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# **Oil is not Bread: Exploring Food Insecurity and Conflict Dynamics in the Niger-Delta Region of Nigeria**

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**TITLE: OIL IS NOT BREAD: EXPLORING FOOD INSECURITY AND CONFLICT  
DYNAMICS IN THE NIGER-DELTA REGION OF NIGERIA**

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Declaration

I, Taiwo Olufunbi George, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

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**ABSTRACT**

The relationship between food insecurity and conflict is complex and dynamic in the sense that conflict often leads to food insecurity and food insecurity leads to conflict. A body of research has shown that conflict leads to food insecurity. However, the other part of the dynamics has been researched only to a limited degree. This thesis contributes to the other part of the research by showing how food insecurity fuels conflict in the Niger-delta region of Nigeria.

To do this, this research employs a qualitative approach to data collection by engaging the major players- farmers and other important players- the oil company and a non-governmental organization. The focus groups interviews were conducted in Bodo, Mugho and Umuechem communities in Rivers state. The result reveals that oil exploration activities has caused environmental degradation. It also reveals that this environmental degradation has resulted in a devastating level of food insecurity in the region.

The research shows that compensation has not been very effective in resolving the problem of hunger and unemployment caused by the environmental degradation and the people have resorted to aggressive means of voicing their grievances.

The thesis concludes that the main reason the people seem unpleased and aggressive is food and livelihood insecurity. The main reasons for the food insecurity are limited access and availability of food is low yield caused by the degradation of the soil, heavy reliance on inputs like fertilizers, unstable prices and inflation, lack of physical access such as farm roads and a huge drop in their income and lack of purchasing power. The emigration of the male population in huge numbers, leaving women behind to care for the households, confirms the state of food insecurity in the region. To be able to solve the conflict in the Niger Delta food security should be given more attention and the government and oil companies should invest immensely in agricultural development and women empowerment.

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**LIST OF ABBREVIATIONS**

DFID	Department for International Development
FAO	Food and Agriculture Organization
MADE	Market Development in the Niger Delta
NDDB	Niger Delta Development Board
NDDC	Niger Delta Development Commission
NDHS	National Demographic and Health Survey
NGO	Non-Governmental Organization
NNPC	Nigerian National Petroleum Corporation
OPEC	Organization of Petroleum Exporting Countries
PwC	Price Waterhouse and Coopers
SPDC	Shell Petroleum Development Company
UNDP	United Nations Development Programme
WFP	World Food Programme



## 1. INTRODUCTION

The relationship between food insecurity and conflict is complex and dynamic Hendrix & Brinkman, (2013). The dynamics is twofold in that conflict can lead to food insecurity and food insecurity can lead to conflict. The former link between the two is commonly observed and researched. The prevalence of food insecurity in fragile states supports this argument. On the other hand, the latter argument has been explored only to a limited degree. This paper explores that part of the dynamics and supports the claim with the aid of qualitative research that conflict<sup>1</sup> occurring in the Niger-delta may be as a result of may be as a result of food insecurity prevalent in the region.

Environmental degradation primarily caused by oil exploration activities has altered the lives of the people of the Niger-delta in the area of food production, food and livelihood security. Oil exploration activities have altered the environment in the Niger-delta and most of the damage occurred through oil spillages and gas flaring. Over the past 50 years, about 13million tonnes of oil have been spilled into the ecosystem in the region, destroying the diverse ecosystem and rich biodiversity that the region is blessed with (Kadafa, 2012).

The majority of the people rely on this biodiversity as their source of food and livelihood. Food and livelihood security in the Niger-delta is heavily threatened because food production is the major occupation of the people in the region with about 85% of the inhabitants running informal agricultural enterprises (UNDP, 2006). Whatever affects food production in the region also threatens livelihood. Food insecurity in the Niger-delta is therefore a critical subject, which requires an urgent attention.

Unfortunately, food insecurity in the Niger-delta has received very little governmental and scholarly attention. Penawou (2012) explains that the general lack of food and heavy reliance on food imports in Nigeria results from the government's negligence of its agricultural sector. However, the agricultural sector was the mainstay of Nigeria's economy before the discovery of

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<sup>1</sup> Conflict in the Niger-delta is regarded as grievances and divided in a later chapter into three categories- 1. grievances against the oil companies, 2. greivances against the government and 3. inter-tribal or inter-communal grievances.

crude oil. Prior to oil discovery, agriculture accounted for about 57% of the gross domestic product (GDP) and provided about 65% of the foreign exchange export earnings of the nation (PwC, 2017). According to the PwC (2017), this began gradually from the 1970s when attention shifted from agriculture to petroleum exploration, with agriculture yielding about 24% of the GDP and only 5% of export earnings.

Oil discovery in the Niger-delta region has immensely benefited the Nigerian economy but appears a curse to the region where it is found and extracted. The organization of oil producing countries (OPEC) recognises Nigeria as the 5<sup>th</sup> largest oil producer, producing about 2.3 million barrels per day and the oil earnings skyrocketed from \$200million to about \$32 billion between 1970 and 1978 (Penawou, 2012, p.70 & 71). As a result of this enormous revenue, the oil industry became the dominant revenue source, displacing the agricultural industry. The government therefore paid lesser attention to the agricultural industry. Crude oil now contributes almost 95% of Nigeria's foreign exchange earnings (World Bank, 2007).

While oil discovery in the Niger-delta has not only influenced the nation's attention shift from agriculture to oil, this shift has unfortunately affected the agricultural production, food and livelihood security in the region. The amount of oil produced in the Niger-delta reveals the oil exploration intensity. The Niger-delta hosts about 5000 oil wells with 7000 kilometres of pipelines crossing over 1500 communities in the region, producing up to 2.5 million oil barrels per day (Gusau, 2012; NNPC, 2018). This profit in the oil sector however is not commensurate with what is obtained in the agricultural sector. Continuous exploration of oil has exacerbated the environmental problems in the region leading to environmental degradation, in form of air, land and water pollution and loss of biodiversity. Environmental degradation has in turn affected the people's lives who are predominantly farmers, relying on their agriculture as their main food and income sources.

Despite the region's economic importance to the nation, a large proportion of the people are considered one of the poorest in the world (Dode, 2011) and it has become a hub of violence. The region has also been referred to as 'a hot bed of violence, insurgency, kidnapping, hostage-taking, oil pipeline sabotage, crude oil theft, gang wars, internecine struggles and so much else by way of anarchy and chaos' (Afinotan & Ojatorotu, 2009, p.191). The conflicts have been previously linked to environmental degradation and livelihood insecurity (NDDC, 2004)

This research, however, goes further to link the conflict to the prevailing food insecurity in the region. The link from conflict to food insecurity is stronger and more researched than the link between food insecurity and conflict (Rudolfson, 2018). However, there have been speculations that conflicts over food will be a serious issue and will call for more researches in the future (Rudolfson, 2018) This research contributes to the issue by examining the cause of this conflict coming from the farmer's perspective, which is representative of the population.

### **1.1 Research aims and objectives**

The main objective of this research is to explore the link between food insecurity and conflict in the Niger-delta region. To achieve this, the research established an underlying fact that oil exploration activities has led to food insecurity by assessing farmers' experiences and reports.

The main sub objectives are therefore;

1. To take direct accounts of farmers' experiences and knowledge of food insecurity in the region.
2. To increase the validity of the research by taking account of other stakeholders' opinions on the issue of food insecurity and conflict in the region.
3. To examine the link between increased food and livelihood insecurity and conflict in the region.
4. To investigate and assess the attempts made by stakeholders to mitigate the damage including compensation and other benefits accessible to farmers.

### **1.2 Research Questions**

The following research questions are therefore used as a guideline to achieve these aims

1. What is the state of food insecurity in the Niger-delta region
2. What are the main drivers of food insecurity in the region?

3. How has oil extraction impacted people's lives and livelihoods in the area?
4. How have stakeholders tried to mitigate the damage from oil extraction
5. What is the link between food insecurity and conflict in the region?

### **1.3 Thesis outline**

Following this introductory chapter, the next chapter provides a literary exposition of the state of food insecurity and conflict in the Niger-delta region. To do this effectively, some background information are provided to give the reader a clearer understanding of the food insecurity situation and how it developed. It goes from a broader description of Nigeria's oil resource and then focuses on the Niger-delta's position in Nigeria's oil economy in order to expatiate on the contribution and relevance of the region to the Nigerian economy. It then explores the conflict and food insecurity issues, level of environmental degradation and the roles of the government, oil companies and non-governmental organizations in remediating the damage.

The next chapter focuses on the themes surrounding food insecurity and oil exploration in the Niger-delta. It explores the food security dimensions- availability, accessibility and utilization, which are best tools for assessing the food security of a region. It also introduces the socio-ecological theory, ecofeminism, which relates environmental degradation with the oppression of women (Gusau, 2012).

This chapter will be immediately followed by the methodology of the research. The fifth chapter analyses the findings of the research by treating the results under each research questions. This is immediately followed by the discussion on the key findings which summarizes the key findings, putting them in perspective by categorizing them under major themes.

The final chapter will give a summary of the findings and will present the researcher's recommendations based on the study's results and knowledge from academia.

## 2. LITERATURE REVIEW

The major concepts reviewed in this chapter are food insecurity, conflict, compensation and land grabbing. The Literature on these concepts will aid in understanding how they relate to the situation in the Niger-delta. The Niger-delta comprises of nine states (Appendix 3), six of which are located in the South-South of Nigeria (Rivers, Bayelsa, Cross Rivers, Akwa-Ibom, Delta and Edo) (Penawou, 2012). The other three states are Ondo state from the South-West, Abia and Imo states from the South-East (Penawou, 2012).

### 2.1 Food insecurity in the Niger-delta

According to the World Food Summit (1996, as cited in FAO, 2006, p. 1)

*'Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life'.*

Nigeria as a whole is being faced with the challenge of being food insecure despite having a history of a successful food production, sustainability and security (Omotor, 2009). Although some parts of the country are food secure and have availability of seasonal crops which includes fruits and legumes, food insecurity remains a major challenge in some parts of the north and the Niger-delta, which makes Nigeria to be considered food insecure by the Food and Agriculture Organization (FAO) and other relevant institutions (Omotor, 2009). Prior to oil discovery, and till around the early 1970s, agriculture was so important to Nigeria's economy that about 70% of the Nigerian labour force were employed in the agricultural sector (Ekundare, 1973). But as oil exploration gained popularity, the agriculture's economic standing gradually reduced. As at 1973, Nigeria was the world's largest exporter of groundnut and 2<sup>nd</sup> largest exporter of cocoa, while cotton, palm oil, palm kernel and rubber were also very important export crops (Ekundare, 1973).

The region is badly affected by the effects of oil exploration because food insecurity in the region is heavily linked to livelihood insecurity. The Niger-delta people depend on the environment as a source of their livelihood because of the region's ecology. Nnadozie (1995) explains that in addition to the oil and gas resources abundant in the region, it is also rich in biodiversity with diverse plant and animal species. It is considered the third largest wetland in the world and the largest in Africa (NDDC, 2004). Wetlands are beneficial to the ecosystem because they aid in food control and maintains biodiversity (Penawou, 2012). This diversity sets a foundation for the major occupations of the people (both male and female) of the region. These are fishing and farming which accounts for 90% of all activities in the region (FOS, 2004).

In the Niger-delta, women like men engage in fishing and farming. However, the Niger-delta is one region where women play significant role in food production. Omeire et al., (2014) explains that the Niger-delta women are highly active in different areas depending on the local ecological setting. Those in the mangrove forest area are actively involved in fishing and farming while those in the freshwater swamp area are involved in fishing wood and seafood collection and sales, gin extraction from palm trees and weaving of mats (Omeire et al, 2014). According to FAO (2011), women seem to be more reliant on these forms of livelihoods than men are because they are often less educated, poorer and possess less properties. Also, while food and livelihood insecurity may cause the men to migrate, the responsibility of caring for the children is passed on to the mother and this makes it more difficult for most women to leave the region. These are the most obvious reasons for the high participation of women in food production in the Niger-delta region.

However, the livelihoods of the people have been threatened by oil exploration activities. Oil companies require a huge land area for their operations such as construction of refineries, oil pipes rigging and installation, and construction of other facilities (Penawou, 2012). This therefore requires that they acquire lands in the most strategic areas at the original owners' detriment resulting in to a significant increase in farmland acquisition by the oil industries (Penawou 2012, p. 89). Most of the people are forced to forfeit their farmlands, which are the people's main livelihood source. UNDP (2006) reports that about 10000 families and 4500 individuals lost their farmlands to oil facilities installation and oil spillage. The people have

been robbed of their mainstay by oil exploration activities because about 70% of the people in the region depend on natural environment for their livelihood (UNDP, 2006). According to Ordinioha (2008), only about 3% of the households in the areas where oil-spillage occurred have food security. This loss of farmlands therefore resulted in livelihood and food insecurity in the Niger-delta region, due to the people's over-dependence on their environment (Ordinioha, 2008).

Apart from forceful land acquisition, oil exploration has also contributed to shortage of farmlands through oil spillage. Oil spillage affects food security by polluting lands and water areas. Ejiba et al., (2016) reports that in some cases, the oil spillage goes as deep as 0.65m into the soil interfering with plant growth and killing the crops. Also, in fruit trees, photosynthesis and transpiration processes are hindered when the trees are covered with crude oil and in plants like pepper and tomatoes, the shoots wilt and die due to the stomata blockage, which in turn inhibits the processes of transpiration, photosynthesis and respiration (Ejiba et al., 2016). Furthermore, the polluted soils are rendered deficient by oil spillage leading to the destruction of soil micro-organisms (Asoya, 2010). Ultimately, this leads to inactivity in the soil, rendering the soil impotent and unable to support plant growth. Either the farmer may abandon the farmland to search for another or he may be forced to search for another source of income.

