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IMPACT OF OIL SPILL AND FOOD INSECURITY ON WOMEN AND YOUTH OF IMO KPOFIRE, IMO STATE, NIGERIA.

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Abstract
In the energy transition conversation, the move away from petroleum dependent energy economy, to a renewable energy powered economy is apposite. Petroleum exploration and its attendant negative externality have given rise to this study. The study garnered data from the stakeholders in the Oil Producing Host Communities of Imo State. It utilized well-structured questionnaire in achieving the stated objectives. Findings from the result reveal that, the consequences of both legal and illegal petroleum related activities are pollution on farmlands, crops failures, environmental degradation and destruction of aquatic. The study also identified the major stakeholders in the petroleum related activities to include; the International Oil Majors, the Nigeria National Petroleum Company Limited, Community Leaders, Traditional Rulers, Security agencies, heads of households, women and the youths The Kpofire activities, flourished due to compromises by all the stakeholders. This portends danger to the achievement of 2030 Agenda for Sustainable Development Goals 1,2,3,6 and 7, of the United Nations. The study concluded that, the energy transition discourse that is ongoing should be scaled up towards proper engagement of all the stakeholders. Nature based energy resources conversation should be emphasized to help sustainable agriculture and reverse food insecurity ravaging Nigeria. Thus, the following recommendations are apt: advocacy on the dangers inherent in kpofire activities should be scaled up; urgent need for the regeneration of the vast area affected by the Imo Kpofire incident, this will help return the women and youth to agriculture for food security.

Keywords: Oil Spill, Food Insecurity, Women, Youths and Kpofire

1. Introduction

Oil exploration and production in the Niger Delta have resulted in massive oil spills and lasting environmental damage to the region (Ele, 2022). Most of the oil spills are attributed to illegal oil bunkering. Illegal oil bunkering is a regular activity in the Niger Delta region in Nigeria (Bodo et al, 2020). This is also amplified by the Kpofire operations. It is now a booming business in the Niger Delta with its disastrous consequences. It is believed to involve the different local militant groups in creeks, commodity traders, military personnel and international businessmen. These activities have resulted to humongous damages to the environment. Ogunmodede & Olufemi (2021) noted that, the ecological and health damage of oil spills and pollution in Nigeria is immeasurable. The systemic degradation of the environment, health, livelihoods and food system of people residing in oil spill areas is visibly intolerable. Oil spills also have consequential health implications both for human in the region and the eco-systems; the most vulnerable being the women and the youth. Oil spills and Kpofire have significant contribution to weakening the food basket. It is also capable of endangering people's health in the Niger Delta region.

Background of the Study

The ecological and health damage of oil spills and oil pollution in Nigeria is unquantifiable. Universal degradation of the environment, health, livelihoods and food system of people residing in oil spill areas is visibly unpardonable. Illegal oil bunkering has made oil spillages and explosions a common occurrence in the Niger Delta region (Campbell, 2015). Nigeria's state oil company and its joint venture partners have spent $360 million on cleaning up the Niger Delta in the past two years (Bodo & Gimah, 2020). The Shell Petroleum Development Company (SPDC) claimed that 70 percent of all oil spills throughout the most recent five years was the after effect of sabotage on its facilities (Campbell, 2015).

This impact on the socio economics of the people has become a major problem complicated by continuous spill of hydrocarbon in the environment as a result of pipeline linkage, poor maintenance and bunkering activities by mostly non-professionals, who pay no value to their environment while embarking on their illegal activities (Mark et al, 2020). The Kpofire saga on the agricultural rich land of Abaezi- Egbema, Imo State is a clear manifestation of the effect and dangers of oil spill in the Niger Delta. No fewer than 200 persons were burnt to death after fire gutted an illegal oil refinery site at Abaezi Kpofire in Egbema Community, Ohaji/Egbema Local Government Area of Imo State. The incident was on the 23rd day of April 2023. The fire explosion was the first of its kind in the history of the state considering the number of people burnt in the firestorm. The site of the illicit refinery was located at the middle of the forest in the Abaezi community. The community has a common boundary with Rivers State oil and agricultural rich area. Some unscrupulous individuals latch on to the remoteness of the area to perpetuate series of negative oil bunkering and operate illegal refineries in the quiet environment. In 2013, National Oil Spillage Detection and Response Agency (NOSDRA) established a National Oil Spills Monitor (https://oilspillmonitor.ng/), a Global Information System (GIS) web application for the official collection of data on oil spills from all operators in the Niger Delta. NOSDRA's record of oil spills between 2006 and 2021 is 721,657.61 barrels spilled in 13,613 incidents. These oil spills, directly and indirectly, affect biodiversity in the Niger Delta Region making the region a more fragile ecosystem.

