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Perceived Safety and Health Implications of Consuming Cassava from Oil Spill-Affected Farms: A Case Study in Oguta Local Government Area of Imo State, Nigeria

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Abstract

This study examines the perceived safety and health implications of consuming cassava products from oil spill-affected farms in Oguta Local Government Area, Imo State, Nigeria, specifically focusing on assessing the community's concerns regarding potential health risks and the quality of cassava crops grown on contaminated lands. The study utilized a structured questionnaire, the Perceived Impact of Oil Spill on Cassava Production Questionnaire (IOSCPQ), was administered to 219 cassava farmers using purposive sampling. The instrument used included demographic information and a Likert scale to gauge opinions on health risks associated with consuming cassava from oil spill-affected farms. Data analysis was conducted using Pearson's Product Moment Correlation, facilitated by SPSS version 2023. The result revealed a significant correlation between oil spill occurrences and perceived health risks. It shows a positive correlation coefficient of 0.740 with a p-value of 0.501, significant at the 0.05 level which indicates a strong perception among community members that increased oil spills are directly associated with heightened health risks from consuming contaminated cassava. The study recommends immediate intervention by relevant authorities to mitigate oil spill effects through rigorous cleanup efforts and regular monitoring of soil and water quality. Additionally, there is need for public health campaign programs to educate the local communities on the dangers of consuming contaminated cassava and to promote alternative sources of safe food. Establishing support systems for affected farmers to transition to safer agricultural practices can also help alleviate the health risks posed by oil spill incidents.

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Introduction

Niger Delta Region has been plagued by numerous environmental and socioeconomic challenges, including widespread pollution and wastewater issues due to oil spills, gas flaring, and other industrial activities. Loss of sacred sites, traditional practices, and cultural heritage can erode community identity and resilience. Oil spills often lead to legal and regulatory actions against responsible parties, including fines, penalties, and litigation. Regulatory agencies may implement stricter regulations and oversight measures to prevent future spills and mitigate environmental risks. Oil spills can damage the reputation of companies, industries, and regions associated with the incident, affecting public trust, investor confidence, and stakeholder relations. Perceptions of environmental stewardship and corporate responsibility may be negatively impacted. Overall, the perceived impacts of oil spills extend beyond immediate environmental harm to encompass a range of social, economic, health, and cultural dimensions. Effective spill response, mitigation, and restoration efforts are essential to minimize these impacts and promote long-term recovery and resilience in affected communities and ecosystems.

Crude oil, also known as petroleum, is a naturally occurring fossil fuel composed of hydrocarbon compounds. It is formed from the remains of ancient marine organisms, such as plankton and algae, that were buried and subjected to heat and pressure over millions of years. Crude oil is extracted from underground reservoirs through drilling operations and serves as a vital source of energy and raw material for various industries worldwide. Onwumelu (2022), "Crude oil, the world's major source of energy'' [1]. Key characteristics of crude oil include; composition, properties, types, uses, extraction and production, environmental and health impacts, Overall, crude oil plays a central role in the global economy and energy system, but its extraction, production, and consumption pose environmental, social, and geopolitical challenges that necessitate sustainable management and transition to alternative energy.

An oil spill is the unintentional or intentional discharge of liquid petroleum hydrocarbons into the environment; these spills usually happen on land but can also happen in bodies of water like rivers, lakes, or seas. Devastating effects of oil spills can be seen in local economies, wildlife, ecosystems, and human health. Abah, et al, (2020) reported that many accidental spills of crude oil in oil producing areas have threatened the nature, and the livelihood of people in the communities through poor yield. Major aspects of oil spills include; causes, type of oil, environmental impact, human health risks, economic consequences, response and clean-up, legal and regulatory framework. Overall, oil spills represent a complex and multifaceted environmental challenge that requires coordinated efforts from governments, industries, communities, and environmental organizations to prevent, mitigate, and respond to incidents, as well as to promote sustainable practices and technologies that reduce the risk of future spills.

A critical challenge observed in oil production and exploration in the study are is the lack of comprehensive research on how cassava farmers, agricultural workers, and other stakeholders in Oguta perceive the risks and impacts of oil spills on cassava cultivation. To effectively mitigate the socio-economic effects of oil pollution on cassava production, policies and strategies for mitigation must take stakeholders' perspectives into account. In addition, the illegal oil refineries (Kpo Fire sites) that are currently ravaging the study area and harming the farmers' crops and soil are the most recent source of crude oil pollution on cassava farmland. Soil pollution is a global issue that every nation that is serious about agricultural production for food security cannot shy away from. This is largely due to the importance of soil for agricultural purposes. Therefore, the goal of this research is to examine the perceived safety and health implications of consuming cassava products from oil spill affected cassava farms by farmers and local communities in Oguta Local Government Area of Imo State Nigeria. The research question that enable this to be achieved is; what are the perceived safety and health implications of consuming cassava products from oil spill-affected farms among farmers and local communities in Oguta Local Government Area?