Apart from pollution of soil and soil organisms, oil spillage also contribute to food insecurity by polluting water areas. Those in the fishing business (fishermen and traders) have experienced a significant decrease in their harvest and income. The FAO estimated that the region has the potential to produce up to 2.2 million metric tonnes of fish in 2008 (FAO, 2018). Unfortunately, this projection is not realised and this is largely because of oil pollution in the rivers as fish supply is continuously diminishing (Osuagwu & Olaifa, 2018). The petroleum substances that are released into the water areas are poisonous to marine habitat killing the aquatic animals in large quantities. Apart from that, the harvested fish and seafood are contaminated with petroleum products and they cause a huge risk to the consumers' health (Osuagwu, & Olaifa, 2018). Oil spills therefore affects the people's livelihoods because of a reduction in harvest and because consumers are sceptical about consuming contaminated produce (Osuagwu, & Olaifa, 2018). Fish is also a major source of animal protein in the region and fish shortage has affected the dietary intake and nutrition of the people.

Food insecurity is also revealed in the level of child malnutrition in the region. According to the 2003, National Demographic and Health Survey (NDHS) report, out of the 44.22% of the total national percentage, 29% of underweight children are found in the oil spill areas (Ordinioha, 2008). This condition is largely due to household food insecurity caused by oil exploration activities (Sawyer et. al., 2013). Furthermore, the 2008 study conducted by the NDHS (cited in Sawyer et. al, 2013, p.42) reveals;

*'More than 31% of under-five children in the Niger delta region of Nigeria are stunted, and 12.8% are under-weight; even as under-nutrition has been shown to pose a great danger to the survival and future wellbeing of children. Studies attribute up to 52.5% of all deaths in young children to undernutrition, varying from 44.8% for deaths due to measles, to 60.7% for deaths because of diarrhoea. Under-nutrition has also been implicated in the aetiology of several diseases, including heart disease, diabetes and cancer...'*

It is noteworthy that food insecurity in the Niger-delta is not due to oil exploration activities alone. Climate change has also contributed to the region's food insecurity. However, while the global climate change has its place, oil exploration also affects the climate of the region. The region has a fragile ecosystem and oil exploration activities such as gas flaring also contribute negatively to the climatic condition of the region. (Nzeadibe et al., 2011). Climate change has altered the pattern of raining leading to a prolonged rainfall season, which in turn results in flooding in the communities, and on farmlands (Ogaraku et al., 2017). This cyclical relationship between oil spillage and climate change has altogether affected agricultural production.

## **2.2 Conflict in the Niger-delta**

Conflict in the Niger-delta has drawn global attention, and what began as an innocent cry and claim to people's rights has evolved into a situation perceived as a threat to the region, the Country, and the world as a whole. To show the seriousness of this situation, Watts (2004) explains in his article 'Resource Curse' how the United States security department describes the Niger-delta;



*'...the Niger Delta- the ground zero of Nigerian oil production – as a volatile breeding ground for militants 'impoverished ethnic groups' for whom terrorist acts (abduction, hostage-taking, kidnappings and extra-judicial killings) were part of their stock in trade.'* (p.50)

### **What kind of conflicts exist in the Niger-delta region?**

The nature of conflict in the Niger-delta is multidimensional and are expressed through both peaceful and chaotic protests. In this paper, the conflicts in the region have been categorised under three main sections; grievances against the oil companies, grievances against the government and inter-communal grievances. According to Kriesberg (1973) one could have a grievance if they feel they have been treated unjustly or unfairly. In addition, a group can begin to have grievances or express hostility towards another group when they feel they have not been fairly treated. The Niger-delta people feel they are not treated fairly because of the loss they suffer through environmental degradation and because their standard of living does not tally with the economic benefit the region offers the nation. Gurr (1993) explains how such dissatisfaction produces grievances;

*'In order for these social effects to cause heightened grievance, people must perceive a relative decrease in their standard of living compared with other groups or compared with their aspirations being addressed under the status quo'* (as cited in Løvlie, 2006, p.28)

#### **A. Grievances against the oil companies**

Frynas (2000) helps with an overview of oil exploration history in Nigeria. The Nigerian Bitumen Corporation, a subsidiary of the German company started oil exploration between 1907 and 1914. The company left the country at the onset of the First World War and after the First World War, the British oil companies took over the exploratory work. This led to the licensing of the British oil companies, Shell and British petroleum for oil exploration activities. For the first time, commercial quantities of oil was found in Nigeria at Oloibiri in Bayelsa state of the Niger-delta region. By the time Nigeria got her independence from the British colonials in 1960, Shell-BP was the dominant oil company in Nigeria and remains so till date (now as

Shell<sup>2</sup>). Soon after the independence, other oil companies joined Shell-BP. The six major oil companies in the Nigerian oil industry are Shell, Mobil, Chevron, Elf, Agip and Texaco (Frynas, 2000, p. 11). There is a total of 18 multinational oil companies in the Niger-delta but these six are the major players (Mgbemena & Uzoma, 2015)

The oil companies make immense wealth from the extraction of oil in the region and although attempts have been made to compensate the people for their losses, the people are still unsatisfied. In stating Chevron's stakes in the oil industry in Nigeria, Kinman & Juhasz, (2011) explains;

*'Chevron currently holds a 40% interest in 13 Nigerian concessions that it operates under a joint-venture arrangement with the Nigerian National Petroleum Corporation, with daily 2010 production averaging 524,000 barrels of crude oil, 206 million cubic feet of natural gas and 5,000 barrels of liquefied petroleum gas (LPG).*

The Pointer (2018) explains that the oil companies are reluctant to offer due compensation to the people affected when compared to the Gulf of Mexico, an oil rich region where British petroleum is also operating. The Pointer (2008) explains that in an attempt to compensate for the oil spillage in the gulf of Mexico, the British Petroleum paid a sum of 20 billion dollars and has also carried out an extensive clean up in the region without litigation. However, the Pointer (2008, p.1) explains that 'the Niger-delta man is not a stranger to the court', meaning they have repeatedly filed cases against the oil companies to request for all they could get as compensation. Still, the people are still unsatisfied after so many repeated visits to both local and international courts.

Many arguments have emerged over what is considered a 'sufficient' compensation, with the oil companies claiming to give enough and the people claiming that the compensations are rather derisory. Vidal (2013) reports a case between Shell and the 11,000 fishermen from Bodo community, where the fishermen filed a lawsuit against the company over devastation and loss of livelihood as a result of oil spills from rusted pipelines belonging to the company. Vidal (2013) reports that Shell offered a sum of 30 million pounds which amounts to an estimated two

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<sup>2</sup> The research also reveals that Shell is the most dominant as most of the farmers were only able to identify Shell as the one responsible for the oil spills.

to three years net lost earnings for each fisherman affected. The damage was said to have occurred in 2008 and the compensation was offered in 2013. This damage will definitely extend for many more decades (Vidal, 2013). From that analysis, the 'huge' sum of 30 million pounds is clearly insufficient to remediate the loss.

Furthermore, The Pointer (2008) explains that the monetary compensation is insufficient for the people because of the long and expensive process it entails. While in other countries, as seen in Mexico, it does not require a litigation for the oil companies to do the needful, the Niger-delta people have to go through a rigorous and expensive legal suit to bring their need forward. The court would demand experts witnesses and account in form of a formal assessment of the situation (damage in this case) before the people's complaints can be established and recognised by the court. Without proving this credibly, their claim will not be considered legitimate. However, employing the professional's service (estate valuers and university teachers) is usually too expensive for the poor affected indigene and the common way of 'paying' the professional is to promise a handsome percentage of what proceeds from the judgement (The Pointer, 2008). Hence, the process is an unpalatable and expensive one for the affected.

While there stands so much to be benefitted from oil extraction, (Egbegbulem et al., 2013) reveals that between 1976 and 1990, a record 2796 oil spills occurred in the country which released over 2 million oil barrels into the environment. Many areas remain polluted till date (Table 2.1). This fuelled the anger of the Niger-delta youths towards the oil companies and served as the initial basis for revolt. According to UNDP (2006), the people 'bear the brunt of natural hazards, biodiversity loss and the depletion of forests, pollution (air, water and soil), and the negative impacts of industrial activities.' (p.73).

**Table 2.1: List of severely oil polluted sites in the Niger-Delta's River State**

<b>Location</b>	<b>Environment</b>	<b>Impacted Area (ha)</b>	<b>Nature of Incidence</b>
Rumuokwurusi	Freshwater Swamp	20	Oil Spillage
Rukpoku	Freshwater Swamp	10	Oil Spillage
Ebubu-Ochani	Freshwater Swamp	25	Oil Spillage
Eleme			
Bomu	Freshwater Swamp	12	Oil Spillage
Obigbo	Freshwater Swamp		Oil Spillage
Umuechem	Farm Bush Mosaic		Oil Spill Incidence
Obrikom	Freshwater Swamp		Oil Spill Incidence
Okpomakiri	Mangrove Forest		Oil Spill Incidence
Ke-Dere	Mangrove Forest		Oil Spill Incidence
Krakrama	Mangrove Forest		Oil Spill Incidence
Orubiri	Mangrove Forest		Oil Spill Incidence
Ekrikene	Mangrove Forest		Oil Spill Incidence
Ekulama	Mangrove Forest		Oil Spill Incidence
Oshie Ahoada	Freshwater Swamp	15	Oil Spillage
Oshika	Freshwater Swamp		Oil Spill Incidence
Oyakama	Freshwater Swamp		Oil Spill Incidence
Ebocha	Freshwater Swamp	10	Oil Spillage
Rumuekpe	Freshwater Swamp	25	Oil Spillage
Nonwa	Mangrove Forest	25	Oil Spillage
Ekuleama	Mangrove Forest	20	Oil Spillage
Bodo West	Mangrove Forest	10	Oil Spillage
Bonny	Mangrove Forest	20	Oil Spillage
Okrika	Mangrove Forest	10	Discharge of refinery wastes

(Obot et al., 2006)

The aggression towards the oil companies can be put under two categories which are hostage taking and pipeline vandalism. Pipeline vandalism is common in the region and it is done in an act to sabotage the production and distribution of oil products in an attempt to steal oil and to cause losses to the oil companies. Pipeline vandalism is associated with other criminal acts such as oil bunkering, oil theft and fuel scooping (Adishi & Hunga, 2017). Oil bunkering is an illegal act, which involves filling a ship with oil, which is tapped directly from the pipelines (Onuoha, 2008). The thieves build a channel around the underground pipes through which the crude oil passes (Onuoha, 2008). Fuel scooping is carried out illegally when pipeline are tampered with or when pipelines are ruptured which leads to leakage. The people then scoop the leaking oil into different kinds of containers. These are basically the way pipeline vandalism is executed.

The implications of pipeline vandalism are felt largely by the oil companies, resulting in severe damage and loss. Damage is done to the pipelines in the process and the companies are responsible for fixing them. Onuoha (2008) reports that NNPC records about 10 billion-naira loss to pipeline vandalism in February 2007 alone. According to Dr. M.S Barkindo, the former NNPC general managing director (as cited in Igbinoia, 2014), ‘oil and pipeline vandalization remains the single most critical challenge facing the oil industry’. In a speech given by the former minister for petroleum, Diezianni Madueke, in 2012, she says ‘Nigeria loses ‘180,000 barrels of oil per day to crude thieves, which translates to 7 billion dollars annually...’ (as cited in Igbinoia, 2014, p.2). This is to emphasize the seriousness of pipeline vandalism in the region.

Hostage taking on the other hand could be regarded as a graver criminal act perpetrated in the region. It is regarded so because it is a direct attack on the oil companies’ workers and has led to loss of lives. Ibaba (2008) reports that it has become a frequent activity and between January and July 2007, 129 oil workers were taken hostage and 9 deaths were recorded from those operations. (p.22) The author explains that the acts are usually very horrific involving masked individuals with sophisticated weapons, and they usually use their captives in negotiating for huge amounts of money. They usually release their captives only after the money requested has been paid. The menacing act has since been extended to all foreigners or any individual who is considered a good deal. A more recent and unfortunate one occurred in November 2012, when a British missionary, Ian Squire, who was kidnapped with three other Charity workers in the region (Gayle, Maclean & McDonald, 2017). He eventually died in the process, before the negotiations were concluded.

### **B. Inter-tribal or inter-communal grievances.**

Bassey (2002) explains the different types of inter-communal conflicts that have been experienced in the Niger-delta region. These include conflicts over land (border and farmland), political conflict, resource war, clan/faction dethronement or succession (Bassey, 2002).

The land disputes are common and have existed across the Niger-delta region. The land and resource conflicts are usually interlinked because the lands which stands as the bone of

contention are in most cases resource rich lands. This is seen in the case of the Cross-River Vs Akwa-Ibom conflict. These are two key oil-producing states in the Niger-delta region. The supreme court ordered that the land containing 76 oil wells be transferred to Akwa Ibom state by cross rivers state (Alao et al, 2012). The land, which is a border between both states, has been the cause of inter-communal clashes between them for about 40 years. In fact, as noted by Bassey (2002), since both states were separated in 1987, several fatal and bloody communal clashes have occurred leading to loss of lives and properties.

In addition, in Rivers state, two communities- Okrika and Eleme communities fought over a land which hosts a government owned petro-chemical refinery (Joab-Peterside, 2007). The land is situated between both communities who are contending over which should be considered the main host. This is not uncommon in the Niger-delta region as the struggle for land has led to many conflicts across communities and tribes.

### **C. Grievance against the government.**

The federal government made about 211.3 billion dollars in revenue from oil sales between 1980 and 1993 (Egbeulem, Ekpe & Adejumo, 2013). The oil companies have indeed generated immense wealth for the government but not so much to the region's benefit. Kinman, & Juhasz (2011) states that almost 700 billion dollars total revenue have been generated after 50 years of oil production and of this, only 1% of the population has constantly benefited from it.

