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Frahms

Comparative Studies of the Environmental and Socio-Economic Experiences of Host Communities of The Impacts of Onshore and Offshore Oil Explorations in The Niger Delta Region of Nigeria: Kokori-Inland and Ugborodo Host Communities as Case Studies

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Disclaimer:

This document represents part of the author's study programme while at the International Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

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Contents

Chapter 1 INTRODUCTION	1
1.1: Why this study?	1
1.1.1: Oil and Gas Extractivism	1
1.1.2: Nigeria Oil and Gas Extractivism: Impact of intensification on other Sectors	s 1
1.1.3: Impacts of Oil and Gas Exploration: Experiences and Perceptions	2
1.1.4: What to expect in this Study.	4
1.2: How is this study important to Development Studies?	4
1.3: Research objective	5
1.4: Research question and sub-questions	5
1.5: Introduction of Case Studies and Recurring Terms	5
1.5.1: Niger Delta Region of Nigeria: Kokori and Ugborodo as case studies of communities	Host 5
1.5.2: Onshore Oil and Gas Explorations:	7
1.5.3: Offshore oil and gas exploration:	8
1.5.4: Kokori Host Community	9
1.5.5: Ugborodo Host community	10
Chapter 2 IMPACTS OF OIL AND GAS EXPLORATION	13
2.1: Overview	13
2.2: Environmental Impacts of Oil and Gas Exploration in the Niger Delta Region of N	igeria 14
2.3: Socioeconomic Impacts of Oil and gas exploration in the Niger Delta Region of N	igeria 16
Chapter 3 METHODOLOGY AND METHODS	21
3.1: Sampling and Method of Data Collections	21
3.2: Methods of Data Collection	22
3.3: Sample Size and Description of Respondents	23
3.4: Challenges Encountered	24
Chapter 4 RESEARCH FINDINGS AND DISCUSSIONS	25
4.0: Overview	25
4.1: The Influence of Complex identities and Intersectionality on People's Experiences of impact of oil and gas explorations.	of the 25
4.2: Ecological systems: Unique and Overlapping Experiences	28
4.3: Host communities and Socio-economic impacts of Oil Exploration.	35
Chapter 5 Conclusions	42

List of Tables

Table 2.1 Five Sites in Ogoniland with the highest concentration of TPH groundwater Table 3.1 Respondents Distributions

List of Figures

Figure 1.1 An example of an Onshore Oil well in the Niger Delta

Figure 1.2 A schematic diagram of an Onshore Oil well.

Figure 1.3 A typical example of a pipeline network of Onshore Oil exploration in Niger Delta Region.

Figure 1.4 A example of an offshore oil platform (rig) in the Niger Delta

Figure 1.5 A schematic diagram of different offshore oil platforms (rigs) and Sea depths.

Figure 1.6 Oil Fields in OML 30

Figure 4.1 The Influence of identities and Intersectionality on Experiences of individuals in Host communities

Figure 4.2 Oil exploration facility on a polluted water body (creek) in Ugborodo community

Figure 4.3 Polluted water body (creek) in Ugborodo community

Figure 4.4 A river in Erhioke part of Kokori community with traces of oil spills

Figure 4.5 Community Road with visible traces of oil pollution close to an exploration site in Kokori.

Figure 4.6 Kokori Flow Station

Figure 4.7 Gas Flaring Facility in Kokori community

Figure 4.9 A sign board by NNPC showing areas that cannot be used for any other purpose because of installed Pipelines and oil exploration infrastructure.

Figure 4.10 Erhioke Cottage Hospital, Kokori, built in 1995 by SPDC (Shell) but currently managed by Shoreline Natural Resources and Heritage Oil, its subsidiary.

Figure 4.11 and Figure 12 Primary Health Centre, Kokori built by the government.

Figure 4.13 and Figure 14 Some classroom blocks of Erhijere Primary School, Kokori built by the State government.