The study addresses this situation by employing a descriptive survey design and utilizing the Pearson

Product Moment Correlation (PPMC) technique for data analysis.

Literature Review

Health Risk of Communities and Oil Spill

Results for mothers and newborns are significant issues in public health. This is because, in the majority of developing nations, unfavourable occurrences involving mothers and newborns continue to be the main cause of maternal and perinatal deaths as well as childhood disabilities. According to data released by the World Health Organisation (WHO) in 2018, women and children residing in impoverished communities account for 99% of maternal fatalities and over 37% of infant mortality in underdeveloped nations. The Sustainable Development Goal (SDG) aims to ensure healthy lives and promote wellbeing for all people, regardless of age, by reducing the global maternal mortality ratio to less than 70 per 100,000 live births and the neonatal mortality rate to as low as 12 per 1,000 live births. Among other strategic aims, the SDG gives universal access to high-quality healthcare services for mothers, newborns, and sexual and reproductive health top priority in response to this challenge.

There is mounting evidence that suggests the environment can have a significant impact on pregnancy outcomes, even though a variety of factors have been linked to unfavorable pregnancy outcomes. Genetic and environmental variables have been shown to interact to cause genetic alterations that cause problems for both mothers and newborns. Thus, pregnant women who live in areas where gas flaring and oil spills have contaminated the environment confront constant risks to their health and the health of their unborn children. Negative effects on development and pregnancy have been related to pollution exposure in all its forms. Research has investigated how air pollution affects pregnancy outcomes and the detrimental effects it has on fetal growth, including low birth weight or preterm delivery, development, and length of pregnancy. Furthermore, even minor disruptions brought on by chemical exposures during critical junctures in a fetus's development can raise an individual's lifetime risk of illness and disability.

It is thought that a person's level of awareness and perception of danger have a significant impact on their overall wellness. Risk perception affects health decision-making, health-seeking behaviour, and health outcomes, according to Ferrer and Klein (2015). Perceptions are shaped in each given population, nation, or society according to the degree of threat that a specific risk represents. Risk perception is high when a situation is seen as threatening; on the other hand, risk perception is low when a situation is seen as less threatening. Therefore, how one perceives dangers affects how they react to circumstances. While residents of areas affected by oil spills are generally susceptible to health issues, pregnant women and infants are particularly vulnerable to these unfavorable health consequences. This is due to the fact that any material that can get through the placenta has the ability to affect the fetus's growth and change its course. There are few studies that show how women perceive the risk that oil pollution poses for unfavorable outcomes for mothers and babies.

Relationship between the Health Risk of Communities, Farmers and the Public on Oil Spill and Cassava Production

Much ado over the inevitable, according to Ebere (2021) on public health concerns in the Niger Delta region of Nigeria and crude oil. Crude oil has suffered greatly in order to gain its importance. It can be referred to as the bitter-sweet crude because of its dual effects on the welfare, wellness, and well-being of the populace in many emerging economies throughout the world. Niger Delta residents continue to be characterized by agitation and restlessness in the wake of allegations that multinational corporations exploit and disregard the local populace. Relevant databases, including Google Scholar, Science Direct, Scopus, and PubMed, were searched for literature on the effects of crude oil on the environment and public health. This dissertation offers a toxicological and scientific translation of what should be done by the major parties instead of hurling endless accusations. Living close to crude oil production sites and spills is a stressor on the environment caused by exposure to physical threats and chemical pollutants that are all harmful to one's health. Therefore, cumulative risk assessment, or CRA, is suggested as a workable method for a thorough understanding of the scope of this issue. The advancement of environmental medicine research, which will produce information on how to use natural resources to address public health concerns related to oil exploration as well as environmental mitigation and cleanup, is something that multinational oil companies ought to encourage. This project will produce a waste-to-wealth programme that will calm

the unrest in the communities that explore for oil. It will be intriguing to learn that the natural remedies to stop the public health epidemic are found in the same setting that fosters the elephant-in-the-parlor.