### **Two key factors explain the grievances towards the government**

1. The people feel dissatisfied with the lack of true federalism existing in the country which has led to the marginalization of the region. Federalism is defined by Egbeulem (2011) as a governmental system 'where the component units of a political organization participate in sharing powers and functions in a cooperative manner (p.218). This philosophy therefore posits that states should have a higher stake in resources explored in their region. However, in the Nigerian government, the federal government autonomously shares and allocates revenue from oil resources. Egbeulem (2011) above noted that the 1960 and 1963 constitutions gave a huge

fiscal autonomy to the different regions; however, this was changed subsequently. This change has therefore created dissatisfaction among the people considering the amount of loss they suffer. There have been protests for a higher stake and the government has reviewed the constitution several times. World bank (2008) notes that the states in the Niger-delta get 13% of oil revenue in addition to the standard allocation. While this is recorded at the state level, substantial and consistent development is not being observed at the grassroots. Ebegbulem, (2011) explains why the people still feel marginalized despite the additional 13% allocated to them. In the first republic (period between Nigeria's independence in 1960 and the year 1966), when agriculture was still a very huge revenue source, regions had control and got as high as 50% of revenue derived from the agricultural produces they produced. However, this is not the same in the Niger-delta region and the practice of resource control was gradually ignored by the military government which took over when the first republic collapsed in 1966 (Ebegbulem, 2011).

2. The people of the region also revolted against the government because they felt marginalized politically and geo-politically. Geo-politically, the Niger-delta is considered to be isolated from the three main regions in Nigeria – the East, West and North (Idemudia & Ite, 2007). This geo-political marginalization also results in political marginalization in the sense that the people from the region are poorly represented in the government. This political marginalization was the reason for some of the earlier protests by some groups from the region (Osaghae, 1995). In 1967, the people protested for a secession (which was later denied) and this was led by Isaac Adaka Boro, Sam Owonaro and Nottingham Dick (Penawou, 2012). Also, there is dissatisfaction within states, for instance the Ijaw people of Delta state protested over their poor representation at the state and local government levels after the state was created in 1991 (World Bank, 2008).

### **Who are those engaged in these acts?**

Conflict in the Niger-delta began gradually with peaceful protests before the 1960s and later degenerated into more violent acts. The first protest was pioneered by Chief Dappa Biriye, who founded the Niger Delta Congress (NDC), a political party of the Ijaw people, and who was

said to have led a delegation which protested the political marginalization of the minority ethnic groups in the Niger-delta at the London constitutional conference in 1958 (Penawou, 2012). Soon afterwards, more violent campaigns began in the region after the former organization could not succeed in achieving their aims. An ex-policeman, Isaac Boro, formed a group known as the Niger-delta volunteer service (NDVS) in the Ijaw area, which, through violent campaigns requested to stop oil exploration in the area (Osaghae, 1995). Some recorded violent acts they engaged in includes fighting the federal military, blowing up pipelines among others.

Not much remarkable campaigns took place until the early 1990s (Osaghae, 1995). More youths became involved in campaigns against the situation of the region which gave rise to formation of groups and movements like the late Ken Saro Wiwa led MOSOP (Movement for the Survival of the Ogonis), the Ijaw Youth Congress, IYC (Osaghae, 1995). More recently, groups such as the MEND (Movement for the Emancipation of the Niger) and the Niger-Delta Avengers have been more active in far more violent causes.

### **2.3 Compensation**

Bello & Olukolajo, (2016) cited adequate compensation as a tool for conflict resolution in the Niger-delta, but how adequate is monetary compensation?

The first attempt made by the government and the multinational companies to deal with the grievances of the minority ethnic groups in the Niger-delta was in 1957 and this led to the establishment of the Niger Delta Development Board (NDDDB) in 1961 ( Bello & Olukolajo, 2016). The board's aim was to advise the government on the people's development needs but the board's failure to achieve its aim led to the establishment of the Niger Delta Basin and Rural Development Authority (NDBDA) in 1980 which also failed shortly after its establishment (Bello & Olukolajo, 2016). Others boards were established subsequently, however, people decried the strategies employed by the government, saying they were not yielding positive results. The most recent and most famous strategy employed by the government to resolve conflict in the region is the Amnesty program initiated by the then president, Musa Yar' Adua in 2009 (Bello & Olukolajo, 2016).



The amnesty program recorded some successes as the Niger-delta militants released considerable number of arms, ammunitions, dynamites, gunboats and explosives to the government in exchange for monetary compensation, and peace was restored to the region for a period (Oluwaniyi, 2011, as cited in Bello & Olukolajo, 2016.). The amnesty program's success was short-lived and Okonofua (2016) termed it as a peace settlement, which does not necessarily translate to a long-term peace.

One problem with monetary compensation is that it encourages corrupt acts and may not get to those with the deepest needs. In most cases, the money is given to the government who then allocate it to the different group heads. In the process of sharing and allocating, those in charge are liable to engage in corrupt acts, such as theft or sharing with close relatives, and well connected individuals, at the expense of those with the deepest needs. The issue of corruption, arising from compensation has been earlier argued by Michael Sandel, who says that money can have a corrupting effect on norms and people's values especially in such areas that exchange was previously non-monetised<sup>3</sup> (Brown. 2016). Giving money to such fragile areas could increase greed, corruption and internal conflict.

Secondly, monetary compensation is relative as seen in the case of Bodo community and the fishermen. What is considered enormous to the payer may be insignificant to the receiver, depending on the level of damage being compensated for. While a third party or the public might consider 30 million pounds a huge amount for a 'poor' community like Bodo, a further assessment proves that it is not sufficient when compared to the degree of loss being suffered by the people and the future loss.

The level of dissatisfaction of the people reveals that the approach being employed (in this case monetary compensation) is not working. A better way to satisfy the people may therefore be to look at their basic needs and the most basic reason for the conflict.

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<sup>3</sup> By this, the author means refers to such developing areas like parts of Africa where exchange by barter is still acceptable and celebrated equally or above monetary exchange.

## **2.4 Land (and water) grabbing and food (in) security in the Niger-Delta**

The increase in the demand for land and freshwater resources is as a result of increase in global food demand to feed the growing world population, changes in diet, energy demands and the concentration on biofuel production (Rulli, Saviori & D'Odorico, 2013) This results in many transnational deals in form of agro-investments between wealthy countries and companies, and developing countries. The wealthy countries and companies acquire large expanse of lands for their operations. This trend is increasing at an alarming rate and has affected African countries immensely.

Amidst several definitions for land grabbing, a definition more specific to Africa is given by Matondi, Havnevik & Beyene (2011) as including 'exploration, negotiations, acquisitions or leasing, settlement and exploitation of the land resource, specifically to attain energy and food security through export to investors' countries and other markets'. (p.1). Daniel (2011) also described land grabbing as 'the purchase or long-term lease of vast tracts of land from mostly poor, developing countries by wealthier, food-insecure nations as well as private entities to produce food for export' (p.25). This occurrence has become popular in Africa and is being perpetuated by foreign companies, countries and even individuals with the support of some African states governments.

The history of land grabbing reveals a series of political deals which lack transparency. It began during the 2008 food and financial crisis, which led to an increase in the demand for land (Daniel, 2011). Many wealthy countries looked to the developing countries for high yielding arable lands for food production, to safeguard the food security of their countries (Daniel, 2011). According to Rulli et. al., (2013), land grabbing is still on the rise and land grabbed for agriculture alone is said to currently be between 32.7 and 82.2 million hectares, which account for about 0.7-1.75% of the world's agricultural land (Rulli et. al., 2013). Asian countries and the Gulf States especially are acquiring millions of hectares of highly productive lands especially in Africa (Epoch Times, 2014). These governments use land grabbing as a strategy to meet the needs of their citizens.

Sadly, the Nigerian government has also supported land grabbing. The Nigerian federal ministry of agriculture and rural development has collaborated with the Ministry of investment

to create policies, which support foreign direct investments in the country (GRAIN, 2015) . Such policies caused the displacement of farmers as seen in Taraba state where 30000 hectares of land were transferred to the US company dominion farms limited without public knowledge (GRAIN, 2015). Also in the Niger-delta, a UNDP report reveals that rubber plantations that spanned across thousands of hectares of lands in Edo and Delta states were converted for the oil exploration uses (Penawou, 2012, p. 87). The World Bank and the Food and Agriculture organization interfered and cancelled such deals because the local land users were either not consulted or not adequately compensated (Rulli et. al., 2013). A lack of transparency and democracy in land acquisition in developing areas by wealthy foreign investors has made land grabbing to be regarded by some as a new form of colonialism. (Rulli et. al., 2013).

In the colonial era, acquisition of land was considered the first point of colonialism and because it contained the resources and the people, the colonial masters knew that once they took over the lands (usually through assault and force), they had most of what they needed (Bulhan, 2015). According to Mwesigire (2014), the colonial system is only complete when land ownership is taken away from the indigenes and decolonization is only complete when the land has been returned to the rightful owners (Mwesigire, 2014). The on-going trend of land grabbing therefore rekindles the memory and reignites the fear of re-colonialism.

There is undeniably a disturbing rate of land grabbing in the Niger-delta caused by indiscriminate allocation by the government to the multinational oil companies. The Niger-delta government and some community leaders issue licenses to the oil companies from different part of the world and in turn promise the people that the companies are bringing development to their communities (Aluko, 2016). However, instead of development, alarming rates of decline and losses are being recorded on a daily basis. Furthermore, state government supports many multinational companies from developed countries and the ultimate goal is to exports the proceeds from the land and water resources for their use abroad (Aluko, 2016).

Another aspect of land grabbing observed in the Niger-delta is the freshwater grabbing. Freshwater grabbing aspect of land grabbing has not been properly assessed and is also on the increase (Rulli et. al., 2013). Both land and water grabbing are being experienced in the Niger-delta. The purpose the land is put to does not justify the act as land has been described as 'not just a resource to be exploited but a crucial vehicle for the achievement of improved

socioeconomic, biological, and physical environments' (FAO, 1999 as cited in Behnassi et al., 2011, p.25). The worst affected are the smallholder farmers, pastoralists and poor land owners. Little or no consideration is given to their needs, livelihoods, welfare and rights. These group of affected individuals rarely benefit from the deals because they are usually uneducated and not well informed and are in most cases considered unqualified for any gainful employment by the multinational companies (Nwigbo & Imoh-Ita, 2016). Land grabbing is said to be a grabbing of freshwater resources because about 86% of freshwater is being used to sustain agricultural production (Rulli et. al., 2013). Land grabbing is therefore associated with grabbing of substantial amount of freshwater resources.

Land grabbing contributes to food insecurity in the Niger-delta by lowering food production and thereby reducing the people's income. The Niger-delta covers about 20,000km<sup>2</sup> within wetlands of 70,000km<sup>2</sup> which originally dictated the people's livelihood (Uche, Ajie & Familusi, 2016.) Also, UNDP (2006) reveals that about 14500 families already lost their farmlands to oil spills or oil infrastructure installations in 1995. The spiking increase in land grabbing for oil exploration and agricultural purposes will only cause a disturbing increase in the loss of the people's livelihoods. Loss of livelihood then causes a reduction in income, which disables people from purchasing the right food quantity and quality needed. This would yield nothing but dissatisfaction and agitation among the people.

### 3. THEORETICAL FRAMEWORK

The framework used for the research is centred on theory of ecofeminism and the food security dimensions. These subjects and issues are relevant, and they provide avenues through which food insecurity and conflict issues can be assessed and researched. They also shape the interview questions and methodology.

#### 3.1 Food security dimensions

FAO (Schmidhuber & Tubiello 2007) recognizes food access, availability, utilization and stability as the dimensions of food security. The food security dimensions were adopted in this study to investigate the state of food security in the Niger-delta region. Since the study aims to show the link between food insecurity and conflict in the Niger-delta region, the different measures of food security were used in framing the interview questions, which were used for data collection. From the interviews, certain links were established between the different dimensions and conflict such as how lack of access or how unavailability of food are related to conflict.

Food security as a concept is difficult to measure and different approaches have been designed by international organizations to measure food insecurity. This complication in measuring food insecurity is partly because the concept of food insecurity is difficult to define. (Wolfe & Frongillo 2001). The food and agriculture organization, FAO define food security into access, availability, stability and utilization, and used them as indicators. According to FAO (2006) food security definition 'gives greater emphasis to the multidimensional nature of food security and includes: "the availability of food, access to food, biological utilization of food, and stability [of the other three dimensions over time]' (as cited in Gordillo & Jeronimo 2013, p. iv). This research has employed the first three dimensions and their indicators for the assessment of food security because stability is considered a 'temporal determinant of food security as it affects all the other three dimensions (Gross, Schoeneberger, Pfeifer & Preuss, 2000, p.5)

**Access**

According to the World Food Summit in 1996, “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2006). Adequate supply of food at the national level does not translate to food security at the household or communal level as seen in the case of the Niger-delta (FAO, 2008) Access is a physical determinant and refers to physical resources such as road or transportation, markets, food distribution.

Access also has an economic aspect which focuses on the consumer’s ability in terms of income, expenditure, markets and prices (Pinstrup-Andersen, 2009). These make accessibility of food to have a strong economic implication for individuals and communities and the Niger-delta region as a whole.

Accessibility is said to be very critical and more research is being focused on examining that component of food insecurity (Hadley, 2011). In a region like the Niger-delta where there is undoubtedly a regional food insecurity, other regions could be leaned on for food supplies. It has been said that the current global production of food exceeds the global population requirement, but the foods are not properly distributed. Accessibility could however, deal with the problem of poor distribution. Lack of food access therefore contributes to food insecurity.

**Availability**

Barrett (2001) defines food availability as ‘sufficient quantities of food of appropriate quality, supplied through domestic production or imports, including food aid’. This is linked to availability of natural, human and economic resources (Barrett, 2001). In other words, safe, sufficient and nutritious food should be available to an individual, whether personally produced or from aid or market.

Food availability is heavily tied to natural resources such as land and water, which are the primary sources of food. A shortage or lack of these natural resources in a community or region would restrict the flow and availability of food. Shortage could be in form of water scarcity or

land scarcity. FAO (Barrett, 2001) shows there is growing scarcity of 40% of agricultural land and growing scarcity of greater 70% of irrigation water globally. Agriculture has been named the biggest user of water on the globe because it requires large amount water for the processes of irrigation and other production processes Wallace (2000).