The activity had continued unabated due to the flourishing nature of the business, although illegal. Apart from degrading the environment, over two hundred individuals were consumed by the inferno, women, youth and children inclusive. Illegal crude oil refining has become a lucrative business, mainly among residents of oil producing states, despite its dangerous consequences. The value chain characterized by the illicit economic activities is the basis for the number of people involved in the incident. The environmental impact of the kpofire incidents and similar incidences related to illegal oil bunkering has serious implication for food security in the oil producing areas. This is now shaping the food system of the citizens of the Nger Delta. As the people continue to cry out for the environmental restoration of their land, oil bunkering in the Niger Delta is still proceeding with greater intensity (Bodo, 2020). Oil pollution and Kpofire have degraded agricultural lands leading to an increase in food poverty levels and turning productive areas into waste lands in the Niger Delta.

Statement of the Problem

The effect of oil spill and illegal refineries (Kpofire) on the region's ecosystems with its attendant consequences are now defining food production trajectory in the area. Exacerbated by black soot pollution, acid rains and other various degrees of environmental degradation are continually exerting pressure on agriculture and health system of the people. Illegal crude oil refining has a denudating impact on flora and fauna, air, soil, aquatic, the mangroves and the ecosystems. This portends serious dangers for the food system of the people of the oil producing areas. It causes poverty, low standard

of living, and distortions in health, food scarcity and death. The women and the youth are the worst hit as they constitute the most vulnerable. The lack of pragmatic collaboration amongst the stakeholders and the lackadaisical attitude of oil companies towards addressing these concerns are also source of worry. In 2020, 13.8 million households were food insecure at some time during the year (U.S. Department of Agriculture, Economic Research Service, 2022). This is expected to worsen if no measures are taken to address the issue in the oil producing areas, particularly Abaezi- Egbema. This indicates danger to the achievement of 2030 Agenda for Sustainable Development Goals 1,2,3,6 and 7, of the United Nations.

Objectives

The objective of this paper is to empirically assess oil spill, food insecurity impacts on women and the youths as a result of the Imo Kpofire incident

Other specific objectives include;

(i) to ascertain the consequences of illegal petroleum related activities, in oil producing area of Imo State.
(ii) to identify the major stakeholders in the petroleum related activities.
(iii) to find out the impact of Kpofire and oil spill on agricultural productivity of women and youth

This study is presented in five sections, the second is a review of related literature, the third is the method of study, and the fourth is the presentation and analysis of result while the fifth is the concluding remarks.

2.0 Literature Review

Oil spill

Conceptually, Chinedu and Chukwuemeka (2018) described oil spill as the release of liquid petroleum hydrocarbon into the natural environment from human induced activities such as crude oil extraction, refining, transportation and storage; exploration and prospecting. The crude exploitation has brought to bear oil spillage and its numerous problems including contamination of water bodies, danger to aquatic life, and destruction of farmlands (Nwilo and Badejo, 2008). Spillage also results from accidents, lack of maintenance of engineering equipment and deliberate acts (plus oil bunkering, Kpofire activities and sabotage).

KPO-FIRE

Kpofire is a local jargon used to describe the artisanal refinery process, which is coined from the explosive sound generated when oil is used as the fuel for the refining purpose (UNEP, 2011). It is a simplified fractional distillation process, using locally fabricated equipment. As described by the people of the Niger Delta, Kpofire is a process of burning crude oil by illegal oil operatives or thieves at isolated locations in the forest, in order to extract refined petroleum products. It is simply a local process of extracting petroleum product by heating the crude in fabricated oven. This causes a lot of environmental challenges in the Niger Delta. Therefore, this can affect agricultural product and its quality leading to food scarcity.

Food Insecurity

Food insecurity is defined as a household-level economic and social condition of limited or uncertain access to adequate food (U.S. Department of Agriculture, 2022) To Carlson, Andrews and Bickel (1999), food insecurity does not necessarily cause hunger, but hunger is a probable outcome of food

insecurity. To be food secure on the household level, a person must always have access to safe, nutritious, and adequate food to live an active and healthy lifestyle (Hendriks, 2015).