Ogboeli *et al,* (2024) on Planning Implications of the Effect of Crude Oil Pollution on Germination and Growth Parameters of Mucuna Pruriens (Var Cochinchinesis) Fabacea in Rivers State, Nigeria. The effect of varying concentrations of crude oil pollution on the germination and growth parameters of Mucuna pruriens (Var. cochinchinenesis) was investigated. The following treatments were used; 0ml, 100ml, 200ml, 400ml, 800ml 1600ml respectively. Although 100% of the velvet beans germinated, different treatments (800 and 1600 ml) were shown to limit development; at this treatment, the time lag between subsequent growth is also shortened. It is believed that oil's physical obstruction of the intake of oxygen and water is the primary cause of growth inhibition. The plants with the contaminated treatments had less development and growth than the non-polluted treatment (control), as a result of the detrimental impacts of the crude oil on the geomorphological parameters (leaf number, leaf area, and plant height) that were tested for. When compared to the control trial, velvet beans treated with smaller treatments (100 and 200 millilitres) were shown to be more productive. Consequently, growth retardation, chlorosis, the presence of a tough apical meristem, and defoliation from the base of the plant occur as the crude oil surpasses the plant's absorption capacity at 800 ml and 1600 ml, respectively. Therefore, it can be concluded that therefore be concluded that oil spills pose a service threat to man and his environment. Hence, greater effort should be undertaken to ensure oil spills are minimized it in the future.

Materials and Method

Study Area

Oguta Local Government Area is located in Imo State, which is in the southeast of Nigeria. It is surrounded by several local government areas, including Ohaji/ Egbema to the west, Oru East to the north, and Ngor Okpala to the east. It is located in Nigeria's Niger Delta. The Imo River, which divides Oguta Local Government Area from the nearby state of Rivers, borders the area to the south. Oguta Local Government Area has roughly 5,100 square kilometres of total land area (Uzoho *et al*., 1974). The latitude and longitude of Oguta Local Government Area in Imo State, Nigeria, are approximately: latitude: 5.7083°N and longitude: 6.8144°E. Oguta Local Government Area's relief is made up of a combination of wetlands, riverine regions, and lowland plains. It is situated between latitudes 5040129.418N and 5041039.97N and longitudes 6044132.06E and 6050102.05E, with a perimeter of 36.62692km. The research area is situated in the hydrological province of southern Nigeria's coastal sedimentary lowlands, which has two different seasons: the wet and the dry. The majority of the four rivers that pour into Oguta Lake are the Njaba, Awbana, Utu, and Orashi. While the perennial Utu Stream empties into Oguta Lake during the rainy season, the Njaba and Awbana Rivers discharge into the lake year-round. In the southwest of the lake, the Orashi River passes by. It was calculated that the yearly total inflow from the rivers and streams would be approximately 25,801.60 m3. The anticipated annual recharge of the lake from precipitation is approximately 693,000 m3, whereas the annual return and overland flow into the lake are around 69,000 and 138,000 m3, respectively. The projected yearly inflow of groundwater into the lake is 2,750,400 metres. Therefore, the total annual input of water substantially exceeds the entire annual outflow. According to these figures, Oguta Lake receives sufficient recharging throughout the year (Paulinus, U.U. et al., 2016).

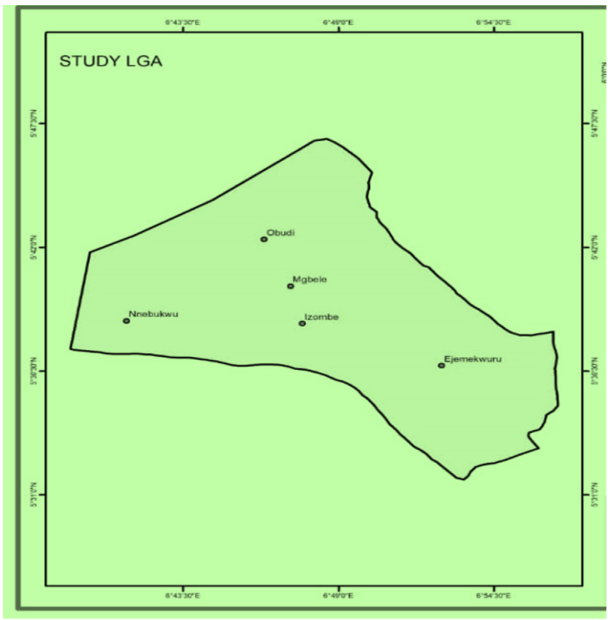

Figure 1: Study Area

Southeast Nigeria's Oguta Local Government Area is mostly covered by tropical rainforests or the equatorial monsoon. The nation's climate is influenced by the warm, moist seasonal breeze known as the maritime

