ASJ: *International Journal of Health, Safety and Environments (IJHSE)*
Vol. 6 (01) 25 January, 2020, Pp. 462 - 472
www.academiascholarlyjournal.org/ijhse/index_ijhse.htm
ISSN: 2360-9311©Academia Scholarly Journals
Indexed In: Directory of Research Journals Indexing - http://www.drji.org
Also Available@; Internet-Archive@Ekpenyong_and_Sotonye, OR; Archive.org/Ekpenyong_and_Sotonye
Open access

Full Length Research

Assessment of Oil Spillage and Livelihood Performance in the Niger Delta Region. A Case Study of Gokana Local Government Area, Rivers State, Nigeria

*Alfred Stephen Ekpenyong and Sotonye Samuel

Faculty of social sciences, Department of Sociology, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.

*Corresponding Author's: E-mail Address ✉: Alfyny93@yahoo.com; Phone no ☎: +2348027907268

Accepted December 20, 2019

The study examined oil spill and livelihood performance in Niger Delta region. The study used environmental sustainable development theory to analyze the missing links in the research work. The sample selected for the study comprised 419 indigenes of Gokana LGA, Rivers State. Data collected for the study were analyzed using mean, standard deviation and simple percentage. Findings from the study affirmed that oil spillage adversely affects agricultural productivity, for instance as indicated in the analysis Cassava production has declined compared to era of pre-oil spillage with an accepted mean and standard deviation scores of 4.01 and 2.01 respectively. Based on the findings, the study Recommended among others that oil companies should engage in preventive measures to mitigate the risk of oil spillage as well as ensuring transparency with regard to payment of compensation to the affected individuals in the area of study. Thus, this paper highlights the oil spillage and livelihood performance in the Niger Delta and reflects on the oil industry failure on environmental protection as contained in the UNEP reports on quality of the environment which contribute to the disease burden of the immediate community. The study reinforces the data in several researched studies on oil spills and its impact on the livelihood of the local populations in the Niger Delta region.

Key words: Agriculture, Agricultural Productivity, Environment, Oil spillage.

INTRODUCTION

Over the years, crude oil has had profound impacts on the world's civilization than any single natural resource in recorded history. Nigeria is one of the leading oil-producing countries in Africa and It is ranked the eight-leading producer in the world. Since her first export in 1956, the commodity has become the center piece of Nigeria's foreign exchange. Interestingly, all of Nigeria's oil and gas resources come from its Niger Delta region, occupied by a mosaic of indigenous nationalities (Kadafa, 2012).

Before the discovery of crude oil, agriculture was the dominant occupation of the people. Crude oil was discovered in commercial quantity in the South-

South region, specifically in Oloibiri, Bayelsa State in 1956. Spillages occur due to oil well blowout, corrosion of oil pipelines, accidental discharges and vandalization. These oil spillages can lead to underground leakages which have impacts on the environment in the form of underground water pollution, soil pollution, health effect and destruction of vegetation (Ikhajiagbe and Anoliefo 2011). Oil spills have a significant impact on the natural resources upon which many poor Niger Delta communities depend. Drinking water is polluted, fishing, and farming are significantly impacted and ecosystems are degraded. It affects the health and food security of rural people living near the facilities. Additionally, oil spills and associated impacts of oil and gas operations have impacted the biodiversity and environmental integrity of the Niger Delta region (Nwilo and Badejo, 2005b). Oil Spillage on farmlands is as a result of crude oil exploitation, the soil (receptor) is soak up by the oil like sponges and prevents the lenticels of crop to absorb oxygen, hence oxygen starvation (Egwu, 2012).