Figure 4.15 Schematic Diagram showing the Unique and overlapping Socio-economic experiences of Ugborodo and Kokori

List of Maps

Map 1.1 Map of Nigeria showing the nine states and oil field of the Niger Delta of Nigeria

Map 1.2 A Map showing th locations of the Research Case Study

Map 1.3 Satellite Map showing the Ugborodo Host Communities and the Escravos Gas-To-Liquid Project (EGTL) site run Chevron Nigeria Limited In Delta State of the Niger Delta of Nigeria.

List of Appendices

Appendix 1: Sample of Research Participation's letter sent to participants.

Appendix 2: Sample of information and Consent Form given and signed by participants.

List of Acronyms

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OML:	Oil Mining Licence
OECs:	Oil Exploration Company
UNDP	United Nations Development Programme
OPL	Oil Prospecting License
NNPC	Nigerian National Petroleum Commission
EGTL	Escravos Gas-To-Liquid
SPDC	Shell Petroleum Development Company
UNCTAD	United Nations Conference on Trade and Development
EGASPIN	Environmental Guidelines and Standards for the Petroleum Industries in Nigeria
TPH	Total Petroleum Hydrocarbon
SCPs	Small Commodities Producers
MOSOP	Movement for the survival of the Ogoni people (MOSOP)
NNPC	Nigeria National Petroleum Corporation
SPDC	Shell Petroleum Development Company

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Abstract

Over the past five decades, Nigeria has experienced significant economic growth attributed to petroleum exploration, production, and exports, particularly in the oil-rich Niger Delta region. However, the extractive nature of petroleum operations in the Niger Delta has led to adverse impacts on the environment, affecting air quality, soils, groundwater, marine ecosystems, biodiversity, and overall environmental sustainability. Environmental pollutants, including industrial effluents, hydrocarbons, oil spills, and gaseous emissions, have posed severe challenges to the socio-economic well-being and human health of host communities across the nine states in Nigeria's Niger Delta. Using these as a baseline, this research paper goes beyond the well-explored general impact of oil and gas exploration in the Niger Delta, it also delves into a nuanced examination of these effects, considering the geo-graphical distinctions of onshore and offshore oil explorations. The study aims to explore and compare (not necessarily to rate one over the other nor say one is less or more impactful than the other) the experiences of host communities where onshore and offshore oil explorations are done, identifying both unique and shared experiences.

The findings of this research reveal distinctive and intersecting experiences in the selected case studies host communities. While acknowledging the importance of shared similarities, which have traditionally guided governmental and non-governmental interventions, this paper emphasizes the significance of shedding light on the unique aspects of their experiences. This approach advocates for a more tailored and need-based strategy in designing interventions, considering both commonalities and divergences to enhance the effectiveness of targeted programs and projects.

Relevance to Development Studies

This study is important to Development Studies and to various actors; State, Non-State, Nongovernmental Organisation (NGOs) and Oil Exploration Companies (OECs) because it brings about the realisation of the possible unique nature of impacts of oil exploration on host communities for specific and need-based interventions and programs.

Keywords

Host communities, Onshore, Offshore, Oil explorations, Niger Delta region, Socio-economic impacts, Environmental degradations, Exploration companies, Ecology.

Chapter 1 | INTRODUCTION

1.1: Why this study?

1.1.1: Oil and Gas Extractivism

Oil and gas exploration, a form of extractivism, exerts wide-ranging impacts on diverse populations and host communities worldwide. This type of extractivism, as defined by Chagnon et al. in their 2022 work, serves as a foundational driver of socio-ecologically harmful processes, encompassing resource depletion, subjugation, and non-reciprocal relationships at all operational levels. This inherently contradicts the core principles of sustainability, encompassing environmental, social, and economic dimensions. The consequences of oil and gas extractivism, includes natural resource depletion, land and soil degradation, species extinction, biodiversity loss, and deforestation, and is intrinsically linked to the pursuit of capital accumulation and the unceasing growth of the global economy (Chagnon, et., al., 2021; Hickel, et., al., 2021). Furthermore, these processes are notably associated with growing inequalities on a global scale in various geographic contexts. These diverse phenomena collectively shape the experiences of local individuals and communities affected by various forms of extractive industries, with oil and gas exploration being no exception.