tropical (MT) air mass, which originates from the South Atlantic Ocean and blows from the sea to the land. In Oguta, the rainy season is warm, uncomfortable, and cloudy, while the dry season is hot, muggy, and partly cloudy. Temperature variations occur throughout the year, with an average of 68 to 88 degrees F. Over the course of the year, there is a considerable seasonal difference in the average percentage of cloud cover in the sky due to the variations in temperature that cause hot and cold seasons. The clearest month is December, when the sky is clear, mostly clear, or partly overcast 44% of the time on average. In Oguta, the clearer portion of the year starts about November 20 and lasts for approximately 2.7 months until about February 12. The cloudiest period occurs in April, when the sky is overcast or mainly cloudy 85% of the time on average. The cloudier period begins around February 12 and lasts for around 9.3 months, finishing on November 20.

The precipitation varies greatly throughout the year, with a wet day defined as one with at least 0.04 inches of liquid or liquid-equivalent precipitation. As a result, there is a roughly 7.2-month wet season and a 4.8-month dry season. It receives copious amounts of rain. Because of the area's closeness to the equatorial belt, these storms are typically of a traditional form. The entire yearly rainfall steadily drops as one moves inland from the shore. According to Ahiarakwem, C.A. et al. (2022), the yearly total varies from 11.2 inches in September to roughly 0.3 inches in January.

Data Collection and Processing

The data collection process for this study involved a combination of primary and secondary sources to ensure comprehensive coverage of the research topic. Primary data were gathered through direct observations, structured questionnaires, interviews, and fieldwork. Direct observations were conducted to visually assess the environmental impact of oil spills on cassava production. The self designed questionnaire, titled "Impact of Oil Spill on Cassava Production Questionnaire (IOSCPQ)", was utilized and divided into two sections; demographic information of the respondents and responses of respondents feeling and opinions regarding the impact of oil spills, using a 4-point Likert scale. Additionally, semi-structured interviews were conducted with selected cassava farmers to gain deeper insights into their experiences and perceptions of the environmental impacts of oil spills. Fieldwork involved collecting soil and water samples from affected cassava farmlands for labouratory analysis to corroborate the survey data. Secondary data involved comprehensive review of existing literatures such as textbooks, journals, government reports, professional manuals, academic thesis and dissertations, and articles from magazines and newspapers. Data from the National Population Commission Publications (1941, 1976, and 2006) were used to contextualize the population and socio-economic conditions of the study area. A purposive sampling technique was employed to select respondents from the study area. This method was chosen due to the sensitive nature of the research and the need to engage directly with cassava farmers impacted by oil spills. The sample consisted of 219 respondents, predominantly cassava farmers from the most affected communities in Oguta Local Government Area. The study area was divided into impacted and non-impacted communities based on the presence of oil spill incidents, with a focus on communities predominantly engaged in cassava farming and significantly affected by oil spills. Table II shows the location characteristics of sampling points. The sample size was determined using Krejcie & Morgan's 1970 Statistical formula:

The formula is as follows:

$N=n=E2+Z2\times p \times(1-p)$.....(Equation 1)

$NZ2\times p\times(1-p)$

Where:

- n = required sample size
- Z = Z-score corresponding to the desired confidence level (e.g., for a 95% confidence level, = 1.96Z = 1.96).
- p = estimated proportion of the population that possesses the attribute of interest
- E = desired margin of error (expressed as a proportion)
- N = population size

For the purposes of this study, the research was limited to five (5) communities where the sample points were preached in the study area. The five communities were those predominantly into cassava farming and who, from the research work, were confirmed to have suffered various forms of oil spill necessitating this research. The affected communities in this category are shown in Table 1 and the location characteristics is shown in Table 2

Table 1: Sampled Communities in Oguta L.G.A impacted by Oil Spill

S/N	Community	Oil Spill Impacted	Cassava Farming Impacted
1	Obudu	Yes	Yes
2	Mgbele	Yes	Yes
3	Nnebukwu	Yes	Yes
4	Izombe	Yes	Yes
5	Ejemekwuru	Yes	Yes

Table 2: Location Characteristics of Sampling Points

S/N	Community	Latitude (N)	Longitude (E)
1	Obudu	5.5478	6.8941
2	Mgbele	5.6809	6.8478
3	Nnebukwu	5.7018	6.7882
4	Ejemekwuru	5.5932	6.9223
5	Izombe	5.6344	6.8592

The collected data were processed and analyzed using several steps, initially, raw data from questionnaires and interviews were checked for completeness and accuracy. Incomplete or inconsistent responses were discarded. Cleaned data were then entered into the Statistical Package for Social Sciences (SPSS) software, version 2023, for analysis. Basic statistical measures such as mean, standard deviation, and frequencies were computed to summarize the demographic characteristics of the respondents and their perceptions of the safety and health implications of consuming cassava products from oil spill-affected farms.