While many African countries are being faced with the problem of extended draught for the past few decades (Wallace, 2000), the Niger-delta is naturally blessed and surrounded by water. The Niger-delta has four main ecological zones -the coastal inland zone, the mangrove swamp zone, the freshwater zone, and lowland rain forest zone (Kadafa, 2012), making it a naturally rich and abundantly blessed habitat and which shows the region was covered in and surrounded by water. However, there is water scarcity in the region and this is considered a paradox. Water resources are insufficient to meet the people's needs and for food production in the region. The water scarcity in the region has been attributed to poor governance of water and the pollution of both surface and underground water caused by oil exploration activities also causes high shortage of water (Falkenmark et. al., 2007).

### **Utilization**

Utilization of food is usually discussed from a biological perspective and is the ability of the body to ingest and metabolise food (Gross et al., 2000) Adequate utilization encompasses nutritious and safe diets, adequate biological and social environment and proper health care (Gross et al., 2000). In total, utilization is about how well people use food that is available and accessible to them. For utilization to take place, there must be accessible food and available food. However, if food is both available and accessible but poorly utilized, food security is still not achieved (Hadley, 2011).

Utilization involves meeting needs in terms of energy, micro and macronutrients as well as food safety and hygiene in different levels of food production (Hadley, 2011). The indicators of utilization therefore include undernutrition, over-nutrition, and malnutrition. Utilization in the Niger-delta was assessed based on the available diets and dietary intake, general malnutrition, safety of water and prevalence or spread of diseases.

### 3.2 Ecofeminism

Ecofeminism is considered a ‘political and social movement which emphasizes the relationship between feminism and environmentalism (Gusau, 2012). Ecofeminists have gone further to link feminism with ecology, socialism and political struggle (Salleh, 2017). Ecofeminism establishes women-nature connections and considers theories that do not take these connections seriously to be inadequate. (Warren & Erkal, 1997). The ecofeminist view emphasises the oppression that women face in connection to social movements and nature. The theory says that men dominate women, and humans or culture dominate nature, therefore, theorists seek to unite ‘the demands of the women's movement with those of the ecological movements to envision a radical reshaping of the basic socioeconomic relations and the underlying values of this society’ Ruether (1975, p.77, as cited in Gusau, 2012). The main aim of this movement is to examine what causes oppression of women and the environment, and how to prevent it.

Although the theory is centred around women in the western culture (Gusau, 2012), no theory better explains the linkage between the challenges of Niger-delta women, which follow the environmental degradation problems. The majority of the small holder farmers in the world are women (Werft, 2016), and during research, it was realised that this is also the case in the Niger-delta. One reason for this being the migration of men from the region due to loss of jobs and income (Okwechime, 2013).

FAO estimates show that about 70% of agricultural labour in most developing countries come from women (Quisumbing & Pandolfelli, 2010). However, women farmers still face a lot of challenges which are summarised under access to credit, property rights and education (Werft, 2016) Each of these issues will be treated accordingly as concerns the finding from the Niger-delta.



## **4. RESEARCH METHODOLOGY**

This chapter informs and expands on the approaches employed in the cause of this study as well as the challenges encountered, ethical issues, and validity of the research. This was done to show the research design and how the answers to the research questions were obtained. The first part deals with the qualitative research approach employed. The second section tells about the research design used in collecting the data. The third part explains the data collection methods in choosing the respondents. The fourth focuses on the validity of the research and the last focuses on ethical issues and limitations of the study.

### **4.1 The qualitative research approach**

This research aims to find out the relationship between food insecurity and conflict as it uniquely concerns the Niger-delta, and to achieve this, the qualitative research seems most appropriate. Qualitative research is most suitable for discovering the experiences of people (Vishnevsky & Beanlands, 2004) and because this research relies on the experiences and narrations of the farmers who are indigenes of the selected communities and other actors situated in the region, qualitative research was employed.

Bryman (2012) says that qualitative research helps to gain an understanding of the social world ‘through an examination of the interpretation of that world by its participants (p.380). Studies have been conducted on different issues affecting the Niger-delta, but this research is unique in the sense that it aims to obtain conclusions not from texts, literature or existing research alone but more from the direct experiences related by the affect people.

In addition, Bryman (2012) carefully highlights the features of this methodological approach that makes it the most appropriate approach for a study such as this. The first part of the approach shows a logical relationship between theory and research where theory is eventually generated from the research. This research helps to reach a theoretical conclusion about food insecurity and conflict in the Niger-delta region. The second part of the approach shows that qualitative research holds an epistemological position, which emphasizes understanding of the social world as interpreted by its participants. The third part of the approach holds an

ontological position which posits that ‘social properties cannot be separated from those involved in its construction because they are outcomes of interactions between these individuals who brought it about (p.380).

Furthermore, the main research methodologies associated with qualitative research are ethnography/participant observation, language based approaches such as discourse analysis, texts and documents analysis, qualitative interviewing and focus groups (Bryman, 2012). For the purpose of this research, qualitative interviewing was done for focus group discussions and key informants. The focus groups consisted of the farmers in the three communities visited in Rivers state (Table 4.1), while the key informants include an official of the Non-governmental Organization MADE and a staff of the Shell Petroleum Company. Data was collected using audio recordings, transcripts, photography, and personal notes/memos.

## **4.2 Research design**

### **4.2.1 The Case Study approach**

The main objective of this research is to look at the link between food insecurity and conflict in the Niger-delta region. Rivers state was selected as a case study of the effect of environmental degradation on food insecurity and how food insecurity is linked to conflict in the oil-producing region.



Figure 4.1. Map of Rivers state showing different local government areas including Gokana and Etche, the research sites (Nwauzoma & Dappa, 2013)

The major criteria for the selection is that the communities (figure 4.1) in the state are considered to be highly significant in Nigeria's oil history and they have either hosted or currently hosting oil stations of transnational oil companies (Penawou, 2013). Rivers state is highly relevant to the transnational oil companies that operate in Nigeria, especially Shell Petroleum Development Company, SPDC and Chevron Texaco. The communities selected also have a history of different cases of conflicts (Watts, 2003).

Agriculture was the primary occupation of the people of rivers state before oil was discovered in the region. The region produced majorly palm oil and palm kernel which at a time constituted the main revenue source of the country (NigeriaExchange, 2006). About 40% of the population practised farming in 1983 and the majority of the remainder focused on fishing. It was also recorded that 39% of the land area which is about 760,000 hectares was suitable for cultivation (NigeriaExchange, 2006). The crops cultivated included cash crops like oil palm, rubber, coconut and other crops like vegetables and fruits. Currently, Portharcourt, which is the

capital of Rivers states is a popular base for the concentration of oil industries and offices and has gigantic reserves of crude oil and natural gas which supplies up to 40% of Nigeria's oil production (NigeriaExchange, 2006). The communities visited are Mougho, Bodo and Umuechem communities (Table 4.1).

**Table 4.1: Communities selected in Rivers State for the fieldwork**

Kingdom	Local government area	Communities
Ogoni	Gokana	Mougho Bodo city
Non-ogoni	Etche	Umuechem

The majority of the communities visited are part of the Ogoni Kingdom. Ogoni land was the homeland of the late Ken Saro Wiwa, the human rights activist who was murdered in the process of fighting for the rights of the people over the oil exploration activities and its side effects in the region. The land became popular and gained international attention against Shell led by Ken Saro Wiwa and other activists. This also influenced the selection of the communities for the research.

Umuechem is highly relevant to this study because the first fatal conflict in the Niger-delta took place in this community. In October 1990, some of the indigenes slated a protest at the Shell facility in the community and this led to the police killing about 80 unarmed demonstrators and destroying lots of properties in the process (Watts & Ibaba, 2011). This was the situation that brought the situation in the Niger-delta to the international scene. (Human Rights Watch, 1999)

This fulfils the role of the Case study, explained by Yin (1994), which is to 'expand and generalise theories' (p.10). However, a single case is hardly enough to provide a general answer to the general problem but this study can provide useful information, which other regions can familiarise with because of the unifying factors they share which include their ecosystem, natural and physical resources.

Crowe et al., (2011, p.1) explains that the case study is useful ‘when there is a need to obtain an in-depth appreciation of an issue, event or phenomenon of interest, in its natural real-life context.’ Food insecurity is a global phenomenon, which is affecting different countries in different contexts. This is a unique context, which is self-inflicted and unnatural unlike other cases of food insecurity. It is unnatural in the sense that it is as a result of bad government policies, negligence and oil exploration activities. Only an in-depth approach such as a case study in an affected area could do justice to the research.

The research also require a case study approach because of it aims to assess two separate but interlinked phenomenon – food insecurity and conflict. The Niger-delta region is big enough and several case studies could have been assessed, however, single case studies are better than multiple case studies for analysing causal mechanisms because they ‘may allow one to the box of causality to locate the intermediate factors lying between some structural cause and its purported effect” (Hipper, 2015, p. 68, Gerring, 2007, p.45). The complex link between food security and conflict is better exposed using the single case study approach.

#### **4.2.2 Triangulation**

Triangulation was employed to increase the validity of the research. The researcher had this tool in mind during the study design phase and as Patton (1990) explains, reliability and validity are key concerns of the qualitative researcher while designing the research and analysing the results of the research. Guion (2002) explains that there are five different types of triangulation, which includes Data triangulation, Investigator triangulation, Theory triangulation, Methodological triangulation and Environmental triangulation. Of this five, data triangulation was employed and it involves using different informants or sources of information, which in this case includes the farmers (focus group), oil company staff (Key informant 1) and the NGO representative (Key informant 2). This was done to generate different perspectives to give a wider picture of the situation (Torrance, 2012)

Kreftin (1990) further explains that data triangulation could be triangulation of data methods and triangulation of data sources. Triangulation of data sources was employed for this research

which involved different grouping of people (Kreftin, 1990). This also was done to increase the validity of the research.

In-depth interviews were then conducted with these three different yet relevant categories, to gain a wider perspective and deeper understanding of the food insecurity and conflict situation. Their feedbacks were then compared during the analysis stage to ‘determine areas of agreement as well as areas of divergence’ in the study (Guion, 2002, p. 1). This was very useful especially in their perception of the state of food insecurity as they gave different opinions on the state as seen in chapter 6 of this study. It helped the researcher in arriving at a more valid and true situation of the region which could have been narrowed to the biased view of the farmers had this triangulation not been employed.

### **4.3 Data collection methods**

Bryman (2012) explains that the major two data sources that can be used by a qualitative researcher are primary and secondary data. Primary data are obtained directly from people or organizations while secondary data are published materials like books and articles (Myers, 1997). Combining both sources is useful for the purpose of triangulation, but only primary data was used in this research.

The sampling method used in selecting the focus group was purposive sampling. Purposive sampling is a ‘type of non-probability sampling that is most effective when one needs to study a certain cultural domain with knowledgeable experts within’ (Tongco, 2007, p. 147). It is a unique form of sampling because the participants are chosen based on the qualities they possess (Tongco, 2007). It doesn’t involve a standard number of participants and the researcher has the freewill to decide who to participate based on their knowledge and experience and not on some existing theories (Tongco, 2007). As a result, the focus group was selected because of their relevance and experience. All participants live and work in that region and are therefore aware of the situation through experience and knowledge.

Snowballing is a purposive sampling approach in which a few sampled individuals propose other participants with relevant experiences and characteristics (Bryman, 2012). The farmers in

the communities were selected using this approach. The village heads and union heads helped to assess the farmers with farmlands and without farmlands, which made up the focus groups.

Convenience sampling was also employed in selecting the key informants (from the oil company and the NGO) by virtue of their availability. A convenience sample is available by chance to the researcher (Bryman, 2012). It was not easy to access the representatives from these organizations so the researcher had to make do with what was easily accessible. Marshall (1996) explains that there is usually an element of convenience sampling in most qualitative researches and this research also has a bit of it.

The fieldwork was carried out in the month of February 2018. During this period, the researcher was able to visit the farmers in the selected communities as well as the representatives of the oil company and the NGO in the state capital, Port-Harcourt, which is the base of transnational oil companies. The field technician made my access to the communities and the interviewees easier.

#### **4.3.1 Qualitative interview**

Qualitative interviewing involves an in-depth interview system which helps the researcher obtain rich, detailed answers as opposed to structured interview employed in quantitative analysis, which generate answers for easy and quick coding (Bryman, 2012). The interview questions are unstructured in order to give room for the interviewees' perspectives. Structured interview questions would not give room for the interviewees to share their unique experiences. In the course of the research, the interviewees revealed some relevant points regarding productivity. They shared that they use fertilizers to boost their productivity, and that in itself is a problem because it is expensive and they usually come in adulterated forms. Such revelations may have been hidden if structured interviews were employed. This is one advantage that unstructured interviews have over the structured type.

Secondly, unstructured interviews have the quality of flexibility, which is also beneficial in gathering information. The research aimed to find out the point of view of the interviewees, which could only be revealed if flexibility is encouraged. Often times, the interviewees deviated to other issues, which are not considered in the interview questions. They raised issues such as

gender and education, and gender and property allocation and the influence of food insecurity on women, which could have been overlooked in a structured interview in the course of the discussion. Although such deviations cause distractions during the interview and makes it more time consuming, it sometimes reveal things that are also relevant to the study, which the researcher might have overlooked. I ensured that the interviewees were comfortable enough to digress as much as they wanted as long as it was within the topic, while still using the interview questions as a guide. The conversation smoothly evolved from one issue to another and this is an interesting feature of the in-depth interview.

The interview questions (Appendix 1) were grouped under each research question and tailored to suit the respondents. The respondents were farmers with farmlands, farmers without farmlands, key respondent 1(Oil worker) and Key respondent 2 (MADE Official). There are however, some similarities in the questions, for instance, I asked all respondents about their view of food (in) security in the region, to be sure they have an understanding of the topic.

#### **4.3.2 Key informants**

Key informants are relevant to a research because they help to ‘attain data saturation, theoretical saturation, and/or informational redundancy’ (Onwuegbuzie & Leech, 2007, p.118). Without the key informant, the data would be limited to the farmers’ perceptions.