Statement of the Problem

The Niger Delta region is a paradox characterized by endemic poverty in the midst of abundant natural and financial resources. The region's ecosystem has therefore been declared one of the most endangered ecosystems in the world (Anejionu et al., 2015). Poverty is pervasive and yet the revenues generated from oil and gas extraction in the Niger Delta region are responsible for 90% of Nigeria's exports and 80% of public revenues. According to the 2006 National Population Census, the population of the Niger Delta is 31 million (Nigeria Bureau of Statistics, 2006) and predominantly depend on the environment – principally agriculture and fisheries for their source of livelihood (Oyinloye, and Olamiju, 2013). The National Bureau of Statistics (2004) further indicated that 50% of the active labour force in the Niger Delta region predominantly cultivates food crops such as cassava, yam, plantain, maize, cocoyam and vegetables. However, The Niger Delta region environment is highly degraded due to the intensive exploitation of oil and gas resources caused by oil spills, gas leaks, flares and land degradation, flooding, and erosion (UNEP, 2011).

In Gokana Local Government Area, oil spills have posed a major threat to the environment, which has led to total annihilation of the ecosystem. Thus, life in the area has become increasingly unbearable due to the ugly effects of oil spills. As important as oil management seem to the nation's economy, the people perceive the discovery of oil as a threat to their life support system which is the land. A vast array of agricultural farmlands and products were destroyed in the area causing fish genocide and destroying other environmental resources, as well as affecting the health and general living conditions of the people living in the study area and its environment. Productive farmlands have been lost to oil production operations in the communities, as excessive oil exploration and seismic activities in the area have had negative reverberations for soil toxicity and quality of crops (Ordinioha, 2008 and Philip, 2016) It is therefore the aim of this study to investigate and evaluate these views as well as the impact of spills on agricultural production on the people of Gokana Local Government Area, through the following objectives and research questions:

Studies from scholars have shown that Oil spillage is a global issue that has been occurring since the discovery of crude oil, which was part of the industrial revolution. Oil spills have posed a major threat to the environment of the oil producing areas, which if not effectively checked can lead to the total destruction of ecosystems. Studies have shown that the quantity of oil spilled over 50 years was at least 9-13 million barrels, (Okpuri, and Ibaba, 2008). Human activities and those of oil exploration and exploitation raise a number of issues such as depletion of biodiversity, coastal and riverbank erosion, flooding, oil spillage, gas flaring, noise pollution, sewage and waste water pollution, land degradation and soil fertility loss and deforestation, which are all major environmental issues.

The Department of Petroleum Resources (DPR) Annual Statistical Bulletin (2014) gives a summary of oil spill incidence report and incidence summary. it can be deduced that about 65.13% of oil spilled in 2014 was due to sabotage; 17.38% was by yet to be determined causes; 14.35% was as a result of natural accidents, corrosion, equipment failure and human error; while 3% was due to "mysterious" circumstances. These estimates as conservatives as they seem are constantly been disputed by oil companies who argue that the bulk of the oil spill (as much as 90%) occurring in the region are caused by sabotage or vandalism.

Fish is a major source of animal protein for

inhabitants of the Niger Delta region and the society at large. The entire population depend solely on the marine ecosystem for their subsistence, and as a result any environmental degradation that affects water resources reduces the potential or sustainable livelihood, thereby increasing poverty. Because of the rich aquatic life and the large bodies of fresh water in the Niger Delta region, there is a huge potential for the region to produce and supply a very high percentage of the domestic demand for fish, which was estimated at 2.2 metric tonnes per year in 2008 (FAO, 2017). Despite this potential, Nigeria still imports over 60 percent of its annual fish consumption. However, with increasing population and increasing environmental degradation in the Niger Delta as a result of oil exploration activities, the supply of fish is becoming increasingly diminished and the survival of the ecosystem is constantly endangered.

Oil exploration has over the years impacted negatively on the physical environment of the oil-bearing communities. (Elum, Monini and Henry-Ukoha, 2016) observes that oil exploitation has increased the rate of environmental degradation and has perpetuated food insecurity as a result of death of fish and crops as well as loss of farm lands and viable rivers for fishing activities leading to loss of livelihood. Oil spill obviously threatens subsistence peasant agricultural economy and environment; hence the entire livelihood and survival of the people (Stephen and Udofia, 2015). The release of petroleum substance or product into the streams, lakes, rivers, beaches, seas, oceans and land can be identified as the major cause of restiveness in the Niger Delta, which arises from the neglect of the environment resulting in extreme impoverishment of the peoples of the region.