Impacts of Oil Spills and Kpofire in the Niger Delta

The Niger Delta is a diverse region with rich mangroves and fish-rich waterways. Many residents, particularly, the women and youth, try to make their livelihoods from fishing and farming. The livelihoods and health of people and communities across the Niger Delta are closely linked to the land and environmental quality, and hence are vulnerable to oil contamination. Crude oil extraction has effectively uprooted the people from the soil, polluted the waters and poisoned the air, Egbema inclusive (Bassey, 2013). Damages to the fragile mangrove forest, threatening of rare species, fish, contamination of underground drinking water, pollution of air quality for the local people, destruction of the livelihoods of the people, reducing the fertility of the soil, with severe consequences on health, agriculture, ecology and aquatic life, all have implications for food security. Hence, there is food insecurity and prevalence of hunger in the Niger-Delta region because of the unsustainable farming and fishing practices.

Theoretically, two models are strongly linked to the subject of this discourse. They are;

The Theory of Environmental Externality.

Environmental externalities are damages or benefits which are not paid for by the polluter or beneficiary under normal market condition (Iyoha, 2002). Externality theory defines the costs or benefits which arise when the socio-economic activities or production system of one group of people have a positive or negative impact on another and in which the first group are unlikely to fully or partly account for their impact (Echeta and Onyeme , 2010).

The Theory of Agricultural Resource Productivity.

This theory described productivity of agricultural resources as the index of the ratio of the value of total farm output to the value of the total farm inputs used in farm production. It is believed that resource productivity is definable in terms of individual input or resource, or in terms of a combination of them, hence, land, capital, labour and management productivity can each be defined as the ratio of total output to inputs of land, labour, capital and management respectively.

Of the two theories linked to this study, the first theory affects the women and youth (farmers) in Egbema community who bear the direct cost from the operations of international majors, for which they do not have any direct benefit. The activities of these international oil companies destroy their farmlands and crops without compensation to the farmers. The second theory concentrates on food production as a targeted to solving the problems of food insecurity.

Empirically, Odjuvwuederhie , Omotor and Adun (2006),examined the effect of oil spillage on crop yield and farm income in Delta State, Nigeria. Using a sample of 262 crop farmers drawn randomly from 10 communities and 5 LGAs in the oil producing agro-ecological zones of Delta State, the negative impact of oil spill on crop production was emphasized. Oil spill reduced crop yield, land productivity and greatly depressed farm income as a 10 percentage increase in oil spill reduced crop yield by 1.3 percent while farm income fell by 5 percent. They recommended the enactment and enforcement of stringent environmental laws to protect the area as well as the implementation of policies to reduce the crushing level of poverty and guarantee a better livelihood for the people.

Osuagwu and Eseoghene (2018) examined the effects of oil spills on fish production in the Niger Delta of Nigeria from 1981–2015 using an estimable Cobb Douglas production function. They found

out that oil production and spills negatively affect fish production, while farm labour has a positive effect on fish production.

Ogunmodede and Olufemi,.(2021) interrogated safeguarding the food basket from oil pollution in Nigeria: post-oil city perspective. The study made use of secondary data and reviewed literature on oil spills. They contend that, a decade of environmental inequities meaningfully contribute to oil spills, environmental toxics and contamination, and impoverishes the food basket and people's health in the Niger Delta region in Nigeria. Their findings revealed that oil spills results in the collapse of the local economy, impact negatively on lives, livelihoods, stifles food production and food security.

Bodo, Batombari and Seomoni (2020) study was on illegal oil bunkering in the Niger Delta region of Nigeria: a challenge to Nigeria's development. The study critically examined the key actors of illegal oil bunkering; the root causes and consequences of illegal oil bunkering, and the solutions to the identified challenges. They noted that despite the huge financial cost on the part of the government and the multinational oil companies, the perpetrators of this business continue to expand their operations in the creeks. Illegal oil bunkering is now a booming business in the Niger Delta. It is believed to involve the different local militant groups in creeks, commodity traders, military personnel, international businessmen, and some indigenous oil servicing companies. The successes of illegal oil bunkering in Nigeria have been ascribed to both local and national interest as a result of the profits from this illegal oil business.