The first Key informant is a staff of the Shell Petroleum Development Company of Nigeria, SPDC. This company is involved in oil mining and their activities are concentrated in the Niger-delta region. They are relevant to the study because their activities have resulted in environmental degradation and the resultant food insecurity and conflict in the region. Although they are not the only oil company in the region, Shell is the major company operating in the region and during the interview, the most mentioned company by the farmers. As explained earlier, the representative of this company was selected by convenience and not by choice or strategy.

The second key informant is a representative of the NGO-MADE. The Market Development in the Niger Delta (MADE) is a subsidiary of the DAI, an international development organization funded by the U.K. Department for International Development (DFID). MADE supports



projects in the Niger-delta with the aim of raising the income of a substantial amount of its populace using market development strategies. MADE has partnered with mostly agricultural units in the region including agricultural inputs, palm oil, fisheries, micro- and small-scale poultry, and cassava. I considered them suitable for this research, because of their involvement with the farmers in the region.

### **4.3.3 Focus group**

The focus group interview is a group interview, which targets a particular, relevant group with emphasis on a specific theme or topic explored in depth (Bryman, 2012).

The focus group interview reveals how the participants in the group perceive and interpret the issues with which they are confronted. In this case, it was done to extract the participants' understanding and perspectives regarding the state of food insecurity, conflict and environmental degradation in their region. To achieve this, the researcher provides a semi-structured setting for the participants to feel very comfortable while the session is going on. The meeting place was the waiting area in the palace of each community.

The initial plan pre-field trip was to interview four focus groups of farmers in each community. The four groups consists of farmers with farmlands, farmers without farmlands, male farmers and female farmers. However, it was discovered that most of the farmers were women. Therefore, it was limited to farmers with farmlands and farmers without farmlands. Farmers with farmlands are those that are still actively involved in agriculture because they still get considerable yield from their lands. Farmers without farmlands are those who have abandoned farming due to low yield. The low yields are caused by oil spillage and most of these farmlands have their farms close to flow stations or areas where there has been a high degree of oil spillage. A key feature of the focus group interview is the selection of respondents who should be selected because they have been involved in a particular situation (Bryman, 2012). The interviewees were selected strategically based on their involvement with oil spillage and farm losses and the categories were based on this. An average of ten farmers were in each community and about 5 farmers were present in each category.

In each of the communities visited, I interviewed the farmers from the different categories and it started as a general interactive session graduating from the more obvious issues of environmental degradation and its effect on their farmlands and then going into the more critical issue of conflict. Before the issue of conflict was discussed, a friendly interactive and an environment of trust was created by going from the more obvious to the more technical issues. This interaction also helped the researcher understand why the people feel the way they do, and in essence, it helped to establish the fact that the losses experienced by the farmers could have triggered conflict. According to Bryman (2012), in a focus group interview, accent is built upon interaction within the group.

After the general interactive session in each community, the large group was then broken down into smaller groups according to the categories. Farmers with farmlands were interviewed before farmers without farmlands using the questions (Appendix 1). Thomas et al. as cited in Rabee, 2004 explained that the focus group interview is ‘a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, although not necessarily representative, sampling of a specific population, this group being ‘focused’ on a given topic’. Although it is important for the sample to represent the population, the focus group focuses more on the purpose of selection or what Rabee (2004) terms ‘applicability’ (p. 655) which focuses on the knowledge of the participants.

The focus group has an advantage over individual interviews that comes from teamwork and collaboration between the interviewees (Rabeem, 2004). The interviewees are able to argue points out among themselves. This makes them challenge one another to think and raise more deep concerns and thoughts regarding the issue being discussed (Bryman, 2012). However, this teamwork cannot be achieved without some amount of familiarity between the members as it is important for them to feel comfortable with each other before this can be achieved (Raheem, 2004). The teamwork was very helpful because the interviewees argued out some issues among themselves and while some were timid about sharing their views, others were very eager to share and this challenged the timid ones to speak up as well. They argued out the issue of compensation from oil companies and the involvement of the government in the issue. Some concrete issues were unravelled through the synergy from the argument and interaction that took place.

#### 4.4 Validity

While there are different point of views and argument about whether validity is applicable in qualitative research or not, many scholars have been convinced of the need for such a tool to help measure the quality of a qualitative research (Golafshani, 2003). In qualitative research, the term validity refers to the level of certainty or trueness of the findings of a study (Guoin). In other words, it infers how much the findings reflect the real situation and if there are enough evidence to back it up. However, Padget (2008, as cited in Thyer, 2010, p. 362) identifies three main threats to validity and these include reactivity, researcher biases and respondent biases.

Reactivity as defined by Thyer (2010, p. 362) is the ‘potentially distorting effect of the qualitative researchers’ presence on the field’. It was observed during the interview that the research was not new to the farmers as a couple of researchers have been to their communities to research different topics. The research process was therefore not new to them and they seemed to have their way of answering questions asked by the researchers. The farmers’ way of reacting to the presence and questions of the farmers seemed rehearsed as a result and they treat the researcher as a very formal individual, as they would treat a government official. This could also lead to biases in their responses. They were noticeably biased in some of their responses, which seems different from what the researcher observed especially on the matter of physical access, good roads to be precise. They all said they do not have good roads, which was contrary to the researchers’ observation.

These threats are adequately dealt with using data triangulation. The results from the three different information sources (farmers, oil staff and NGO staff) were compared and the conclusion was drawn from this. Because validity and reliability help to distinguish a bad research from a good one, then a ‘good’ research can be used for generalization.

#### **4.5 Limitations, ethical considerations**

A major limitation to the research was language. A large proportion of interviewees do not have formal education and therefore could not communicate appropriately in the official language of Nigeria, which is English. While the community heads and some of the male farmers were able to communicate in English, most of the female farmers were not able to. To deal with this problem, the creolized version of English language, known as 'pidgin English' was used and with the help of the field technician who doubled as the translator, the questions were asked and the answers were related back to the researcher.

Furthermore, prior to the period when the research was carried out, the researcher was aware of the economic problems existing in the region, but this initial knowledge in no way prepared the researcher for what was to come. The inflation rate in the region beats any other part of Nigeria that the researcher had visited. This was a major constraint to the research as the amount budgeted could not cover up to half the expenses incurred. This also led to a premature termination of the research process and the funds could no longer sustain the research. The inflation cuts across different spheres, from feeding to accommodation to transportation. This itself further explains or reveals the background problem which is being faced in the region as everyone was quick to point to oil spillage as the reason for the inflation.

In addition to the work done, a deeper consideration and application of the theory of ecofeminism would have been more helpful in this research. It was not used from the start in designing the research questions but was later introduced when the issues about women came up during the interviews. Much of the interview questions and resulting data were centred around the dimensions of food security and limited data was provided on ecofeminism.

It would also have been useful to also include government officials in the research as they are very important actors in the issue. Unfortunately, this was not possible because they were not accessible.

Furthermore, the sole reliance on qualitative research could have been avoided. Some data were better collected quantitatively like in the area of farm yield, which could not be obtained qualitatively. A mixed research could have been better in this case.

Finally, many similarities were observed in the answers of the farmers in the different communities. For this reason, the findings were reported under the categories of ‘farmers with farmlands’ and ‘farmers without farmlands’, without showing the different communities which could have led to a lot of repetition.

It is very important to be mindful of ethics when conducting a qualitative research. Ethics in qualitative research simply refers to respecting research participants through the adoption of research standards (Bryman, 2015). The four pillars of ethics were considered- respect for others' autonomy, justice, non-maleficence (do no harm), beneficence (do good) as well as the four frames of ethics - principles (follow guidelines, principles); consequence ethics (best outcome to most); compassion ethics (wellbeing of those involved); virtue ethics (own conduct according to virtuous stance) (Bryman, 2015). I was very mindful and I put the interests of the participants into consideration. I also considered what they consider to be morally right in order not to betray their trust during my research. Before conducting the interview, I explained to the participants what the research is about and where it will be used and they gave their consent orally because of their desire to see a change in the situation they are in.

## **5. FINDINGS**

This chapter reveals the findings gathered from the key informants' interviews and focus group discussions. The chapter has been subcategorized into four sections. The first one explores the state or level of food insecurity in the Niger-delta using the dimensions of food security- access, availability and utilization. The second section reveals the main drivers of food insecurity as explained by the participants. The third section looks at the link between food insecurity and conflict in the region and the final looks at the issue of compensation. These narrations combined with the literature are then used to conduct the analysis in the chapter that follows.

### **5.1 State of food insecurity in the Niger-delta**

This section focuses on the views of respondents, which include the focus group (farmers with and without farmlands), and key informants from the NGO, MADE and Shell SPDC. The account of discussion with the focus group will first be presented and this will be followed by the findings from the key informants on the state of food insecurity in the region.

In explaining the state of food insecurity, farmers employed terms such as a drop in yield, scarcity, inflation, fertilizer usage. The responses are therefore categorised under the four dimensions of food security.

#### **5.1.1. Availability:**

##### **A Farmers' perspective**

The indicators of food availability that are unique to the region and the participants' accounts include yield estimates, total area planted, use of improved inputs, price and price shifts for main staples. While most of these indicators are better assessed numerically, this analysis is based on the qualitative research and conclusions are reached from discussions with the farmers.

Yield: All of the farmers admitted that there is a significant drop in yield from the farmlands. Farmers from the Bodo community have experienced the oil spillage more than farmers in the other communities. In the Bodo community, some farmers have been forced to abandon their farmlands due to a near complete destruction of their farmlands by oil spillage. These represented farmers without farmlands. At the beginning, farmers from the Bodo community relied on neighbouring communities where oil spillage has not caused huge damage.

Umuechem is one community that has experienced a relatively lower percentage of damage to farmlands from oil spillage. However, even in the Umuechem community, the farmers have also experienced a significant drop in yield which is first as a result of the environmental pollution caused by the oil exploration and second as a result of over farming of the relatively more productive lands. The dependence of other communities like Bodo who are more badly affected by the oil spillage on the Umuechem community also contributed to this over-farming. One of the farmers in the Umuechem community explained the extent of this drop in yield. He asserts that:

*'an hectare of land used to yield up to 144 trips pf plantain and 12 bunches makes a trip but since shell came they hardly get trips' .... 'cassava gets rotten, maize stalk grows but it yiled \s no fruit... We were having bumper harvest everywhere before shell.*

Farmers without farmlands had nothing to say about yield because they had no yield. However, they had a lot to contribute on the other areas.

Total area planted: In terms of the total area planted, Bodo community is the most badly hit of the three communities visited. Most of the lands had been badly affected by oil spills and the rivers had changed to black as a result of oil spillage. Most of the farmers without farmlands are found in this community. A farmer from the Bodo community specifically took the research team to his farmland. He had stopped farming operations on that land for some years because the upper soil had coagulated to form rocks (Figure 5.1 and Figure 5.2) due to the oil spillage and nothing could grow on the land. The oil spillage even suppressed the growth of weeds..



Figure 5.1: The state of the top soil of a farm in Bodo community post oil spillage. Photo credit: Taiwo George



Figure 5.2: A closer look at the state of the soil on one of the farms post oil spillage. Photo Credit: Taiwo George



As it was mentioned earlier, there are varying degrees of damage depending on the coverage of the spilled oil as seen in the Figure 5.3 and Figure 5.4. Cassava planted around the same time were observed in two different communities



Figure 5.3: A 4-month growth of cassava in a badly affected farmland in Bodo community. Photo credit: Taiwo George



Figure 5.4: A 4-month growth of cassava on a farmland in Mugho community not heavily affected by oil spillage. Photo credit: Taiwo George

Use of improved inputs: Fertilizer was no stranger to the community. All the farmers (with farmlands) attested to the fact that the little they reaped from the farmlands was with the aid of fertilizers which they relied heavily upon. As a matter of fact, the three major fertilizer producing companies in Nigeria are situated in Portharcourt. Unfortunately, due to the level of damage experienced on the farmlands, the fertilizers could only do little. The low yield despite the reliance on the fertilizer is based on two things as explained by the farmers

1. The fact that the farmlands have been damaged by oil spillage and over planting
2. The fertilizers obtainable in the markets are adulterated.

The farmers decried the fact that their markets are flooded with diluted fertilizers, much to my surprise. I investigated this further and the farmers replied that the government control the fertilizer companies and most of the produce are being transported to other parts of the country. This led to the scarcity of fertilizer in the host state/communities, leaving the farmers at the mercy of the adulterated types sold at the markets.

As discussed earlier, the farmers from Bodo were the biggest users of fertilizer because of the seriousness of damage done to their community. Even in Umuechem where the situation is relatively better, the farmers also admitted that they could do no planting without the fertilizers.

According to the farmers without farmlands, most of them also used fertilizers heavily on their farmlands before they finally gave up due to too little, no yield or excessive cost of fertilizers. An official of Bodo community farmers is one of such farmers without farmlands and he explained that he abandoned his land after trying all he could to increase output but the yield only declined continuously.

Price and price shifts for main staples: Based on farmers' accounts the prices of food in the market are unstable and continuously increasing. Food is becoming more and more inaccessible due to the continuous decline and the unsustainability of the local production of food. There is heavy reliance on imports of staple from other regions of the country. Farmers with farmlands are able to substitute their food sources as they get some from their farmlands and some from the markets. However, farmers without farmlands rely majorly on what is obtainable from the market contributing to increase in market demand for food. The increase in demand also influence inflation in food prices because it is the only source of food for most families.

### **B. The NGO official's perspective**

Availability: He explains that the availability of food has improved immensely between the late 90s and now as a result of intervention from the NGOs. He also explains that the main problem they are having now is not unavailability of food but farmers' reluctance to adopt the new improved methods. That remains a threat to achieving food security in the region

Yield estimates: In term of yield estimates, he says that their NGO operates through indirect implementation using experts who are usually lead firms like Saro and Syngenta. MADE serve the intermediaries, bringing these big commercial companies closer to the people. They organizations then provide improved products and services to the people at a subsidized rate. As a result, they have been able to improve the yield over the years.