When oil spill occurs, it becomes poisonous and thus makes water and land fouled and threatens the rich coastal habitat. The fish in the water is a major carrier of trace elements that could be detected in the understanding of pollutants and monitoring the quality of the environment for the survival of species in the aquatic habitat (Odia, 2009).

The fact is incontrovertible that the environment of the Niger Delta has been intensely polluted with tragic consequences for the economy of the people and the totality of the quality of life (Babatunde, 2010).

According to Ibaba (2010) the unsustainable exploitation of the environment in the Niger Delta is blamed on the inability or failure of the environmental laws to correctly acts in attitudes and beliefs, which impacted negatively on the environment. The people hold the view that because oil operations involve the release of hydrocarbons and other noxious materials into the atmosphere, gas combustion with the generation of intense heat and flares and the disposal of industrial wastes, may affect the fertility of the inhabitants in such a manner that fecundity may fall and the birth of abnormal babies may increase.

Also, cases of cancers especially those of the skin may rise and respiratory diseases especially chronic restrictive lung conditions may increase. Anxiety was also expressed regarding the related effect of the oil company operations on nutrition, arising from devastation of arable land, and a degeneration of marine and aquatic life from periodic oil pollution of dry land, swamps, rivers and streams. Human health is therefore identified by the communities themselves as a major issue which must be addressed to improve their quality of life. Researchers have shown that the pollution caused by oil spillage does not end with the mopping up of the spilled oil. It is now known that health risk is not averted by abstinence from fish killed by spilled oil. Some of the fishes and animals that escape instant death from pollution are known to have taken in some of the toxic substances, which in turn get into human beings that eat them. This will in turn cause infections on man coupled with other “side effects inform of genetic mutations” (Odalonu, 2015).

The earnings from the Petroleum Industry in the Country grew from 1960 and became high in the early 1970s during the oil boom. This replaced earnings from agriculture which was the main stay of the Nation’s Economy. Production, over the years continue to decline. Besides, the low performance of the agricultural sector, the oil exploration activities which caused constant incidence of oil spills, especially in the Niger Delta region of the country have further affected agricultural production. This includes the production of major staple crop such as cassava in the oil producing region of the country. The location of the Niger Delta region in the rainforest and mangrove forest vegetative zones of Nigeria makes possible all-year-round agricultural production activities. The inhabitants of the region are engaged in fishing due to the presence of creeks especially arable crops and other form of agricultural activity which include cassava, yam,

plantain, maize, cocoyam and vegetable as the predominant food crops in the area (Nnabuenyi, 2012).

Agriculture is however a shadow of itself in the communities in which the black gold (oil) flows and the inhabitance of the communities continue to wallow in conditions of social deprivation and abject poverty. The consequences of oil spillage on agricultural production, the environment and humans are enormous. Nnabuenyi, (2012) observed the negative effects of oil spillage on agriculture and lamented that most of the farmlands are destroyed and rivers polluted leading to the death of fishes; and most farmers and fishermen are thrown into confusion and joblessness. Chindah and Braide, (2000) added that oil spills cause great damage to the oil communities due to the high retention time of oil in the soil occasioned by limited flow. This prevents proper soil aeration and affect soil temperature, structure, nutrient status and pH, and ultimately, crops are destroyed.

The Primary objective of this study is to examine, highlight, and understand the devastating impact of oil spill on agricultural production in Gokana Local Government Area. This will be achieved through the following specific objectives. To examine the causes of oil spillage, the effect of oil spillage on the farmlands and health standard of the people, the socio-cultural and economic impact of oil spillage on the life of Gokana People, and suggest solutions to the problems encountered in the area as a result of the activities of oil multinationals.