1.1.2: Nigeria Oil and Gas Extractivism: Impact of intensification on other Sectors

The oil and gas sector of the extractive industry of Nigeria with over 1.4million barrels per day of petroleum export places Nigeria in the 9th position of World highest exporter of petroleum and it generates about 88% of its foreign exchange earnings. However, according to the Nigerian National Bureau of Statistics (NBS) (2023), second quarter report, Crude petroleum and Natural gas contributed only about 5.34% of the real Gross Domestic products (GDP) of the country while other sectors such as the Agricultural sector (crop production) contributed about 20.66% (NBS, 2023). With the oil and gas sector bringing in so much of the country's foreign earnings but still insignificantly contributing to the GDP shows the possibilities of intensification and undue attention, investment, favourable policies etc, to the sector at the detriment of other sectors. This consequently affects a large population that depend on these other sectors for their employment and sources of livelihood and on the environment especially in the Niger Delta Region where the operations are being carried out.

Also, this shows economic vulnerability due to over-dependencies on the sector which may lead to economic crises in times of price fluctuations, market changes and resource depletions. With the high level of dependency on the oil and gas sector by the Nigerian economy, there have been intensification of explorations, production and exports activities and operations and this consequently have negative impacts on the environment and the local people especially in the nine states that make up the Niger Delta region of Nigeria. The impacts of these oil and gas activities in the true sense of extractivism is negative to the environment and host communities often have similar experiences in some ways and in other ways they could be very diverse. In all these experiences, lie different unique stories.

1.1.3: Impacts of Oil and Gas Exploration: Experiences and Perceptions

Some of the stories of local people in host communities are filled with direct negative experiences of the environmental and socio-economic impacts of oil exploration and of course some very few people are benefiting in one way or the other, socially, and economically. However, the very nature of the activities being extractive, it has negative environmental consequences everyone suffers irrespective of your benefits in other ways. Experiences and perceptions and opinions to exploration activities by locals of host communities may differ, while some cry for the reduction or total stoppage of exploration activities in their communities because of the negative impacts on their environment and socio-economic livelihood, others do acknowledge and condemn the impacts by their cries and pains for interventions but still feel that change can only come from the intensification and multiplication of oil exploration activities and Oil exploration companies (OECs). As paradoxical as it seems, it's true! Experiences, perceptions, and stories differ as much as they look and are generalised to be similar.

Here is a story of two indigenous people from the Ugborodo community in the Niger Delta Area of Delta State, Nigeria. I shall call them Temi² and Ayo³. Temi is an experienced fisherman and Ayo is a businessman that operates a small cyber cafe, internet, printing, and Point of Sale (POS) money deposit and withdrawal services and both live in a small island community that plays host to OECs that operates in shallow and deep offshore waters. Living in the same community means they are subject to the same impacts of the oil exploration and to the same state laws and rules concerning environmental protection and sustainability. Temi when asked what his thoughts were about oil exploration as a fisherman, he lamented the detrimental impact these activities have on the environment especially the water bodies from which he derives his livelihood. He complained about the frequent and constant pollution of the environment and the effects it has on aquatic habitats in the area. He narrated how things were a bit bearable as a growing child because of the reduced number of spills that occurred compared to what is being experienced now. The level of pollution is high, and fishes are dying or migrating thereby forcing them (fishermen) to go far into the Atlantic Ocean which he describes to be a dangerous adventure. He wished that oil exploration activities were discontinued in his community.

While for Ayo, the businessman, he acknowledged all the impacts as narrated by Temi, however, he never wished the exploration activities to stop because he described the profitability of his business to be dependent on the influx of people into the community on seasonal basis due to the seasonal operations of the ¹OECs. These could be paradoxical, but these reactions and perceptions are born out of his experiences in relation to his sources of livelihood.

