be used. The instrument for data collection will be the questionnaire which will be distributed to the respondents.

The relationship between the scores from the first and second administered questionnaires were correlated using Pearson's product correlation coefficient. The correlation coefficient (r) of 0.79 was achieved.

The data was analyzed using quantitative method with the aid of simple percentage, tabular computation, criterion mean and correlation analysis with the aid of SPSS. A total of 100 copies of questionnaires were distributed. The simple percentage research questions will be structured based on Likert-scale formula of **Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed**. The 5-dimension of the variables were measured on a 5-point Likert type scale on 5 item scale

On the other hand, the Pearson Product Moment Correlation Statistics was used to test all the hypotheses at 0.05 significance level in order to determine how strong the relationship is between the dependent and independent variables. The coefficient value can range between -1.00 and 1.00. If the coefficient value is in the negative range, then that means the relationship between the variables is negatively correlated, or as one value increases, the other decreases. If the value is in the positive range, then that means the relationship between the variables is positively correlated, or both values increase or decrease together. The acceptance or rejection standard on tested hypotheses will be based on the values of correlation coefficient and p-value at 0.05 degree of freedom. Thus, reject the null hypothesis (H₀) if the p-value is less than 0.05 otherwise accept.

Pearson Correlation Coefficient Formula

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

where;

- r= correlation coefficient
- N=Number of pairs of scores
- ∑XY=sum of the products of paired scores
- ∑X=sum of X scores
- ∑Y=sum of Y scores
- ∑X²=sum of squared X scores
- ∑Y²=sum of squared Y scores

RESULTS AND DISCUSSIONS

Percentage response for oil spillage on farming activities

From the questionnaire distributed, 162 (90%) respondents are in agreement with the fact that Oil spillage destroy farmlands whereas 15(8%) did not agree. 3 (2%) person remained neutral. The response also shows that 155(86%) admitted that Oil spillage destroy crops, while 22(12%) did not agree. 4 persons representing 2% remained neutral. It also revealed that 163(91%) respondents are in agreement with the fact that Oil spillage contaminates soil nutrient, whereas 15(8%) did not agree. 2 persons representing 1% remained neutral. Also, 157(87%) respondents are in agreement with the fact that Oil spillage lead to low yield, while 20(11%) did not agreed. 2 persons representing 1% remained neutral. 168(93%) respondents are in agreement with the fact that Oil spillage poisons food, whereas 12(7%) did not agree. 0 persons representing 0% remained neutral. In addition, 159(88%) respondents are in agreement with the fact that Oil spillage kills fishes, while 18(10%) did not agreed. 3 persons representing 2% remained neutral. A total of 80(88%) respondents are in agreement with the fact that oil spillage makes the water unsaved for fishermen, whereas 18(10%) did not agree. 4 persons representing 2% remained neutral. It further showed that 165(92%) respondent are in agreement with the fact that oil spillage destroys the eggs and multiplication process of sea food, whereas 14(8%) did not agree. 1 person representing 0.5% remained neutral.

Contamination of soil and ground water on farming activities

From the questionnaire collected, 160 (89%) respondents are in agreement with the fact that contamination of soil and groundwater affect farming activities whereas 18(10%) did not agree. 2 (1%) person remained neutral. The response also shows that 162(90%) admitted that contamination of soil and groundwater poisons the soil, while 14(8%) did not agree. 4 persons representing 2% remained neutral. 160(89%) respondents are in agreement with the fact that contamination of soil and ground water make crops unsaved for consumption, whereas 17(9%) did not agree. 3 persons representing 2% remained neutral. Also, 157(87%) respondents are in agreement with the fact that Contamination of soil and groundwater discourage farmers, while 13(10%) did not agreed. 5 persons representing 3% remained neutral. A 168(93%) respondents are in agreement with the fact that contamination of soil and groundwater destroys sea foods, whereas 10(5%) did not agree. 2 persons representing 1% remained neutral. In addition, 159(88%) respondents are in agreement with the fact that contamination of soil and groundwater leads to low yield, whereas 18(10%) did not agree. 3 persons representing 2% remained neutral. A 154(86%) respondents are in agreement with the fact that contamination of soil and groundwater leads to shortage of food, while 18(11%) did not agreed. 8 persons representing 4% remained neutral. Furthermore, 163(91%) respondents are in agreement with the fact that contamination of soil and groundwater leads to poor living standard, while 14(7%) did not agreed. 3 persons representing 2% remained neutral.

For further clarity and accuracy, the null hypotheses are tested using Pearson Moment Correlation Coefficient with the aid of

Statistical Package for Social Sciences (SPSS) at 0.05 level of significance.

H0₁: Oil spillage does not negatively affect fishing activities in Ogba and Bodo Rivers State.