THEORETICAL PERSPECTIVES

In considering the issue under interrogation, which is -The Incident of Oil Spills and Agricultural Productivity within the Niger Delta region, the theoretical framework adopted for this study is Sustainable Development Theory.

Sustainable Development Theory

Sustainability can be defined as the practice of maintaining processes of productivity indefinitely natural or human made by replacing resources used with resources of equal or greater value without degrading or endangering natural biotic systems. Sustainable development ties together concern for the carrying capacity of natural systems with the social, political, and economic challenges faced by humanity.

For the purpose of this study, the Environmental Sustainable Development Theory will be adopted. However, this theory emphasizes on the need for conserving the natural resources (Crude Oil) by the multi-national companies to avoid degrading or endangering the natural biotic systems. Hence, the Sustainable Development approach emphasizes that conservation of the natural environment is the collective responsibility of both multi-national companies and host communities, in as much as the environment provides resources needed for human survival, multi-nationals should focus on replacing resources used with resources of equal value without degrading the environment. In other words, resources of today should be used while that of tomorrow should be put into consideration.

The Sustainable Development Theory therefore emphasizes the link between oil producing communities in the Niger Delta Region and the activities of oil exploration carried out by multi-nationals which are in turn exploitative to the environment. Therefore, emphasis by the multi-national companies should be made on protection and preservation of the integrity and stability of natural resources within the Niger Delta Region.

DESCRIPTION OF STUDY AREA AND METHODOLOGY

Gokana kingdom is one of the six Kingdoms of the Ogoni people in Ogoni (also Ogoni-land) in the Niger Delta Region of Nigeria. it is a local government area in Rivers state.

The area is located in Rivers State on the coast of the Gulf of Guinea, east of the city of Port-Harcourt. Its Headquarters are in the town of Kpor. It has an area of 126 km² and a population of 228,828 (the given Figure 1, constitute the population of study) at the 2006 census. Gokana comprises Eight communities, namely, Lewe, B. Dere, K. Dere, Kpor, Biara, Bomu, Bodo, Gio-Koo.

The cross-sectional research design, also known as the one-shot or status studies co-relational design was adopted. The population of study consist of indigenes/residents of both sex in Gokana Local Government Area, Rivers State. The sample size for this study was determined using the Taro yamane's formula which gave us 399. However, 5%

Figure1. Map of Rivers State showing the location of Gokana Local Government Area.

Source: Researchgate.net

of error or attrition was added to our sample size making it 5% of 399 = 19.95, approximately 20. Therefore 20+399 = 419, this was done to enable us take lost questionnaires into consideration.

Simple random and purposive sampling techniques were adopted in selection of our sample size in the study area.

The study made use of two sources of data collection. The first method was the primary source of data collection which adopted structured questionnaire, which was presented to respondents to express their views, opinions, and observations. The second source was the secondary source of data collection which utilized already published information, such as textbooks, journals, articles, earlier publications, encyclopedia and dictionaries.

For the analysis of data, the data collected was analyzed and presented in tables, using mean, standard deviation, and simple percentage. This would enhance easy interpretation of data.

FINDINGS AND DISCUSSION

socio-demographic profile of respondents

From Table 1, 217(58.65%) of respondents are male while 153(41.35%) of respondents are female. it is clear from the above that majority of respondents are male since they reflected the highest score of (58.65%). Also, 89(24.05%) of respondents fall within the age bracket of 18-28

Table 1. Showing the Socio-Demographic Profile of Respondents.