Furthermore, looking at one story from a broader spectrum in other parts of the globe about the experiences and reactions/perceptions of affected local people in relation to oil and gas exploration, it will be interesting to look at the story of Maria in Arsel, et., al., (2019). Maria is young woman who lives in a small *colono* community that plays host to oil explorations in the northern Ecuadorian Amazon. Maria, as a lady in her thirties that has experienced oil explorations, and its related activities was asked to share her thoughts on the expansion of oil exploration in her community. Her responses could be paradoxical, and this shows the varied perceptions of people towards issues that are assumed to have a particular reaction or perception. As an environmental

¹OECs means Oil Exploration Companies.

²Temi (fisherman) was one of my respondents interviewed in August 2023 in Ugborodo community.

³Ayo (businessman) was one of my respondents interviewed in the Ugborodo community. NOTE: Temi and Ayo are generic names.

enthusiast, it is quite easy to fall into the web of assumptions that the communities that are affected or struggle with the impacts of oil explorations should have a symmetrical opinion regarding oil explorations. These diverse opinions could be because of some factors and trade-offs.

Before diving into Maria's response, it is very important to know that Maria's community in the northern Ecuadorian Amazon has visible oil exploration activities and facilities that define the area. The community has a visible presence of oil pipeline networks, activities that visibly show the presence of the OECs and their employees and pockets of degraded areas due to oil spills as it is in the case of Temi and Ayo in the Niger Delta of Nigeria. These seem to be a general narration and occurrence in communities that play host to one form of extractivism or the other. In Maria's response, she expressed a good knowledge of the detrimental impacts on the environmental and socio-economic development of her community in general and on her family in particular. However, she expressed her support for the intensification of oil explorations by OECs with the hope of her family members being employed when the opportunities come. Like Temi and Ayo, Maria demonstrated a good knowledge of the presence of OECs and their activities, but she shared similar perceptions and opinions with Ayo about the continuous intensification of oil explorations in their community.

Local people of host communities especially from developing countries like Ayo may fall a victim of accepting oil and gas extractivism and ancillary activities because they see them as an opportunity to escape from poverty, hardship and a means to improved economic conditions generally (Arsel, et., al., 2019; Aragon and Rud, 2013; Özkaynak, et., al., 2015). This may not be always the case. However, it may be because of the no or limited choice situation of alternate source of livelihood caused by the intensification of oil and gas extractivism for economic growth without meaningful economic gains for local people. This could be called immiserizing growth according to Shaffer, (2016, p.1), Arsel, et., al., (2019).

Also, just like Temi, Ayo, and Maria, I was born and raised in a small landlocked community called Kokori. Kokori community plays host to onshore oil and gas explorations in the Niger Delta region of Nigeria. With the nature of oil activities being carried out as an onshore exploration, the exploration facilities and equipment are installed on the land. Taking a tour around the community, one can easily see a web of oil pipelines across the community because they are just installed above the ground. Other facilities such as oil wells and flow station sites could also be seen. However, as similar as the features of these operations are with those of Maria, I had quite a different experience as a growing child. As a growing child, up to my university stage in Kokori community, the discourses within my circles and families surrounding oil explorations and activities contrary to the popular lamentations of environmental degradation, were usually around the benefits that are accrued to the community and to the indigenous people. These benefits include what the OECs are expected to do as Corporate Social Responsibilities (CSR) or what the benefits from the government as an oil producing community should be. And of course, the different conflicts that are associated with benefit sharing and the tussle of attending to typical political economy's questions of who owns what? And to what extent can one be involved in the sharing of benefits? Benefit sharing and its associated conflicts is still very visible in the Kokori community amidst other important negative impacts that are being suffered.