Use of improved inputs: according to the official, the farmers use improved products more than before. One of the projects they have invested in is the pro-vitamin A cassava which is genetically bred cassava. The NGO has distributed this cassava to the farmers across the communities. Cassava itself is a major staple food and almost all households consume this food.

In terms of area planted: Yes, he admits that the oil exploration activities have caused a lot of damage to the area.

### **C. The oil company staff's perspective**

He says food insecurity is no better or worse in the region than other parts of the country. He believes food is just as available as it is in other parts of the country.

He agrees that oil pollution has hampered agricultural development in the region but says that it is not enough to affect availability, as food is generally available in the country. In his words;

*'Nigeria essentially have enough food to meet local needs'*

What he believes is that there is food, but lack of jobs. This lack of income is hindering the people to get what they want.

### 5.1.2 Access

According to the World Food Programme (2009), food access varies widely among and within areas, therefore, indicators should fit into the livelihood strategies employed by the people or population being examined. Some of the indicators employed for the physical access are amount of good motorable roads and economic access indicators including reliability of income source, purchasing power or income, prices and food stock duration.

#### A. Farmers' perspective

The farmers decried that now that they rely on other communities for food, their access is hindered by a lack of mobility around the communities, which is due to a lack of infrastructure such as good roads. This led to a dialogue between the researcher and the farmers because the report contradicts the researcher's observation. One of the first things the researcher observed was that the roads leading to the community were quite good and motorable. The following dialogues ensued as a result.

*'Farmer: To get food from the neighbouring village is difficult because there is no mobility*

*Researcher: I observed on my way here along the villages that there is a motorable roads ,  
What then is the challenge with the mobility?*

*Farmers: (laughs with sarcasm and anger) which road is good? We're saying the roads in the villages between the farms are not good at all. If you want to see, follow us...'*

In other words, what the researcher observed are the major roads linking one community to the other. The roads within the villages and the farms are not in a good shape and the farmers themselves have had to create roads themselves with simple/manual implements. They explained that this has worsened the situation of food accessibility in the region.

In terms of income source and reliability, the farmers all agreed that there is no stable or reliable source of income and this is due to the fact that they relied heavily on land and water as their sources of livelihood. Women now engage in what they termed 'subsistence trading'<sup>4</sup>, which is a minimal form of trading done to support their families. However, the subsistence

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<sup>4</sup> Oxford dictionary defines subsistence as the action or fact of maintaining or supporting oneself, especially at a minimal level. The term 'subsistence trading' used by the farmers could therefore be understood in this context.

trading does not seem to be sufficient as well and according to one of the women, this has led more women into prostitution because there is nothing to do and it has led the youths into vices. In the words of the community head of Mugho community,

*'..through subsistence trading. We don't have companies or other government expenditures, and people resort to trading, and because there are no influx of buyers it dies a natural death. Means of livelihood is very hard. You have groundnut for more than three days and then it turns bad and you dispose it or use it for family. Last year was worse, we died in our numbers due to ...policy. The parents could not even feed their children. Last year was worse than other years on both food and health.*

In terms of prices, the farmers agreed that the prices of food continue to increase due to importation from neighbouring communities or states or other regions. In other cases, it is very unstable and changes constantly.

The farmers without farmlands have been handicapped in terms of economic access as they have lost their main source of livelihood. Their sources of income have been reduced and most of them now rely on trading and the profits from it. Some of them continue to look forward to promises of compensation from the oil companies and some of them do not have any hope. This have affected their access to food immensely.

### **B. NGO official's perspective**

In terms of prices of food, he explains that food is accessible in the sense that it is moderately affordable. He also agreed that a drop in the farmers' income has added to the challenge. He explained that environmental degradation has affected the purchasing power of the farmers. However, he says it has improved and has become better than it was before 1999 due to the interference of different NGOs because they feared that food insecurity is synonymous to violence and they try to prevent it from spreading to other parts of the nation.

### **C. The oil company staff's perspective**

In his opinion, the job insecurity has reduced people's economic access to food and that is the main cause for the what is considered food insecurity in the region. To emphasize his point, he explained,

*'I don't think there is food insecurity. I would say there is job insecurity which can be reduced by agriculture.'*

### **5.1.3 Utilization**

Vhurumuku (2014) explains that utilization is assessed by diseases and access to health facilities. Diseases such as stunting, wasting, undernourishment and infant mortality are some of the support indicators of food utilization (Philippine Statistics Authority, 2017). Children were not part of the sample, so they were not observed, but the key indicators employed for the assessment of this dimension of food security are access to improved water sources, prevalence of food related diseases such as malnutrition and undernourishment and access to health facilities.

#### **A. Farmers' perspective**

The farmers explained that in the lack of no alternatives, they resort to eating the 'contaminated fish using the contaminated water'. They explained that they do not have borehole and other good water source. The lack of these basic amenities and safe drinking water is a threat to their health and living conditions. In the words of the community leader of one of the communities

*'We are going to the polluted water to get polluted fish while we go to the polluted land to get scanty food'*

In terms of diseases, they decried the fact that they are being exposed to danger of diseases. According to them, last year was worse in terms of food insecurity and poor health and death rate increased last year. Any information on malnutrition?

Malnutrition seemed higher among the farmers without farmlands whose access to food have declined significantly. They do not care anymore about getting a balanced diet and they only go for what they can access and the cheapest items in the markets. The secretary of Bodo community, on behalf of farmers without farmlands said they consume anything within their reach, which in most cases is unsafe for their health.

### **B. NGO official's perspective**

In terms of food related diseases, he explained that that has also improved over the years although there has been cases of this in the past. For instance, the introduction of the pro-vitamin A cassava has improved the quality of this high starch food. The people do not need to buy sources of vitamin A separately and so it has improved vit A deficiency in the region. What does he base this on?

He did not say much about access to water and health facilities or sanitation.

### **C. The oil company staff's perspective**

He says there might be malnutrition because there is job insecurity in the area. He agreed that poor economic access might have affected the dietary intake of the people but he maintains that this is due to job insecurity and not the scarcity of food.

## **5.2 Drivers of food insecurity**

### **A The farmers' perspective**

Both farmers with farmlands and without farmlands unilaterally said that it food insecurity is due to the oil exploration activities. Shell SPDC seem to be the major culprit as all farmers from the different communities pointed their fingers at the company. They explained that it affected their sources of livelihood- farmlands and rivers and thereby affecting their yield and their income which has incapacitated them and reduced their purchasing ability. One of the farmers from Mugho community explained

*'... We were having bumper harvest everywhere before shell. Due to oil exploration, even before the spillage, during the exploration we started using the... Immediately ken stopped shell from exploring, we were having a little harvest. So, when they started exploring again after ken died that the spillage became worse and it affected the harvest even more...'*

From Umuechem community, one of the farmers explained;

*'Before the coming of shell, when we plant maize, it yields well, now the maize grows about 6 feet high and no fruit. Cassava gets rotten. Shell got here in 1958. Before '58 there was enough food. Serious reduction in food.'*

During the discussion, the farmers from Umuechem community introduced another source of food insecurity that they are being faced with, which according to some of them is even worse than shell. They explained that the activities of the pastoralists known as 'Fulani herdsmen' has, in recent times and has contributed to food insecurity. The herdsmen move their animals from one farmland to another to consume the anything they can find, from weeds to plants. The farmers explained that they could not confront or stop the herdsmen because the herdsmen have become more dangerous and aggressive. According to one of the farmers with farmland,

*'The present one is the herdsmen which is even worse than shell oil pollution, the animals feed on the farm and the people are afraid to confront them. They can kill.'*

The herdsmen activities have resulted in conflicts in some parts of the country, leading to loss of lives. During their journey, in search of pasture for their herds, they trespass farmlands thereby destroying crops and this bringing about resistance from the farmers and resulting in clashes where the farmers are eventually overpowered, injured or in several cases, killed. (Adetula, 2016)

Farmers without farmlands have exploration activities to blame for food insecurity, especially oil spillage and land grabbing. Land grabbing was the initial cause of loss of farmlands before oil spillage. Land grabbing cases were more common in the earlier years of oil exploration activities but in more recent times, oil spillage is the main cause. All of the farmers without farmlands therefore mentioned oil exploration activities as the primary cause of food insecurity.

### **B. The NGO official's perspective**

He admitted that the oil exploration has done a lot of damage to the region and that is why their NGO and others are intervening. He explained that in addition to that, ignorance is also contributing to the state of food insecurity in the region. He explained that they have introduced



some programs to deal with food insecurity and they have tried to educate the people on sustainable agricultural practices and other ways of increasing crop yield and food quality. For instance, he explained that they have made it known to the farmers the dangers of incessant use of fertilizers on the already damaged farmlands. The farmers are quick to use fertilizer but the NGO has introduced the use of organic product and organic system of agriculture such as the use of leguminous plants to rejuvenate the soil.

*Reply: that's why we are promoting organic products. The organic products are not ..most farmers even if the soil is rich, they still want to apply fertilizer so the problem we are having is their quick instruments u can use to test your soil to know whether or not you need fertilizer but the farmers are quick to request for fertilizers so they just drop everything there. Two, if you have oil spillage, the soil is damaged so adding another chemical-fertilizer, it cant work and that's the beauty of the organic products because they use microbes and the microbes once they enter the soil, they rejuvenate the soil, like the dead soil, the first thing I will do is plant cowpea and leae it to grow or any leguminous plant so they multiply in millions and keep multiplying and before you know the soil is back,*

### **C. The oil company staff's perspective**

He completely disagrees that oil exploration is the source of food insecurity in the region. First, he disagrees with the proposition that there is food insecurity in the region. According to him, the region has faced challenges, which is common to other regions in Nigeria such as poor governance and policies, climate change and others, which have also contributed to low food production in the region. He says oil production has affected agricultural development but cannot be seen as the only factor affecting agricultural production and development. However, enough food is produced in the country but the main problem people in the region have is job insecurity.

### 5.3 How is food insecurity linked to conflict?

#### A Farmers' perspective

Farmers with farmlands and without farmlands agree that the main vice affecting them is idleness. The youths have no job and have to find other means to survive. They are not encouraged to go into agriculture. The farmers explained a situation that serves as the origin of conflict in the region. One of the farmers explained that before the oil exploration activities, they were having what he refers to as 'bumper' harvest but the problem started shortly after the exploration activities, they started experiencing reduction in yield and this raised concerns among the people. Reduction in yield seems to be the first noticeable negative effect of oil exploration. This led to protests by the late Ken Saro Wiwa, the human rights and environmental activist. In the words of the community representative of Mugho community

*'Well, u see ken fought nationally and internationally. We have no leader again after the demise of ken so everything deteriorated. After ken died no one is talking.'*

Since then the different forms of conflicts explored in chapter 2.2 have taken place in the region and the perpetrators are mostly youths who according to the farmers are hungry and idle and would be easily lured by people to participate in kidnappings, cultism, fights and violent acts. (I gathered from their report that they seem not to have such an informed leader again or the lack of support from the government has made them to opt for more violent ways of expressing themselves.) the results from your interviews should be presented here.. this chapter needs more

#### B. The NGO official's perspective

He says 'an hungry man is an angry man'. He says the inability to feed oneself and take care of one's needs could make one tempted to engage in vices on the promise that they will get reward. He thinks that is one reason some of the people participate in vices.

In addition, he explains that some NGOs and donors have come to intervene in the region because they believe that food insecurity is synonymous to violence. Therefore, they believe

that if they intervene in the state of food security in the region, it will prevent violence from spreading to other parts of the region and country.

### **C. The oil company staff's perspective**

He says nothing about conflict and the drivers of conflict but continues to hammer on lack of jobs as a cause of poverty.

## **5.4 Compensation**

### **A. Farmers' perspective**

Both farmers with farmlands and without farmlands were quick to make it clear that they have not been compensated. When the researcher raised this topic in one of the communities, one of the farmers quickly cuts in

*'There is nothing like compensation, you hear me? There nothing like that, I will take you to a community where they have about 53 oil wells but they have nothing to show for it...if you see where oil exploration has destroyed lands, you will cry'*

They explained that they have received no compensation or assistance from the government. In one of the communities, the farmers explained that the oil companies set up some scholarship programs for the students in the communities but according to them, it has not been effectively carried out. In Umeuchem community, the women group explained a little about the scholarship program. One of the women explained Shell organized the scholarship program and they used to sponsor up to thirty children. However, now they hardly sponsor six children and it is highly competitive. She also explained that it is a short-term scholarship, which only sees the child through the secondary school level.

In Mugho community, one of the farmers with farmlands explained that oil companies have tried to compensate through one program called the BMI- SPDC CLEANUP remediation program. The CLEANUP program is about cleaning the soils and farmlands to rid it off oil spillage. However, they explained that it has not been effective, and it was done halfway. He

also explained that a clustered development board was formed by shell which included the various communities in Gokana local government. This board was called the GMOU. They started some projects in 2014 but it seems abandoned now.

The farmers without farmlands have responses that are similar to those of farmers with farmlands. They said they have received no compensation whatsoever but have been given nothing but failed promises. They explained that they have been to the court on several occasions which have not yielded satisfactory results.

### **B. The NGO official's perspective**

According to him, they have attempted to help the farmers through improving their farm yield through indirect implementation as explained before. This indirect implementation involves them bringing in other agricultural companies to provide their products at a subsidized rate for the farmers.

They also try to compensate the farmers for their nutritional losses through the genetically bred inputs, and foods like the pro-vitamin A cassava they make available to the farmers. In addition, they have been able to help through the promotion of organic products and farmers' education/awareness program, which they organize to enlighten the farmers on how to deal with the state of food insecurity. They also have a peace building advocacy program for youths through which they encourage the youths to embrace agriculture.

On the part of the oil companies, he explains that the companies have had agricultural units to address the needs of the farmers but some of those units have phased out with time.