Pearson's Product-Moment Correlation (PPMC) was used to test the relationships between oil spill incidents and various perceived impacts, such as soil degredation, yield reduction, and disruptions to farming activities. The significance level was set at 0.05. the correlation results were interpreted to understand the strength and direction of the relationships between oil spills and their perceived environmental impacts on cassava farming. Additionally, interview data were transcribed and analyzed thematically to identify common themes and insights related to the farmers perceptions and experiences.

Result and Discussion

The result's analysis is categorized into three sections: demographic analysis of respondents; perception of local communities, farmers regarding environmental impact of oil spill associated with cassava production, and Hypothesis result.

Respondents Demographic Analysis

This research included three demographic variables. They were: Gender, Age, and Work Experience. The findings in the tables below reflects distribution according to demographic variables of the sampled individuals.

Table 3: Gender Profile of the Respondents

Variable	Frequency	Percent %
Male	84	42.63
Female	113	57.36
Total	197	100

Source: Researcher's Field Survey 2023

Gender of Respondents

Table 3 reveals that 84 (42.83%) of Respondents were males, while 113 (57.36%) were females. It indicates female respondents were more interested in the research than male respondents were.

Table 4: Occupation Profile of the Respondents

Variable	Frequency	Percent %
Cassava farmers	145	73.6
Civil servants	52	26.4
Total	197	100

Source: Researcher's Field Survey 2023

Occupation of Respondents

Table 4 reveals that 145 (73.60%) of Respondents were cassava farmers while 52 (26.39%) were civil servants. It indicates cassava farmers respondents were more interested in the research than the civil servants were.

Table 5: Educational qualification Profile of the Respondents

Variable	Frequency	Percent %
FSLC	110	55.8
First degree	54	27.4
Post graduate	33	16.8
Total	197	100

Source: Researcher's Field Survey 2023

Educational Qualification of the Sample

Table 5 shows 110 respondents (55.83%) FSLC; 54 respondents (27.41%) first degree; 33 respondents (16.76%) respondents post graduate degree holders.

Table 6: Age Profile of the Respondents

Variable	Frequency	Percent %
30-35	110	55.83
36-55	54	27.41
65 and above	33	16.76
Total	197	100

Source: Field Survey 2023

Age of the Sample

Table 6 shows 110 respondents (55.83%) aged 30-35years; 54 respondents (27.41%) aged 36-55years; 33 respondents (16.76%) respondents (8%) aged 65 and above.

Perceived safety and health implications of consuming cassava products from oil spill affected farms among farmers and local communities in Oguta Local Government Area.

How do cassava farmers and local communities perceive the social and cultural disruptions resulting from oil spill incidents in Oguta Local Government Area? Table 7 shows the rate of responses given on the perception of cassava farmers and local communities on social and cultural activities disruptions resulting from oil spill incidents in Oguta Local Government Area.

Table 7: Rate of Responses for Perception of Cassava Farmers

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agree	86	43.65	43.65	43.65
Agree	62	31.48	31.48	31.48
Disagree	47	23.86	23.86	23.86
Strongly Disagree	2	1.01	1.01	1.01
Total	197	100	100	100

Source: Researcher's Survey data (2023)

The 197 respondents, 86 respondents representing 43.65% gave a strongly agree response on the perceived safety and health implications of consumption of cassava products from the oil spilled farmlands in Oguta Local Government Area. Similarly, 62 respondents representing 31.48% agreed that there are safety and health implications of consumption of cassava products from oil spilled farmlands in Oguta Local Government Area. However, 47 respondents being 23.86% disagreed on the perceived safety and health implications of consumption of cassava products from oil spilled farmlands in Oguta Local Government Area. This was followed by 2 respondents representing 1.01% who strongly disagreed on the perceived safety and health implications of consumption of cassava products from oil spilled farmlands in Oguta Local Government Area.

Hypothesis Result

Ho3: There is no significant relationship between the perceived safety and health implications of consuming cassava products from oil spill-affected farms among farmers and local communities in Oguta Local Government Area.