Yes, my experience was quite different because unlike Temi, Ayo, and Maria, I rarely directly experienced the environmental impacts of oil explorations because my family and I lived far away from areas of the community where the exploration facilities are installed and operated. However, as one moves closer to the exploration sites where the oil wells and flow stations are located, the environmental impact of the exploration activities become more evident. In these areas of the

community, visible traces of land pollution and degradations due to oil spills from aged or vandalised pipelines, discharge of industrial effluents, and the pollution of the air with fine soot because of gas flaring could be seen and are experienced by inhabitants.

This shows that even within a community that plays host to oil exploration, there could be differences in the experiences of the locals that live in the community. If there could be differences amidst the assumed homogeneity in the experiences of different people from the same community with the same local laws, culture, and the same type of oil exploration based on location (Onshore), how much more the experiences compared across different locations that informs different type of explorations (ie Offshore). These different experiences of people across different host communities that play host to oil and gas exploration based on their geographical location coupled with my personal experiences forms the motivations for taking up this study.

1.1.4: What to expect in this Study.

In this study, I shall explore the environmental and socio-economic experiences of the impacts of oil and gas exploration on host communities putting into consideration the geographical locations (Onshore and offshore) These experiences of the impacts shall be studied using two host communities: Kokori community, host to Onshore oil explorations and Ugborodo community, host to offshore oil operations. The impacts shall be compared to see the overlaps and uniqueness in their experiences. It is noteworthy, that these comparisons that shall be done in this study is not in any way to place the level of impacts of one over the other, nor is it meant to prove that one operation is less impactful than the other. But this shall be done by simply exploring people's experiences to see the overlaps and uniqueness.

1.2: How is this study important to Development Studies?

The topic and the discourses surrounding the impacts (environmental and socioeconomic) of oil exploration is not new, there are several literatures that have been written that will be explored in 'chapter 2' of this study. And they have done very critical study of the topic; giving critical analysis of the sources of environmental pollution, the scale and magnitude of pollution as a way of quantification, the relationships between OECs and host communities and the social and economic effect on host communities. However, this study pushed further these discourses by avoiding the assumption of the homogeneity of the experiences of host communities to the impacts of oil exploration by trying to investigate the unique as well as the overlapping experiences of host communities based on their geographical location. In this case operations done on land (onshore) and those on water bodies (offshore).

This study is important in various ways and to various actors; State, Non-State, Non-governmental Organisation (NGOs) and Oil Exploration Companies (OECs) because it will bring about the realisation of the possible unique nature of impacts of oil exploration on host communities for specific and need-based interventions and programs.

1.3: Research objective

This research seeks to:

1. Explore the environmental and socio-economic impacts of Onshore oil and gas exploration on host communities using the Kokori community as a case study.

2. Explore the environmental and socio-economic impacts of Offshore oil and gas exploration on host communities using the Ugborodo community as a case study.

3. Compare the environmental and socio-economic impact of both onshore and offshore oil and gas explorations on host communities (Using Kokori and Ugborodo communities as case studies). This is not to show the level of impact of one operation over the other but to show the common and unique experiences of host communities.

1.4: Research question and sub-questions

Research question:

What similarities and differences exist in the experiences of host communities regarding the environmental and socio-economic impacts of onshore and offshore oil exploration in the Niger Delta of Nigeria, with Kokori and Ugborodo as case studies?

Research sub-questions:

1. What are the specific environmental impacts experienced by host communities in Kokori and Ugborodo?

2. What are the environmental similarities and differences between onshore and offshore oil exploration in the Niger Delta within the selected case study areas?

3. How do the experiences of host communities in Kokori and Ugborodo compare in terms of the socio-economic impacts of onshore and offshore oil exploration?

4. What are the residents' perceptions of the benefits and drawbacks of onshore and offshore oil exploration and exploitation in these communities?