### **C. The oil company staff's perspective**

He said nothing about compensation but explains that the major need of the people is jobs, so they can afford to buy the food and to meet their basic needs. He says the people (mostly youths) are no longer interested in farming or fishing and they need more modern jobs.

## 6. DEBATING FOOD INSECURITY AND CONFLICT IN THE NIGER DELTA

Following the findings stipulated in the chapter 5 above, this chapter will discuss the key findings under the research questions and objectives of the thesis. This includes an examination of the state of food insecurity in the Niger-delta region, the drivers of food security and the relationship between food insecurity and conflict. I have therefore drawn a summary of the key findings from the analysed interviews.

### **The state of food insecurity in the region.**

The farmers said food is not accessible physically and economically, and it is not available due to drop in yield and increase in the use of farm inputs. The NGO official also admits that there is a problem of food insecurity due to the drop in yield of agricultural production and the financial incapability of the farmers. The oil company staff on the other hand disagrees that the region is food insecure because he believes food is available but the only problem is the financial incapability of the people, which is due to the lack of jobs in the region. again, FAO (2008) clarifies this argument about food security by explaining that before a region is considered food secure, all the four dimensions of food security must be present and these include availability, accessibility (physical and economic), utilization and stability. A lack of one or more makes a region food insecure. The region examined is therefore food insecure.

Furthermore, Babatunde (2017) confirms there is a considerable reduction in local food production in the Niger-delta caused by environmental degradation thereby affecting food availability. Ukpe, Nweze & Arene (2016) also confirms that despite the vision of Nigeria to have a continual physical and economic access to food, poor access to food remains a problem contributing to food insecurity in the Niger-delta.

Howbeit, the NGO official insisted that there is an improvement in the state of food insecurity due to the remediation activities by them and the oil companies. The introduction of the improved inputs like the pro-vitamin A genetically bred cassava has improved the diet and nutrition of the people. Vitamin A deficiency is not only common in the region but in other parts of Nigeria as well. Olaosebikan et al., (2017) explains that the vit-A cassava, also known

as yellow cassava because of the yellow hue of the  $\beta$ -carotene are safe for consumption, has a good taste and an attractive colour which makes them more preferred to the original white type (Figure 6.1). The physical qualities make it more appealing to the people and through this innovation, the people's dietary requirement is being met.



Figure 6.1: A garri processor frying provitamin A gari (Olaosebikan et al., 2017)

The NGO- MADE and other organizations like the International Institute for Tropical Agriculture (IITA) and HarvestPlus Nigeria organize meetings and trainings for local farmers and traders across the country on the benefits of this innovation and through these events, the varieties are distributed to the people (Olaosebikan et al., 2017). The access to the variety depends on the presence of the project. The project might have contributed to short term improvements in nutrition, but the long term effect and the sustainability is not clear.

However, the farmers consider the innovation a minor contribution in the general state of things. They insist that food is not available because of the low yield, heavy reliance on inputs like fertilizers, unstable prices and inflation, lack of physical access such as farm roads and a huge drop in their income and lack of purchasing power. These altogether makes them not to consider the improvement in the situation through the intervention of the NGO as insubstantial.

In terms of utilization, oil spill in the Niger-delta has been linked with infant mortality (Hodal 2017). Author reveals that unborn and new-born infants are highly vulnerable to oil pollution because they have not developed bodily defences against toxic chemicals. According to Schmidhuber & Tubiello (2007), utilization ‘encompasses all food safety and quality aspects of nutrition; its sub-dimensions are therefore related to health, including the sanitary conditions across the entire food chain (p.19703). Poor utilization of food is reflecting in the health of especially mothers and infants in the region. Four out of ten new-borns die within three months in Ogoniland and about 16000 infants in the Niger-delta were reportedly killed in their first year in the year 2012 alone as a result of oil spills (UNPO, 2017). This further confirms the extent of food insecurity in the region.

The state of insecurity in the region is also confirmed by the emigration of the male population in huge numbers. Okwechime (2013) considers this an ‘environmentally induced migration’ in a situation referred to as internal migration (p.2). The author explains that internal migration ‘refers to a situation where victims of environmental conflicts are forced to abandon their ancestral homes to the relative safety of places other than their original homelands’ (p. 13). Most of the men have gone to other regions in search of jobs and income. This leaves so much of the household responsibility on the women. Most of the women have become the chief providers for their households and it reflected on the research in the sense that about 70% of the farmers interviewed are women who complained bitterly about the state of food insecurity and loss of livelihood in their community.

Despite these heavy responsibilities given to women in the Niger-delta, they are still considered unimportant and inferior. During the interview, it was discovered that while most of the women work as farmers, many of them do not own properties are not rarely considered during the distribution of family properties. The author observes that the women are restricted when it comes to entitlements, other privileges required for improving their outputs, and this contributes to food insecurity in the society. For the women in the Niger-delta, their active involvement in agriculture is not considered when it comes to distributing properties and output and all of the community officials are spokespersons are men. This handicaps the women economically and contributes to food insecurity in the society. In a way, the societal setting limits women’s ability to provide for the family and at the same time, gives a huge responsibility to the women.

Furthermore, even when food production has failed, when asked about coping strategies, a male farmer in one of the communities said *'our women now engage in small trading'*. This shows that apart from the fact that the majority of the farmers in the communities are women, even when farming has failed to provide for the families, the responsibilities of looking for alternative is even transferred to the women- they start to engage in small businesses which require small capital. The capital are funds or micro credits accessed through informal institutions (Ukpe, Nweze & Arene, 2016). These include farmers' cooperatives, Esusu<sup>5</sup> and microfinance banks. These are some coping strategies the women employ to cater for their families.

Ecofeminism explains this oppression and dominance of the females in relation to the environment by focusing on how environmental degradation harm women by affecting their livelihoods (Leban, 2014). The female domination is revealed by the research in the sense that it was observed that most of the women could not expressed themselves in English language. However, most of the male farmers surprisingly spoke very good English. It was clear that many of them had reasonable basic education while the women did not. Most of the interview with the women was done with the aid of an interpreter. Most of their reaction, their fury and displeasure were observed from the tone of their voices and actions. SDN (2014) also confirms that there exists a very low or lack of formal education among women in the Niger-delta which is due to 'limited educational opportunities and cultural marginalization resulting from patriarchal culture' (p.3). These restrictions and burdens placed on women in the Niger-delta contributes to food insecurity

### **The drivers of food insecurity**

The farmers together with the other interviewees (from the oil company and the NGO) agreed that the oil exploration activities have caused food insecurity in the region. The people hold the oil companies responsible for the environmental degradation, food and livelihood insecurity being experienced in their region. Some of the farmers explained that some of the oil pipes have

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<sup>5</sup> In the Esusu program, people who are closely related or acquainted come together to save money, which they access only in emergencies. They also borrow money from these joint savings to start businesses. These informal sources are the most used in the Niger-delta (Ukpe, Nweze & Arene 2016)



ruptured and are not well maintained and this leads to spillage but some of them also sabotage the pipelines and oil facilities contributing to the spillage. In a research conducted by Ordinioha (2008) food insecurity is worse in communities that have experienced oil spillage than areas where oil spillage did not occur and

Gas flaring and oil spillage have caused the land and rivers to become contaminated and polluted. These have in turn affected food production, causing the mass death of fishes and crops, rendering the soil weak and useless for planting and even leading to the contamination of foods harvested from the land and water. Because these are the major sources of livelihood, it has led to a drop in the income of most farmers and some have even lost their jobs and farmlands completely. Naburi (2017) reports that Rivers state has a labour force of about 4.3 million and 61.4% of that population are either unemployed, or underemployed. An analysis of development models in the Niger-delta also reveals that 56% of households in the region made between 0.2 & \$4 per day (SDN, 2014)

The rate of water pollution in the Niger-delta is highly devastating. In the communities visited, the rivers and streams seen were all black and covered in oil (Figure 6.2). Vidal (2011) reveals that water in the Niger-delta is coated with 1000 times more hydrocarbons than allowed by the Nigerian standards. Ngah & Agbogunleri (2018) reveal that apart from ground water, rain water is also unsafe for consumption because it contains weak acids, black carbon and sulphate as a result of the gas flaring in the region. This makes portable water expensive and unaffordable for the poor (Ngah & Agbogunleri 2018). This, the farmers complained was a huge threat to their health. In addition, it has caused a lot of damage to the aquatic life, which was a major source of food and income for them. Before the coming of the oil companies, the people drank directly from the streams and there was abundance of water because the area is surrounded by water. They also used the water in growing their agricultural products and as a source of recreation; swimming was a common sport in the region (Amnesty international, 2015).



Figure 6.2: A river badly affected by oil spillage in Ogoniland. Photo credit: Taiwo George

This made the people to adopt different coping strategies and a major one is the reliance on fertilizers to boost production. Falade (2018) reports that the Niger Delta Development Commission (NDDC) distributes organic liquid fertilizers to the farmers in the region. However, none of the farmers mentioned this. They unanimously said they buy the fertilizers from the markets and that they are usually adulterated, diluted with limestones to increase the quantity. The fertilizers however, are not really effective on the damaged soil, as explained by the NGO official, and does more harm than good because it is a case of adding a chemical to an already contaminated soil and that is why the yield remains low. Indiscriminate use of fertilizer also affects the environment because it seeps through the soil to contaminate ground water and according to the secretary of the farmers in Bodo community, it is risky because most of the farmers using it are uneducated and cannot properly assess how much is enough.

Another problem forcing the people off their lands as discussed earlier is the issue of pastoralists. There have been news of between pastoralists desperately in search of food for their herds and villagers across the country. This makes the farmers in the region scared to go to the farms sometimes to avoid confrontation with the pastoralists as such confrontations has led to conflicts in other regions in recent times, like the Benue incidence. The farmers in

Umuechem especially complained about this and explained that it scares them more than the oil spillage itself.

The pastoralists' activities has been a problem in the country for some decades but in recent years, violence between the nomadic herders and the farmers in agrarian communities has escalated. Crisis group Nigeria (2017) reports an estimated death toll of about 2500 people in 2016 alone resulted from these conflicts, which are considered almost as bad as the Boko Haram insurgency. However, while the Boko Haram insurgency is more active up north, the nomadic herders, being mobile are moving towards the central and southern parts of Nigeria. Crisis group Nigeria (2017) explains that the increase in these clashes is simply due to the effects of climate change which are drought and desertification which have destroyed pastured and dried up natural water sources in the Northern part. The pastoralists therefore move southward in desperate search for pasture and they in the process interfere with farmlands.

### **Linking food insecurity and conflict**

The farmers were quick to point at the lack of availability and access to food, and income as the major reasons the youths engage in violent activities. Although the causes of conflicts are complex, in the Niger-delta however, the high level of food and livelihood loss has made the people become more agitated and highly vulnerable to conflict. Food insecurity is often analysed in the context of livelihood insecurity because 'food security is crucial to the sensitivity, resilience, and sustainability of livelihood systems' (Alexander de Waal, 1989, as cited in Babatunde 2017). Idemudia & Ite (2007) explains how this predisposes the people of the Niger-delta to conflict;

*'The vulnerability of the Niger Delta ecology and the dependency of the people on their environment for livelihood sustenance are the basis for explaining and understanding the contribution of environmental factors to the conflict.'*

The link between food insecurity and conflict has been said to be complex. Hendrix & Brinkman (2013, p.3) distinguishes between chronic and acute food insecurity by saying

*‘Chronic food insecurity is a persistent lack of “sufficient, safe, nutritious food to maintain a healthy and active life,” and is generally caused by extreme poverty (FAO 1996). Acute food insecurity refers to temporary gaps in access to food, and can result from a variety of factors ranging from high prices to disruptions in delivery systems, recessions, natural disasters and extreme weather events, political turmoil, and violent conflict.*

From the above definition, one can conclude that the situation being faced in the Niger-delta is an acute food insecurity. Consequentially, Hendrix & Brinkman (2013) explains that acute food insecurity can increase social grievances and can lead to rebellious acts because such rebellions could be caused by a ‘large horizontal inequality across regions and ethnic groups’ (Hendrix & Brinkman 2013 p. 3) This is more evident in the inter-communal clashes over oil lands and arable lands in the Niger-delta.

Communal conflicts are common in areas where land and water are scarce (Hendrix & Brinkman, 2013) and these seem to be the scarcest resources in the Niger-delta. Land and water are also the major sources of food and livelihood. Hendrix and Brinkman furthermore explain that the conflicts are further exacerbated through strain on the productive, fertile lands in areas where there is high population densities. The Niger-delta is left with considerable fewer and insufficient fertile lands and there is therefore a strain on those left-over lands. In a race for what is left, the people also struggle for what is left of available lands and properties. The inter-communal clash as usually clashes over borders that were originally clearly defined but due to scarcity of land, the ownership is being questioned and revised. This is the case between B-dere and K-dere, in Ogoniland, the two brother communities which are only separated by a road and are located opposite of each other. There is constant squabble over land and property in the region. People are desperate to farm in order to produce food and income for their families and would go to any length to do so.

The government and the oil companies have looked at different ways of compensating the people but have not paid attention to the magnitude of the impact of food and livelihood insecurity. However, the faulty compensatory attempt and negligence by the government has made the people result to means of self-help, which eventually results to conflict.

During the interview, most of the farmers insisted that they are not being compensated. The farmers made no mention of monetary compensation and said very little about assistance from

NGOs and the oil companies in form of local scholarships and awareness programs. One of the farmers became enraged when the issue of compensation was brought up. He interrupted the conversation by saying '*there is nothing like compensation*'. They however, mentioned the BMI-SPDC CLEANUP program. The government in collaboration with Shell SPDC embarked on a program, which involves cleaning the contaminated sites (soils) in the Niger-delta. Akpan, Ejoh & Okafor (2017), this extensive process takes up to 50 years and an estimate of over \$50 billion. This is obviously a long-term procedure, which the people do not see as a solution.