Ayibakari and Ebisine (2022) evaluated the economic impact of crude oil spills on cassava production in Olodiama Clan, Southern Ijaw Local Government Area of Bayelsa State. They employed structured questionnaire as the main instrument in collecting .The results, reveal that oil spillage had given rise to unproductive soil, thereby killing the people's interest in cassava farming and other agricultural activities. It came to the conclusion that oil spillage had affected the socio-economic activities of the people, thereby causing negative relationship between the oil companies and the host communities in the study area.

Efenakpo, Davies, Onuchukwu and Kejeh, (2022) studied illegal crude oil refining and its implications on the Niger Delta's ecosystem. The review paper highlighted the effect of illegal refineries on the region's ecosystems currently exacerbated by black soot pollution. The study revealed that illegal crude oil refining has a denudating impact on flora and fauna, air, soil, aquatic ecosystems, and the mangroves. Causes of illegal refineries include poverty and low standard of living, the pragmatic collaboration between security authorities and other actors, the relatively low set-up cost, and the lackadaisical attitude of oil companies towards the replacement damaged oil facilities. They recommended the following; shutdown of all illegal refineries, stakeholders' synergies to guard against oil pollution and biodiversity loss, environmental education, and youth empowerment through vocational training,, afforestation, and reforestation of degraded sites.

Amadi, Aleruchi-Didia , Konne and Ugochukwu (2022) x-rayed environmental effect of KPO-Fire in Niger Delta and future health implication. They found out that oil thefts have become the idea that replaced the most crisis and agitations in the Niger Delta communities against the perceived neglect of the areas. This had resulted to widespread operation of illegal oil bunkering activities called Kpofire. The products extracted are fuel, kerosene and diesel. One of the major problems of Kpofire is the introduction of soot into the environment. The Niger Delta people are therefore faced with daily environmental challenges such as inadequate housing facilities, contaminated drinking water sources, barren lands for agriculture, dead rivers for fishing activities and poor health conditions. Their recommendation is that a collective effort is needed to put a stop to the menace of kpofire in order to avoid environmental pollution thereby endangering the health of the people of Niger Delta.

3.0 Research Methodology

Study Area

The study was conducted in Imo State, one of the nine Niger Delta states. The state occupies a total area of about 5,100 square kilometers and is located between latitudes 4º 45'N and 7º 15'N and longitudes 6º 50'E and 7º 25'E (www.imostate.gov.ng). The study specifically concentrated on one of the Local Government Areas (LGA) producing oil in the state, Ohaji/Egbema shown in figure 1.0 which represent the study area.

The areas are diverse, naturally endowed and among the most fertile parts of the state, with people who possess entrepreneurial and community spirits (Echeta et al, 2023). The people have also maintained their traditional occupations of farming, fishing and palm oil processing, though at a subsistence level, notwithstanding the government's neglect of infrastructure and constant environmental damage. They engage in subsistence farming based on the availability of arable farmland. In tropical rainforests, farming is also the main source of income, and women predominate in retail, both locally and internationally.

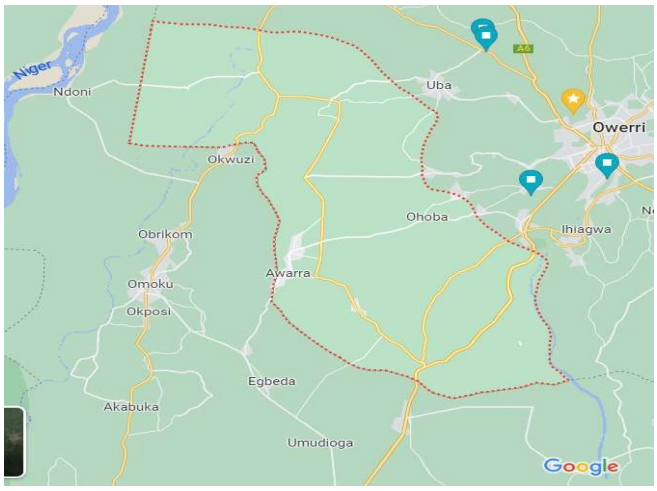

Figure 1.0 Map of Ohaji/Egbema LGA. Source Google Maps

Study Design

The qualitative method was used for this research and is essentially survey-based. The qualitative approach was based on the participant's responses using structured and validated questionnaires. The nature of the research problems calls for the qualitative methodologies. The operational strategy for the study also included situation analysis, engagement of stakeholders and focused group discussions.