1.5: Introduction of Case Studies and Recurring Terms

1.5.1: Niger Delta Region of Nigeria: Kokori and Ugborodo as case studies of Host communities

The Niger Delta region of Nigeria is located between latitudes 3° and 5° N and longitudes 5° and 8° E in the Gulf of Guinea with a total surface area of over 70,000 km2. This region is rich in species and biodiversity, and it has the largest drainage system into the Atlantic Ocean in West Africa. At the Continental level, the Niger Delta region has the largest wetland and the third-largest drainage system in Africa. This region can be regarded as the backbone of the economy Nigeria because it plays host to oil and gas exploration, production and export which generate a large portion of Nigeria's foreign exchange.

Nigeria operates a federal state system with thirty-six states and the federal capital territory. Out of the 36 states that make up Nigeria, the Niger Delta region is made up of Nine (9) states and they include Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo, and River States. These States form the heart of the petroleum industry in Nigeria, and they are the most affected by the negative impacts of the industry. The exploration, production, transportation, storage, and other activities of the oil and gas industry in the Niger Delta region have had visible impacts on the environmental and socio-economic livelihood of the host communities. These impacts not only affect the people but also the ecological composition and biodiversity of the Region. There is quite a long history of pollution and environmental degradation in the region. One notable example of the multiple cases is the case of Ogoni land in Rivers state where the United Nations Environmental Programme, UNEP, (2011) conducted an excessive impact assessment in 2011. This and other cases shall be discussed in the next chapter.

The host communities in the nine states that make up the Niger Delta in the Southern part of Nigeria have undoubtedly suffered because of the various forms of oil-induced environmental degradation, pollution, and neglect of the affected host communities by the state and the exploration companies. Most of the host communities in this region are rural, and more than 70% of them rely only on natural resources for their survival (Eregha and Irughe, 2009, p. 16; UNDP Report, 2006).



Map 1.1 Map of Nigeria showing the nine states and Oil field of the Niger Delta of Nigeria Source: Kingsley, et., al., (2019)

1.5.2: Onshore Oil and Gas Explorations: These are exploration and production activities that are done on land which involve driving a drilling rig into the earth's crust to reach fossil fuel. Basically, the facilities (both for exploration, drilling, transportation, and storage), and activities are all done on the land. The oil wells are grouped into fields with each well taking up to 0.5 acre for heavy crude oil and up to 80 acres for natural gas (Research Guides, Library of Congress, n.d). These oil wells at different locations within the oil field are connected by networks of carbon steel pipes often known as pipelines to a production and processing facility (flow station) where the drilled oil and gas are given preliminary treatment through heating and chemical processes.

An example of an Onshore Oil field is the *Kokori Oilfield* which lies in OML30² (Oil Mining Lease) and was previously owned and operated by Shell Nigeria Exploration and Production and is currently owned by Shoreline Natural Resources Limited (45%); Nigerian Petroleum Development Company (55%) (Global Energy Monitor, 2023).



Figure 1.1 An example of an Onshore Oil well in the Niger Delta Source: Ohwevwo, (2020) (Vanguard news)



Figure 1.2 A schematic diagram of an Onshore Oil well. Source: Khalifeh and Saaeb, (2020)



Figure 1.3 A typical example of a pipeline network of Onshore Oil exploration in Niger Delta Region.

Source: Urhobo Today, (2021)

² OML is Oil Mining Licence

1.5.3: Offshore oil and gas exploration: these are oil and gas exploration and operations carried out on water (Sea, ocean, and shallow water). While the major exploration and drilling are done on water using marine equipment and facilities, some of the exploration facilities such as transportation in the form of pipelines, storage facilities terminals, and operation offices and bases are located on coastlands and different communities play host to these facilities and the exploration companies. Offshore explorations use platforms that are either permanent or fixed to the seabed or are mobile (floating on water) but anchored to the seabed during operations (Research Guides, Library of Congress, n.d). In offshore productions, most production facilities are located at the shorelines close to sea or the area where the actual drilling is taking place.