4.6. Summary of results

Table 4.4 Pearson Moment Correlation Coefficient for Oil spillage and farming activities.

| | | Oil spillage | Farming activities | Hypotheses | P value | P value | N | Sig level | Remark |
|--------------------|---------------------|--------------|--------------------|--|---------|---------|---|-----------|----------|
| Oil spillage | Pearson Correlation | 1 | .861 | H ₀ ₁ : Oil spillage does not negatively affect fishing activities in Ogba and Bodo communities in Rivers State | .001 | .861 | 8 | 0.05 | Rejected |
| | Sig. (2-tailed) | | | | | | | | |
| | N | 8 | 8 | | | | | | |
| Farming activities | Pearson Correlation | .001** | 1 | H ₀ ₂ : Contamination of soil and underground water does not negatively affect farming activities in Ogba and Bodo in communities Rivers State | .002 | .859 | 8 | 0.05 | Rejected |
| | Sig. (2-tailed) | .861 | | | | | | | |
| | N | 8 | 8 | | | | | | |

** Correlation is significant at the 0.05 level (2-tailed).
The result of the hypothesis 1 above revealed that Oil spillage affect fishing activities in Ogba and Bodo communities in Rivers State with $r = 0.861$, $N = 8$, with statistical significant at $P (0.001) < 0.05$. This implies that Oil spillage does affect fishing activities negatively in Ogba and Bodo communities in Rivers State. Consequently, the null hypothesis which states that oil spillage does not affect farming activities in Ogba land and Bodo Rivers State is hereby rejected and the alternative accepted.

Contamination of soil and underground water does not negatively affect farming activities in Ogba and Bodo in communities Rivers State

H0₂: Contamination of soil and underground water does not negatively affect farming activities in Ogba land and Bodo Rivers State.

Table 4.5 Pearson Moment Correlation Coefficient for contamination of soil and underground water on negative effect on farming activities in Ogba and Bodo

| | | Soil And ground Water | Farming activities | Hypotheses | P value | P value | N | Sig level | Remark |
|-----------------------|---------------------|-----------------------|--------------------|--|---------|---------|---|-----------|----------|
| Soil and ground Water | Pearson Correlation | 1 | .859 | H ₀ ₂ : Contamination of soil and underground water does not negatively affect farming activities in Ogba and Bodo in communities Rivers State | .002 | .859 | 8 | 0.05 | Rejected |
| | Sig. (2-tailed) | | | | | | | | |
| | N | 8 | 8 | | | | | | |
| Farming activities | Pearson Correlation | .002** | 1 | H ₀ ₁ : Oil spillage does not negatively affect fishing activities in Ogba and Bodo communities in Rivers State | .001 | .861 | 8 | 0.05 | Rejected |
| | Sig. (2-tailed) | .859 | | | | | | | |
| | N | 8 | 8 | | | | | | |

** Correlation is significant at the 0.05 level (2-tailed).
The result of the hypothesis 2 above revealed that contamination of soil and underground water negatively affect farming activities in Ogba and Bodo communities in rivers state with $r = 0.859$, $N = 8$, with statistical significant at $P (0.002) < 0.05$. This implies that contamination of soil and underground water does affect farming activities negatively in Ogba land and Bodo Rivers State. Consequently, the null hypothesis which states that contamination of soil and underground water does not negatively affect farming activities in Ogba and Bodo communities in Rivers State is hereby rejected and the alternative accepted.

From the tested hypotheses it can be observed that oil spillage has negative effect on farming activities in Ogba land and Bodo by destroying farmlands, crops, vegetation, soil nutrients, causes low yield, kills fishes, makes water unsave for fishermen and destroys the eggs and multiplication process of sea food. This is indicated in the mean score of $4.5 > 3.0$ and the probability value of 0.001 which is less than the 0.05 the acceptable level of significance. Also, the R-value of 0.861 is positively high, while $N = 8$, thereby showing that oil spillage has negative effect on farming activities in Ogba land and Bodo Rivers State. This is to say that degradation has indeed brought some hardship to Rivers people particularly those in Ogba and Bodo whose original occupation used to be tied to farming and fishing activities.

In the same vein, from the table it can be observed that contamination of soil and ground water negatively affect farming activities in Ogba and Bodo communities in Rivers State by poisoning the soil, making crops un-save for consumption, discouraging farmers, destroying sea foods, leading to shortage of food and poor living standard. This is indicated in the mean score of $4.5 > 3.0$ and the hypothesis test result which is significant at a probability value of 0.002 and R value of 0.859 .

This goes to prove that the people major sources of livelihood have been negatively affected by degradation arising from oil and gas activities.

The finding of this work is in line with Ejiba, Onya and Adams (2012), who studied the negative impact of oil pollution in the Niger Delta region and concluded that oil spillage and gas flaring have continued to impact negatively on the people of the region causing destruction of the environment, while causing significant damage on livelihood of mostly farming and fishing communities.

This result also conforms with the work of Oyebamiji, Adekola & Igwe (2013) who assessed the effects of oil spillage on community development in the Niger Delta Region and discovered that oil spillage causes poverty, health challenges and food contamination. It is also in line with a study by Edino et al. (2012) who found that the Niger Delta residents are negatively affected by gas flaring which are hazardous to health, environment, and general well-being of the oil-producing host communities.

CONCLUSION

Based on the findings of this study as indicated above, it was concluded that oil spillage have negatively affected farming and fishing activities in Ogba and Bodo communities in Rivers state. Contamination of Soil and Groundwater has also negatively affected farming and fishing activities in Ogba and Bodo communities in Rivers state

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