Instruments and Method of Data Collection

A total of 200 self-administered questionnaires were used to collect the data for the study. Data gathered from the questionnaire were used to answer the research questions. The data collected were analyzed using descriptive and regression analysis. Objectives (i) and (ii) were achieved using descriptive statistics. Objective (iii) was realized using regression analysis. Moreover, each research question is measured in 5 point likert scale. The responses are: strongly Agreed (SA), Agreed (A), Undecided (U) Disagreed (D) and Strongly Disagreed (SD). Using SPSS 2.0 for the coding, 1, 2, 3 , 4 and 5 represents strongly agreed (SA), Agreed (A), Undecided (U) ,Disagreed (D) and strongly disagreed (SD), respectively.

Model Specification

The model follows the framework of Lopez (1997) and supported by the theory of environmental externality. It shows significance of biomass as an input in agricultural production. Similarly, the increasing levels of degradation of biomass, affects agricultural productivity and food production. The model is therefore adopted and modified since it assumed an estimable production function. Here the amount of oil spill and Kpofire as explanatory variables influencing agriculture and food production.

Thus, production function (Q), relating to agricultural Productivity of an individual farmer (women and youth) as a function of Environmental distortion (oil spill and Kpofire) (θ), conventionally, they determine what happens to food production. Thus, the following production function holds

$$Q = f(\theta) \quad \text{.....(1)}$$

Where:

Q is the agricultural productivity and θ are assumed inputs in production.

The functional model for this study is specified as follows

$$AGPROD = f(OILSP, KPOFIR) \quad \text{.....} \quad (2)$$

The econometric model is then specified as follows

$$AGPROD = \beta_0 + \beta_1 OILSP + \beta_2 KPOFIR + \mu \text{ ... ...} (3)$$

Where

AGPROD = Agricultural productivity (lack of it result to food insecurity)

OILSP = Oil spill in the oil producing area of Imo State

KPOFIR = Illegal oil refining in the oil producing area of Imo State

Apriori expectation of the coefficient of the independent variables are given as

$\beta_1, \beta_2 < 0$

Where β_0 is the intercept term, β_1 and β_2 are the parameters of the model to be estimated and u_t is a white noise error term assumed to be normally distributed.

4. Presentation and Analysis of Result

Pie charts

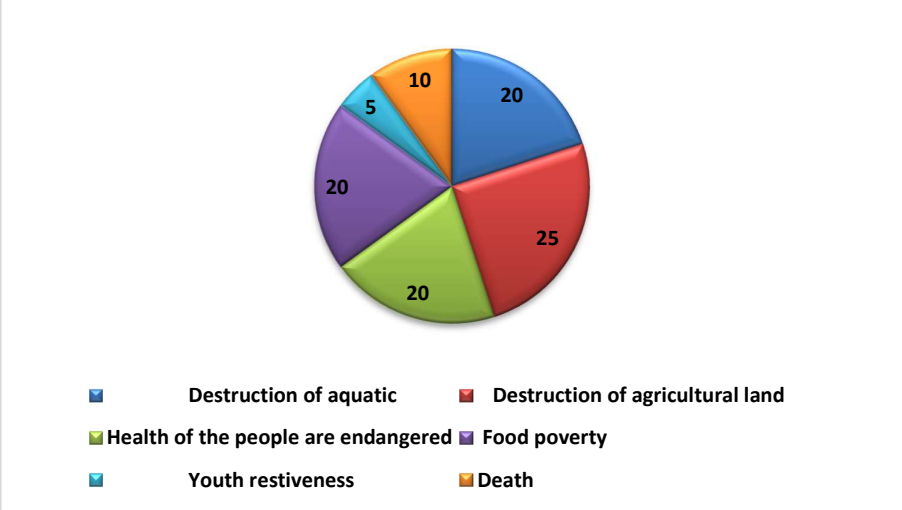

Figure 2.0 pie diagram showing the consequences of illegal oil activities

To provide answer to the first research question, the study ascertained and rated six major consequences of oil spill and Kpofire related activities in oil producing area of Imo State (see figure 2.0). They are enumerated and rated as follows; Destruction of aquatic (20%), Destruction of agricultural land (25%), Health of the people are endangered; particularly women and the youth (20%), Food poverty (25%), Youth restiveness (5%) and Death (10%). In all, these consequences indicate grave danger to food security and increasing poverty in the area.