Variable	Frequency(N=370)	Percentage (%=100)
GENDER		
Male	217	58.65
Female	153	41.35
AGE		
18-28	89	24.05
29-38	110	29.73
39-48	81	21.89
49-59	64	17.29
59 and above	26	7.03
EDUCATION		
No formal education	32	8.65
Primary	79	21.35
Secondary	138	37.29
Technical Tertiary	121	32.70
OCCUPATION		
Unemployed	38	10.27
Farming/Fishing/Hunting Trading	221	59.73
Civil Servant	57	15.40
Student	32	8.65
	22	5.95
LANGUAGE		
English	92	24.86
Clan	145	39.19
Pidgin	133	35.95
RELIGION:		
Christianity	315	85.14
Muslim	48	12.97
African Traditional Religion	7	1.89
COMMUNITY		
Lewe	37	10.0
K-Dere	62	16.76
Kpor	59	15.95
Biara	46	12.43
Bomu	33	8.92
Bodo	71	19.19
Gio-koo	21	5.68
B-Dere	41	11.08

Source, field survey.

years, 110(29.73%) fall within the age limit of 29-38 years, 81(21.89%) of the study population fall within the age bracket of 39-48 years, 64(17.29%) of the study population fall within the age limit of 49-58 years while 26(7.03%) of the overall study population fall within the age bracket of 59 years and above. The analysis also revealed that 32(8.65%) of respondents had no formal education, 79(21.35%) of respondents attended primary school, 138(37.29%) of respondents attended secondary school, while 121(32.70%) of the overall study population had tertiary qualification. Based on this criterion, it is acceptable to state that majority (37.29%) of respondents had obtained secondary

Table 2. Descriptive Statistics Showing Causes of Oil Spillage in Gokana

S/N	Question	N=370	Categories	Frequency	Mean	Standard Deviation	Research Decision
1	Pipeline vandalism by militant causes oil spillage	370	YES NO	209 161	3.2	1.6	ACCEPT
2	Poor maintenance of oil facilities by exploratory companies causes oil spillage	370	YES NO	293 77	4.17	2.09	ACCEPT
3	Utilization of substandard materials leads to oil spillage	370	YES NO	216 154	3.34	1.67	ACCEPT

Source: field survey.

education. Furthermore, 92(24.86%) of respondents spoke English, 145(39.19%) of respondents spoke language peculiar to their clan while 133(35.95%) of the study population spoke pidgin. Also, 37(10.0%) of respondents resided at Lewe, 62(16.76%) where located at K-Dere, 59(15.95%) of the study population where sampled at Kpor, 46(12.43%) of respondents where located at Biara, 33[8.92%) of the sample population reside in Bomu, 71(19.19%) of the respondents were sampled at Bodo, 21(5.68%) of the sampled population resides at Gio-Koo, finally, 41(11.08%) of the respondents were sampled at B-Dere in Gokana local government area of Rivers state. Analysis revealed that 38(10.27%) of respondents were unemployed, 221(59.73%) of the study population engaged in agrarian works like; farming/ fishing/ hunting, while 57(15.40%) of the study population were traders, 32(8.65%) of respondents were civil servants, 22(5.95%) of the study population were students. On the basis of religion, 315(85.14%) of respondents were Christians, 7(1.89%) of respondents were Muslims while 48(12.97%) of the overall study population were African Traditional Worshippers in the research locale.

DESCRIPTIVE STATISTICS SHOWING CAUSES OF OIL SPILLAGE IN GOKANA

The first issue, this study set out to resolve is to ascertain the causes of oil spillage in Gokana. Three (3) parameters were designed by the researcher. The first parameter seeks to know if pipeline vandalization by militants is the major cause of oil spillage in Gokana. The Table 2 shows that the question on pipeline vandalization by the militants is the major cause of oil spillage, has a mean score of 3.2 and a standard deviation of 1.6. This implies that most respondents attest to the fact that pipeline vandalization is the major cause of oil spillage in Gokana. The second parameter seeks to know if poor maintenance of oil facilities by exploratory companies causes oil spillage; again the result of the descriptive statistics shows a mean score of 4.17 and a standard deviation of 2.09 and was accepted. This by implication means that poor maintenance of oil facilities by exploratory companies causes oil spillage.