Table 8: The Descriptive Statistics

Variables	Mean	Standard Deviation
Safety and Health Implications	0.118	0.12
Oil spill	10.63	1.095
Error Term	0.5095	0.435

The descriptive statistic in this section reveals the mean and standard deviation for each variable for safety and health implications from consuming products of cassava origin owing to an oil spill in Oguta Local Government Area. From the values in Table 8 above, the safety and health implications of consuming cassava related products from the oil spilled study area of Oguta Local Government Area have a mean value of 0.1180 and a standard deviation value of 0.120. Cassava production provided a mean value of 10.630 and a standard deviation of 1.095. Also, the table indicated a difference between the mean values of the oil spill and error term as 10.630 and 0.5095, respectively, while the standard deviation of the error term is 0.435.

Table 9: Correlation

Variables	Pearson Correlation	Significant
Safety and Health Implications	0.74	0
Oil spill	-0.5	0

Table 9 above indicates a significant relationship between safety and health implications from consuming cassava products and oil spill occurrences.

Table 10: Regression Analysis

Variables	Standard Error	Beta	T-value	P-value
(Constant)				
Safety & Health Implications	0.01	0	2.03	0.005
Oil spill	0.01	-0	-1.01	-0.051

Other values of Regression Analysis

Statistic	Value
R2	0.786
Adjusted R2	0.748
Values Explained by other variables	21.40%
F-Statistics	80.132
Prob (F-Statistics)	0

The result of the regression analysis above reveals the safety and health implications on farmers and local communities of the consumption of products of cassava origin from oil spilled locations in the study area of Oguta Local Government Area. The outcome shows that there is a positive relationship between the safety and health implications of the consumption of cassava products by farmers and local communities owing to the oil spill in the study area. R2 indicates that only 78.6% of the variations in the independent variable of health-related risks to farmers, communities, and the public are explained by the variations in the dependent variable of cassava production. The implication of this is that the remaining 21.4% is explained by other variables not included in the model. Consequently, since the explanation variable is greater than 50%, it shows that the model has a good fit. The adjusted R2 value of 74.8% is slightly below the R2 of 78.6%. F-statistics shows the validity of the model, as its value of 80.132 is well above its Prob (F-statistics) value of 0.000. Thus, in our third hypothesis above, we assume that there is no significant relationship between safety and health implications for farmers and local communities owing to the consumption of cassava products in the affected study area of Oguta Local Government Area. The correlation result shows a positive correlation of 0.740, with a p- value of -0.501 significant at only 0.05%, which entails that more safety and health implications are inherent owing to the more oil spill occurrences recorded in the study area, which seems dangerous. Therefore, the null hypothesis is rejected, while the alternative hypothesis is accepted. Thus, we could state that there is a significant relationship between the safety and health implications of farmers and local communities going by the consumption of cassava related products gotten from the oil spilled locations in the study area of Oguta Local Government Area.

Conclusion

The study revealed significant concerns among community members regarding the potential health risks

associated with consuming cassava products grown on oil spill-affected farmlands. Public opinion largely believes that oil spills may contaminate cassava crops with toxic substances that are harmful to human health. Farmers also perceive a substantial risk of soil and water contamination from oil spills, which impacts the safety and quality of cassava products. Furthermore, there is a consensus among community members that consuming cassava products from oil spill affected areas poses health hazards. These findings underscore the critical need for addressing oil spill impacts on agricultural land to ensure food safety and protect public health in affected communities.

Recommendations

Based on the findings, it is essential to implement regular and comprehensive environmental monitoring to assess the levels of contaminants in soil, water, and cassava crops in oil spill-affected areas. This would involve periodic testing and analysis by environmental agencies to ensure that contamination levels are within safe limits. The data obtained from these assessments can guide mitigation efforts and inform the community about the safety of their food products. Also, conducting extensive public health education and awareness campaigns to inform farmers and community members of the potential health risks of consuming cassava from oil-contaminated farmlands. Additionally, the study recommends soil remediation and rehabilitation programs to restore the fertility and safety of farmlands affected by oil spills; these programs should include techniques such as bioremediation, phytoremediation, and the use of soil amendments to remove contaminants and improve soil health. By rehabilitating the affected farmlands, it will be possible to reduce the health risks associated with consuming cassava and other crops grown in these areas, ensuring long-term food safety and sustainability.

Conflict of Interests

The authors declare that there is no conflict of interest to disclose

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