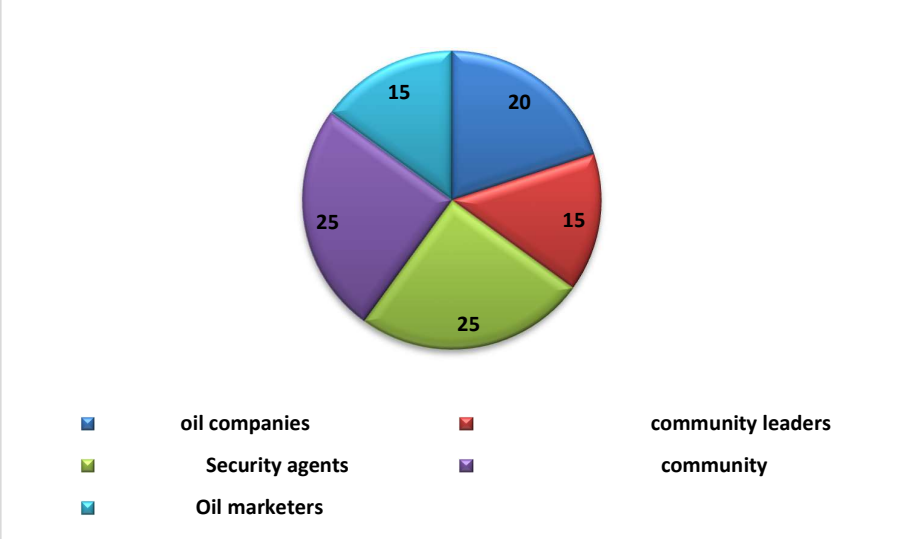

Figure 3.0 identified major stakeholders and their role in oil spill and Kpofire activities

The diagram above (figure 3.0) provides answers to research question two. Thus, with respect to the major stakeholders identified and their role in oil spillages and Kpofire activities ; the oil companies and various joint ventures with NNPC contributes to 20%,the community leaders(Traditional Rulers, President Generals, Youth leaders), make up 15%, the Security agents (the military, the police, the DSS and the NSCDC) contributes to 25%. The community (supporters of the illegal business) contributes to 25% while the Oil marketers (promoters and sponsors of the Kpofire business) make up 15%. The worry here is that, all these illegal activities cannot be successful without the collaboration of all the identified stakeholders. The Kpofire activities and other illicit oil activities flourished due to compromises by all the stakeholders. This portends danger to the achievement of 2030 Agenda for Sustainable Development Goals 1,2,3,6 and 7, of the United Nations.

Regression Results

In order to address research question three, the Ordinary Least squares estimation was utilized.

Table 1: Oil spill,, food insecurity and the Imo Kpofire incident

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.42475	2.110666	5.412865	0.0000
OILSPL	0.034022	0.089497	0.380149	0.7042
KPOFIR	-0.131139	0.091470	-1.433680	0.1532

R-squared	0.010469	Mean dependent var	9.690000
Adjusted R-squared	0.000423	S.D. dependent var	2.201849
S.E. of regression	2.201384	Akaike info criterion	4.430936
Sum squared resid	954.6796	Schwarz criterion	4.480410
Log likelihood	-440.0936	Hannan-Quinn criter.	4.450957
F-statistic	1.042114	Durbin-Watson stat	1.105841
Prob(F-statistic)	0.354644		

Source: E-views output of the study.

A regression analysis was carried out to examine the relationship between Kpofire and oil spill on agricultural production of women and youth in Abaezi- Egbema, an oil producing area of Imo State. The results of the analysis presented above in table 1 indicated that, the effect of oil spill in the area is statistically insignificant at 5% level. However, it is a positive function of agricultural productivity (proxy for food insecurity). On the other hand, Kpofire in the area is statistically insignificant at the 5% level. Its coefficient is negative in line with the apriori expectation. This indicates inverse relationship existing between Kpofire and agricultural productivity. Thus as Kpofire is increasing, food production decreases. The R-Squared explained about 1.4% of the variation in the agricultural productivity (proxy for food insecurity) is attributed to crude oil spill and Kpofire in the area.
The estimated regression result of equation 3 is fitted in equation 4 below as

AGPROD = 11.4247521663 + 0.0340222031912*OILSPL - 0.131139101825*KPOFIR …….(4)

Although the sign of oil spillage variable is quite inconsistent with the theoretical expectations, it also had statistically insignificant influence on food insecurity. This result further stressed the fact that, the people perceived effort made by multinationals and other agencies with the cleaning up exercises during oil spill as commendable. The focused grouped discussion (FGD) also amplified this fact. The insignificant influence on food insecurity portends danger for the women and youth. This result is in line with the findings of Opuofoni and Lubo (2022) that oil spillage had given rise to unproductive soil which leads to food insecurity.