In addition, the monetary compensation that comes occasionally have rendered the youths dependent, idle and lazy, leading them into illegal oil bunkering and other crimes. They are often seen trying to claim the funds by protesting and some have resorted to other forceful means of 'claiming their money' through kidnappings, threats or vandalism of oil pipes. For instance, the head of Umuechem community explained about his abduction that his abductors demanded for money because they heard it through the grapevine that he had been given some sum of money by shell as compensation to the community. They did this to forcefully get what they consider their portion. Abducting prominent members of the communities is also quite common in this region due to the desperation of the youths. The people have become agitated and aggressive because of the magnitude of loss they have suffered and do not consider the compensation offered to them to be sufficient.

Apart from the scramble for scarce resources, food price increase has also triggered violent riots and conflicts in different parts of the world such as the recorded 2007-2008 violent riotings in 48 countries when world food prices increased (Brinkman & Hendrix, 2011). Due to the scarcity being experienced in the Niger-delta, most foods in the market are usually obtained from other regions in the country and the prices of food and foodstuff are relatively higher in the Niger-delta than in other parts of the country. The inability to purchase the desired or required quality or quantity of food may serve as a motivation for the people to take to violence. Brinkman & Hendrix (2011) explains that the theories that explain the link between food insecurity and conflict are usually centred around the concepts of motivation (which include food, shelter, clothing and other basic needs) or opportunity costs (Brinkman & Hendrix, 2011). The inability to get desired food could therefore motivate people to engage in violent acts. Such

vulnerable individuals could also be lured into violent acts and militant groups on the promise that they will receive food, shelter and other basic needs as rewards.

Finally, Food insecurity caused by oil exploration damages triggers different responses from the affected people and According to Kpae & Adichi (2017) increase in unemployment leads to increase in different criminal behaviours among the youths- kidnappings, oil bunkering and, militancy. The NGO official also admitted that food insecurity has led to conflict and increase in vices by the words ‘an hungry man is an angry man’. He admitted that this is what motivates some other NGOs to intervene in the region because they believe that such conflicts and vices could spread and serve as a threat to other regions.

The women are also not left out of the vices. According to one of the women,

*‘this has made some of their women go into prostitution because there is no yield from the farms and it is becoming more difficult to survive’.*

According to a research carried out by Nwigbo & Imoh-Ita (2016), female prostitution is high in the Niger-delta and the people took to prostitution as a means of survival due to lack of jobs<sup>6</sup>.

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<sup>6</sup> Nwigbo & Imoh-Ita (2016) conducted an analysis on unemployment and crime rate in the niger-delta using Rivers, Akwa-Ibom and Bayelsa states as a case study. Some of the crimes assessed include robbery, cultism, drug trafficking and political thuggery, kidnapping, oil theft, pipeline vandalism and prostitution. Prostitution was found to be high in the three states.

## 7. CONCLUSION AND RECOMMENDATION

The ultimate aim of this research is to find out the link between food insecurity and conflict in the Niger-delta region. This research has emphasized the fact that the grievances of the people are fuelled by food and livelihood insecurity. It has also emphasized that oil exploration activities contributed immensely to environmental degradation, robbing the people of their food and livelihoods. In addition, the attempts made to compensate the people for their losses have proved futile because the basic needs, which are food and livelihoods, have not been met. The aftermath of this is the different forms of conflicts taking place in the region for which it is regarded a highly volatile and dangerous region.

Food insecurity exists in the Niger-delta. From the interviews, the farmers confirm the state of food insecurity by explaining that food is not as available as before due to the low yield. They also explained that due to livelihood insecurity caused by environmental degradation, there is limited economic access to obtain the required and desired foods in the markets. The NGO official also agrees with the situation but explains that they are taking actions to mitigate it such as the dissemination of knowledge and agricultural inputs like the pro-vitamin cassava to the farmers. The oil company staff however does not agree that there is food insecurity in the region, because, according to him, food is available but the people lack jobs. Food security definition demands both the accessibility and availability of food for a region to be regarded as food secure. For this reason, it can be concluded that there is no food security in the region.

Both the research and literature reveal the different drivers of food insecurity in the region. All the farmers pointed at oil exploration as the main driver of food insecurity and this is also supported by the literature. Another cause of food insecurity, interference of pastoralists on farmlands, was mentioned during the interviews with the farmers. The oil staff mentioned the third cause of food insecurity and that is climate change. However, oil exploration activities seems to be the one with the biggest impact on the community.

As regarding compensation, the strategies that have been employed to compensate the people are debatable and the interviews from the farmers reveal that they are deeply unsatisfied with what they have received so far. Literature reveals that the government and the oil companies have focused more on conflict and have sought ways of ending the conflict through force and

monetary compensation. The NGOs are the only stakeholders that have concentrated on achieving food security because they consider that the basic need of the people.

In relation to conflict, a reduction in the availability and accessibility of food has made the people prone to conflict. The people have taken to different forceful means of meeting their basic needs. They abduct oil workers and other prominent individuals for money and they sabotage the oil pipelines and fight themselves over lands and properties. The people have appeared desperate to survive because of their perceived lack in the midst of plenty and are therefore expressing their agitation through harsh means.

If the problem of conflict in the Niger-delta is to be dealt with, it is important to review the main causes of the problem. The monetary compensation approach has failed, and it is raising a generation of dependent, idle youths who would always request for more. Agriculture should be invested in to make it more lucrative and attractive to the people. The CLEANUP program should also be done effectively like in other regions. Same can be achieved in the Niger-delta with the help of solid and strict government policies, supporting the rights of the people. The government of Nigeria needs to work harder on establishing a relationship and trust between itself and the people of the region before any success can be achieved in the region. The government can achieve this through inclusion program, involving and engaging the youths. When this is done, it will enhance agricultural production and the people can go back to work. This would deal with both problems of food and livelihood security.

The link between food insecurity and conflict has been said to be complex and dynamic; because food security can be both a consequence and cause of conflict. Many researchers have explained how conflict leads to food insecurity. However, not much has been recorded on how food insecurity leads to conflict and researches are on going in this field. This research work has therefore contributed to this side of the dynamics, that is, how food insecurity leads to conflict.



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## 9. APPENDIX

### Appendix 1: Interview guide

#### Farmers with farmlands

1. What do you understand by) having food security for yourself and your family.
2. What are the main reasons for not being foodsecure?
3. Proritise the reasons (1-5) (MAKE problem tree with the farmers)
4. What are the food security situation at the moment and how do you cope with it?
5. Have the food security situation changed during the last 20 years?
6. What is the main reason for this change?
7. Prioritise the reasons (1-5)
8. Reduced yield - How **do you think it has** been affected? How much?
9. what is your yield per hectare about 20 years ago compared to now
10. Do you use fertilizers before or now and do you consider it effective
11. (In case there is a reduction) What do you think is the main reason for the reduced yield?
12. How have you been able to manage the loss and what coping strategies have you employed?
13. Have you been compensated by the appropriate body/organization

#### Farmers without farmlands

1. What do you understand by) having food security for yourself and your family.
2. What are the main reasons for not being food secure?
3. Prioritize the reasons (1-5) (MAKE problem tree with the farmers)
4. What are the food security situation at the moment and how do you cope with it?

5. Have the food security situation changed during the last 20 years?
6. What is the main reason for this change?
7. Prioritize the reasons (1-7)
8. What happened to your farmland? What exactly led to the loss of your farmland?
9. Please tell me what coping strategies you have adopted to deal with or make up for the loss
10. How have you reacted, have you taken part in any rioting or revolt?
11. Would you say there is a general increase in poverty level due to loss of farmlands and low yields?
12. Have you been compensated for your loss?
- 12a. If yes, how?
- 12b. Do you consider this compensation sufficient for you and your household

(A breakdown of likely drivers of food insecurity)

- 1 How do you perceive food insecurity in your household, how would you explain food insecurity in your household and has there been changes and what has caused the changes.
2. Do you think your current purchasing power (income) of your household is sufficient to get you enough food and a healthy lifestyle?
3. From your perspective, what is the main causes of food insecurity in your area?
4. Do you know the name of any oil company in your community? Can you tell me if your community is presently producing oil?
5. Do you think oil exploration activities have positively impacted on your occupation and living standards (If yes please explain. Probe for development projects, scholarships, etc.)
6. Do you think oil exploration activities have negatively impacted on your occupation and living standards (Probe for impacts of oil spills, gas flares, waste discharge, etc.)

7. Would you say that governmental policies have been favourable to your farming? In what ways? If not, in what ways?
8. Do you think the climate has affected your farming negatively or positively? How much difference do you observe?
9. Has there been any clashes between this community and other neighbouring communities?
10. What was the reason for the conflict and how has it affected your occupation? What do you think led to it and if it is not on going, how was it dealt with?
11. In what way do you think it was influenced by any of these drivers above as well as oil exploration activities?)
12. Are there any insurgencies in your community?
13. If so, how have they affected your occupation and security in the community?
14. What can you say about the activities of NGOs and the federal government in your community? (Probe for development projects). Have they been helpful and in what ways?
15. Do you have representatives who communicates issues of problems associated with oil exploration activities to the oil company responsible or the government? (If yes, tell me about the process)
16. Do you think the oil resource in the community has affected your livelihood and income?
17. Have your expectations from the federal government and Oil Company been met? (Please explain) (unmet expectations could be a driver of crisis)
18. Are there any issues that you would like to raise that you feel are important but that you haven't had a chance to explore in this interview?

#### Oil company staff

1. What's your perception of food security in the area

2. From your perspective, what is the main causes of food insecurity.
3. Has there been a change concerning the accessibility of food in the market, is it stable throughout the year?
4. Do you observe an increase in malnutrition, like poverty might drive conflict because of lack of income.
5. Would you say that there is a general increase in poverty in the region?
6. Has there been conflict between this community and other communities?
7. When did this happen and what was the reason for it?
8. Do you think that the conflict in the community may be or may have been due to food insecurity and poverty? If yes how?
9. Does your company still have active production in the community (If yes, what is the daily production figure? If no, what was the daily production figure? Please tell me the reason for the stoppage)
10. Are there any negative impacts of oil exploration activities on farmers in the communities? (Probe for impacts of gas flares, oil spills, waste effluent discharge, etc.)
11. Would you say oil exploration activities has contributed to the foodinsecurity and conflict and how?
12. In what ways have you attempted to deal with food insecurity
13. In what ways have you attempted to deal with conflict?
14. Do you have any special compensatory program or developmental projects for farmers? If you have, how is it administered?
15. What do you consider the basic need of the people and do you think these needs are being met by your compensation methods
16. Are there any issues that you would like to raise that you feel are important but that you haven't had a chance to talk about in this interview?

NGO staff

1. Can you tell me about any developmental projects for rural communities of the Niger Delta region by your organization / government? If you have, who are the targets
2. How has the government been affected by the state of food insecurity and conflict in the region?
3. Do you have any conflict reduction strategy in the communities? If you have, Can you please explain how effective it has been? Do you know other organizations that have this?
4. What are you doing to tackle poverty and high food prices in the region?
  - 4a. Have you provided any governmental support for the people to make up for their losses?
  - b. Are there favourable policies in place for those who have been affected?
  - c. Have you considered food aids for the people?
5. How have the people responded so far and do you think they are happy with the developments? How can you tell?
6. Do you have compensatory programs targeted towards the farmers for low yield and loss of farmlands?
7. (for government official) What can you say about the performance of the oil companies in the Niger Delta region?
  - 7a. How are you, as the government, monitoring the activities of the oil companies?
8. (for oil workers) What can you say about the performance of the federal government in the Niger Delta region?
  - 8a. Do you think they are making efforts to help deal with food insecurity and conflict?
9. (for NGO) Have you considered providing food aid or other forms of assistance for the people of the community?
10. Are there any issues that you would like to raise that you feel are important but that you haven't had a chance to talk about in this interview?

**Appendix 2. More pictures from the research site**



Figure 9.1: A billboard advertising the soil CLEANUP project in Bodo community. Photo credit: Taiwo George



Figure 9.2: A female farmer on her farmland decriing the poor state of the farm. Photo Credit: Taiwo George





Figure 9.3: Some ruins caused by intercommunal clashes between K-dere and B-dere communities in Ogoniland. Photo credit: Taiwo George

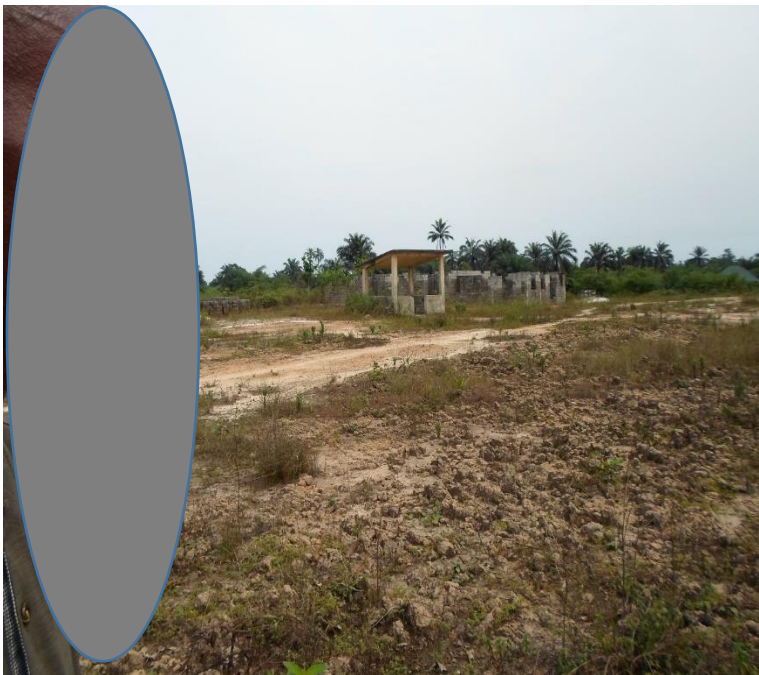


Figure 9.4 A farmland located directly next to a flow station where oil spillage had taken place in Bodo community. Photo Credit: Taiwo George

**Appendix 3:** Figure 2.1: Map of Nigeria showing the Niger-delta states (Oil producing states). (Ite, Ite & Ibok, 2013)





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