Lastly, the third parameter seeks to determine if utilization of substandard materials leads to oil spillage. The result shows a mean score of 3.34 and a standard deviation of 1.67 and was accepted. This implies that utilization of substandard materials leads to oil spillage.

DESCRIPTIVE STATISTICS SHOWING EFFECT OF OIL SPILLAGE ON THE FARMLANDS AND HEALTH STANDARD

The second goal of this study is to determine effect of oil spillage on the farmlands and health standard in Gokana local government of Rivers state. In analyzing this, four measures were designed by the researcher on the basis of Likert scale of measurement. The result is shown in the Table 3. It shows that Cassava produce has declined now compared to era of pre-oil spillage has a mean score of 4.01 and a standard deviation of 2.01 and

Table 3. Descriptive Statistics Showing Effect of Oil Spillage on the Farmlands and Health Standard.

S/N	Question	N=370	Categories	Frequency	Mean	Standard Deviation	Research Decision
1	Cassava produce has declined now compared to era of pre-oil spillage	370	Strongly agree Agree Undecided Disagree Strongly disagree	153 146 8 47 16	4.01	2.01	ACCEPT
2	Grasses in your area are no longer greenish compared to era of pre-oil spillage.	370	Strongly agree Agree Undecided Disagree Strongly disagree	133 107 29 66 35	3.64	1.82	ACCEPT
3	There is rarely arable farmland in your area	370	YES NO	243 127	3.62	1.81	ACCEPT
4	Oil spillage is accompanied with strange diseases in your area	370	Strongly agree Agree Undecided Disagree Strongly disagree	111 93 35 72 59	3.34	1.67	ACCEPT

Source: field survey.

was accepted. This by implication means that cassava produce has declined now compared to era of pre-oil spillage Again, the question on grass in the area are no longer greenish compared to era of pre-oil spillage, has a mean score of 3.64 and a standard deviation of 1.82 and was accepted. This implies that grass in the area are no longer greenish compared to era of pre-oil spillage. Also, the question that there is rarely arable farmland in the area has a mean score of 3.62 and a standard deviation of 1.61 and was accepted. This implies that there is rarely arable farmland in Gokana local government area. Finally, the measure on oil spillage is accompanied with strange diseases in the area has a mean score of 3.34 and a standard deviation of 1.67 and was accepted. This implies that oil spillage is accompanied with strange diseases in Gokana local government area of Rivers state.

DESCRIPTIVE STATISTICS SHOWING THE IMPACT OF OIL SPILLAGE ON SOCIO-CULTURAL AND ECONOMIC LIFE OF INHABITANTS

The third goal of this study is to determine the impact of oil spillage on socio-cultural and economic life of inhabitants in Gokana local government area of Rivers State. In analyzing this, four measures were designed by the researcher on the basis of Likert scale of measurement. The result is shown in the Table 4. It shows that poverty is becoming a norm in the community has a mean score of 3.67 and a standard deviation of 1.84 and was accepted. This by implication means that poverty is becoming a norm in Gokana local government of Rivers State. Again, the question on people hardly meet their nutritional needs due to oil spillage in your area has a mean score of 3.14 and a standard deviation of 1.57 and was accepted. This implies that people hardly meet their nutritional needs due to oil spillage in the community.

Also, the question that suicide rate is increasing due to hardship in the area has a mean score of 2.63 and a standard deviation of 1.32 and was rejected. This implies that Suicide rate is not increasing due to hardship in Gokana local government area.

Finally, the question that fishing festival is affected by oil spillage in Gokana local government area has a mean score of 3.24 and a standard deviation of 1.62 and was accepted. This implies that fishing festival in Gokana local government area has been

Table 4. Descriptive Statistics Showing the Impact of Oil Spillage on Socio-cultural and Economic Life of Inhabitants.