On the case of Kpofire, this indicated inverse relationship existing between Kpofire and agricultural productivity. It is consistent with the theoretical expectations; it also had statistically insignificant influence on food insecurity. This was also buttressed during the FGD. We gathered that most of the Kpofire incidences were not even reported to relevant agencies for the fear of not being exposed. Consequently, compensations of any sort to the people were not paid. Those illicit activities had endangered their lives, the lives of others and the environment. In cases of death, such individuals were buried instantly, while the Kpofire operation continues. However, this result is directly in line with the findings of Ibietela (2018) that the decreases in species composition are indicative of the effect of the illegally refined crude oil residue on the soil fungal population and diversity. Therefore, the continual dumping of this residue into the soil environment, will in turn affect the ecological balance, since these organisms play very important role in the ecosystem. This leads to food insecurity.

5. Concluding Remarks

The study concluded that, the energy transition discourse that is ongoing should be scaled up towards proper engagement of all the stakeholders. Investment in renewable energy infrastructure and a shift from the traditional energy sources to a more friendly, nature based energy resources will help sustainable agriculture and reverse food insecurity ravaging the Niger Delta, Nigeria and Sub-Saharan Africa.

The results of the study had it that, the indigenes have suffered a lot of negative effects of oil spill and Kpofire operations which have numerous consequences. The consequences ascertained were destruction of aquatic, destruction of agricultural land, health of the people are endangered, food poverty, youth restiveness and death. Similarly, some stakeholders and their roles in the circumstances were identified. They included; the oil companies and various joint ventures with NNPC, the community leaders,(Traditional Rulers, President Generals, Youth leaders), the Security agents (the military, the police, the DSS and the NSCDC), the community (supporters of the illegal business) and the Oil marketers (promoters and sponsors of the Kpofire businesses). Findings from the study also reveal that crude oil spillage has a positive and statistically insignificant effect on agricultural productivity. The operation of illegal refineries (Kpofire) has a negative and statistically insignificant effect on agricultural productivity of oil producing areas of Imo State, particularly Abaezi- Egbema. The external environmental hypothesis cannot be rejected as the activities of oil spill and Kpofire have consequences on the food production dynamics in the area.

Based on the findings, the following recommendations are made.

i) The international majors operating in Abaezi- Egbema and other parts of Egbema kingdom should set up a homeland security outfit to deal with oil spill detection and Kpofire operations. These security outfits should be well remunerated.

ii) Proper protection of the oil installations and preservation of the eco-system, for meaningful agricultural activities. There should be deployment of technology using drone and other smart devices for effective inspection of crude oil pipelines and other installations.

iii) Routine checks, total and prompt overhaul of all worn-out facilities such as pipelines and weak leaking valves that can aggravate spillage.

iv) From the study, the security agencies seem to be compromised. There should be a Taskforce comprising the Police, DSS, NSDC and the military aided by technology to carry out immediate arrest and prosecution of any person or group of individuals involved in crude oil theft and Kpofire activities. Such Taskforce should be routinely changed to avoid colluding with the locals.

v) In other to ameliorate food security as a result of low agricultural productivity, the women and youths in the area, should be engaged in more social investments programme with emphasis on entrepreneurship and skill training. Provision of sustainable employment through entrepreneurship will help engage the women and youths effectively.

vi) The community, community leaders and all the major stakeholders should work out sustainable programmes that will involve a transparent process for equity and fairness in distribution of social responsibility packages to the people.

vii) Advocacy on the dangers inherent in Kpofire activities should be scaled up; energy transition conversations should emphasize taking actions and not just the talk.

viii) There is urgent need for the regeneration of the vast area affected by the Imo Kpofire incident; this will help return the women and youth to agriculture for food security.

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