S/N	Question	N=370	Categories	Frequency	Mean	Standard Deviation	Research Decision
1	Poverty is becoming a norm in your community	370	Strongly agree Agree Undecided Disagree Strongly disagree	101 156 18 74 21	3.67	1.84	ACCEPT
2	People hardly meet their nutritional needs due to oil spillage in your area	370	Strongly agree Agree Undecided Disagree Strongly disagree	102 91 17 84 72	3.14	1.57	ACCEPT
3	Suicide rate is increasing due to hardship in your area.	370	Strongly agree Agree Undecided Disagree Strongly disagree	56 69 23 120 102	2.63	1.32	REJECT
4	Fishing festival is affected by oil spillage in your area	370	Strongly agree Agree Undecided Disagree Strongly disagree	92 101 28 103 46	3.24	1.62	ACCEPT

Source: field survey.

hampered as a result of oil spillage in the area.

DESCRIPTIVE STATISTICS OF OIL SPILLAGE AND THE WAY FORWARD IN GOKANA

In examining oil spillage and the way forward in Gokana local government area of Rivers State**,** the following results were obtained. It reveals that the measures were structured on the basis of Likert Scale of measurement. The result is shown on the Table 5. It shows that the question on implementation of the United Nations Environmental Programme Report (UNEP) will clean polluted land has a mean score of 3.58 and a standard deviation of 1.79 and was accepted. This implies that the implementation of the United Nations Environmental Programme Report (UNEP) will clean polluted land. Again, on whether the implementation of MOUs by oil companies will be assistive, has a mean score of 3.35 and a standard deviation of 1.68 and is accepted. This shows that implementation of MOUs by oil companies will be assistive. Also, on whether mitigation of gas flaring would be assistive in protecting the environment has a mean score of 3.13 and a standard deviation of 1.57 and was accepted. This implies that mitigation of gas flaring would be assistive in protecting the environment.

DISCUSSION OF FINDINGS

In tandem with the above statistical descriptions and summations; the study affirmed that oil spillage adversely affects agricultural productivity in Gokana local government area of Rivers State. The myriad of pipeline vandalization witnessed in recent times is mostly attributed to the activities of militants and poor maintenance of oil facilities by exploratory companies. Most respondents also affirm that cassava produce has declined now compared to era of pre-oil spillage, and that there is rarely arable farmland in area. They also agreed that oil spillage is accompanied with strange diseases in the area.

Table 5. Descriptive Statistics of Oil Spillage and the Way Forward in Gokana.

S/N	Question	N=370	Categories	Frequency	Mean	Standard Deviation	Research Decision
1	Implementation of the United Nations Environmental Programme Report (UNEP) will clean polluted land.	370	Strongly agree Agree Undecided Disagree Strongly disagree	126 119 10 72 43	3.58	1.79	ACCEPT
2	Implementation of MOUs by oil companies will be assistive.	370	Strongly agree Agree Undecided Disagree Strongly disagree	118 96 13 81 62	3.35	1.68	ACCEPT
3	Mitigation of gas flaring would be assistive in protecting the environment.	370	Strongly agree Agree Undecided Disagree Strongly disagree	83 105 31 79 72	3.13	1.57	ACCEPT

Source: field survey.

However, most of the respondents attest that poverty is becoming a norm in the area, as such; people hardly meet their nutritional needs due to oil spillage in the area as highlighted in the Table 5. This has also affected their fishing festival.

However, the respondents revealed that implementation of the United Nations Environmental Programme Report (UNEP) will help in cleaning the polluted land. Available data (cited in Tables) revealed that implementation of MOUs by oil companies will be assistive. Also, the respondents revealed that mitigation of gas flaring would be assistive in protecting the environment. Finally, it was revealed that the constant spillage of oil in Gokana Local Government Area has adverse effects on the inhabitants.

CONCLUSION

The coastal area of Niger Delta is the home to oil exploration and exploitations in Nigeria. This study concludes that there is a trade-off between oil exploitation activities and livelihood performance in the region. The key environmental issues in the Niger Delta relates to its petroleum which also has negatively impacted the environment due to unprecedented oil spillage. Oil exploitation has increased the rate of environmental degradation and has perpetuated food insecurity as result of death of fish, crops as well as loss of farmlands and viable rivers for fishing activities leading to loss of livelihoods. Oil spillage on land and water not only destroy their crops, farmlands thereby causing damage to the quality and productivity of the soil but also deprive them of portable water and fishing which is their major source of employment and food while negatively creating a contaminated environment, their health is also affected as all these take negative tolls on their lives.

RECOMMENDATIONS

Based on the forgoing postulations, the study made the following recommendations Oil exploratory companies should take adequate measures in maintaining their facilities. Government should also take adequate measures in meeting up with the needs of the area by creating jobs, and providing social amenities.

Oil Companies should engage in preventative measure to Mitigate the risk of oil spillage/pollution as well as ensuring transparency with regard to payment of compensation, contract to affected communities.

REFERENCES

Anejionu O, Ahiarammunnah P and Nri-ezedi C (2015). Hydrocarbon Pollution in the Niger Delta: Geographies of Impacts and Appraisal of Lapses in Extent Legal Framework. Journal of Resource Policy, (45): 65-77.

Babatunde A (2010). The Impact of Oil Exploitation on the Socio-Economic Life of the Ilaje-Ugbo People of Ondo State, Nigeria. Journal of Sustainable Development in Africa, 12(5): 7-10

Egwu SA (2012). Oil Spill Control and Management, Petroleum Technology Development Journal Quarterly, 19(3): 457- 478

Food and Agricultural Organisation [FAO] (2017). Fishery and Aquaculture Statistics. Global Production by Production source 1950-2015 (Fish. Stat. J.). In: FAO Fisheries and Aquaculture Department. [online] Rome. Updated 2017. www.fao.org/fishery/statistics/software/fishstatj/en

Ibaba SI (2010). Environmental Protection Laws and Sustainable Development in the Niger Delta. Africana, 4 (2).

Ikhajiagbe B and Anoliefe GO (2011). Natural attenuation of a 14-month –old waste engine oil polluted soil. J. Soil Sci. Environ. Manage.; 2 (7):184-192.

Kadafa AA (2012). Environmental Impacts of Oil Exploration and Exploitation in the Niger Delta of Nigeria. Global Journal of Science Frontier Research Environment and Earth Sciences, 12(3): 19-28.

Nwilo CP and Badejo TO (2005b). Oil Spill Problems and Management in the Niger Delta. International Oil Spill Conference, Miami, Florida, USA.

Odalonu BH (2015): The Upsurge of Oil Theft and Illegal Bunkering in the Niger Delta Region of Nigeria: Is There a Way Out? Mediterranean Journal of Social Sciences Vol 6, No3 S2.

Odia LO (2009). Oil Exploitation and Conflict in the Niger-Delta Region of Nigeria. Poverty in the Niger Delta of Nigeria. Journal of Human Ecology; 26(1): 25 - 30.

Okpuri CO and Ibaba SI (2008). Oil Induced Environmental Degradation and Internal Population.

Ordinioha B and Sawyer W (2008). food insecurity, malnutrition and crude oil spillage in a rural community in Bayelsa State, South-South Nigeria. Nig. J. Med.; 17:304-309

Oyinloye MA and Olamiju OI (2013). An Assessment of the Physical Impact of oil spillage and Remote Sensing Technology: Empirical Evidence from Jesse Town, Delta State, Nigeria. British Journal of Arts and Social Sciences, 12(11): 235

Philip A (2016). oil spills injustices in the Niger Delta Region: reflections on oil industry failure in relation to the United Nations Environment programme (UNEP) report, international journal of petroleum and gas exploration management; 2(1): 26-37, in March 2016.

United Nations Environmental Programme Accessed August 10 2010. www.unep.org