Figure 1.4 A example of an offshore oil platform (rig) in the Niger Delta Source: Onyenucheya. 2023 (The Guardian)



Figure 1.5 A schematic diagram of different offshore oil platforms (rigs) and Sea depths. Source: Science & Tech, Britannica, 2023

The Niger Delta region has both Shallow waters, Deepwater, and Ultra deepwater oil fields and explorations.

A typical example of a Shallow oilfield is the *Sapele Shallow water field* which lies in block OML 41 owned by Seplat Petroleum (45%); Nigerian Petroleum Development Company (55%) (Global Energy Monitor, 2023); the Deepwater offshore oilfield is the *Bonga North Conventional Oil field* which lies in block OML 118 (Oil Prospecting License, OPL 212P) owned and operated by Shell Nigeria Exploration and Production, Eni, Total Energies and ExxonMobil (Offshore Technologies, 2023) and an example of the Ultra deepwater offshore oilfield is the *Egina Oilfield* being operated by Total Energies in partnership with the China National Offshore Oil Corp (CNOOC), Petrobras, Sapetro and the Nigerian National Petroleum Com-mission (NNPC) (TotalEnergies, 2023).

1.5.4: Kokori Host Community

Kokori community is in Ethiope East Local government of Delta State, one of the nine states of the Niger Delta. It has a population of about 30, 000 people sparsely distributed at the boundaries in small villages with a large number concentrated at the mainland called Kokori-Inland. Kokori community occupies a 196 Square Kilometres flat land area situated in the evergreen tropical forest zone blessed with about seven to eight months of rainfall and five months of little or no rain and which is dominated by oil palm trees and agricultural activities. This gives hint to why it is described as an agrarian community with most of the local people being directly or indirectly involved in farming and agricultural activities as means of livelihood. Involving in Farming activities with my grandmother and mother taking us miles of walk to distant farms formed beautiful childhood memories for me as an indigenous person of Kokori community. Kokori has the biggest local market square in Ethiope East local Government area with food and agricultural produces being major commodities.

Also, the community has about twenty-nine streets in the mainland and about thirty Villages around the outer boundaries including Samagadi, a fast-growing village that make up the Kokori community. It has networks of streams and creeks that cut across different parts of the community. The three major streams include the Omwe stream on Eku Road, Iranzo Stream on Orogun road and Erhanaka stream on Kokori-Ofuoma road (Akpojotor, 2011). These streams and other smaller bodies of water whose volume depend on the seasons serve as a source of livelihood to local fishermen and women in the community.

I could remember how my parents, especially my mother, took me and my siblings to fishing sessions that are usually done in seasons and communally. We usually go to the Erhanaka stream with our bowls and baskets on the set fishing days to harvest as much as we could catch. It was more than just fishing to me and to the people in those days, it was a time families met and socialised while bowling through the muds in search of a good catch. Beautiful old days that have gradually faded away due to pollution.

Oil and gas exploration in kokori community started in 1958 by Shell Petroleum Development Company, who discovered crude oil in commercial quantities in the community. Production started in Kokori Oil field in 1966 with several networks of pipelines (mostly installed at the surface) running across the community connecting the different oil wells (about 20 oil wells) to the flow station, drilling facilities in the oil wells, gas flare sites and flow stations (Agbogidi, et., al., 2005) and since then there has been gradual and constant degradation of the environment, health impacts, land grabbing and disposition of indigenous people of their land for the purpose of building exploration facilities and also due to pollution. Kokori Oilfield is grouped in the OML 30 alongside 10 other oilfields, Afiesere, Eriemu, Evwreni, Oweh, Olomoro-Oleh, Oroni, Uzere West, Osioka, Ofa and Okpolo with 8 producing fields and 3 marginal fields running across 11 communities. OML 30 is currently owned by Shoreline Natural Resources Limited (45%) and Nigerian Petro-leum Development Company (NNPC) (55%) (Global Energy Monitor, 2023).

Moving from Oil exploration in Kokori community, it is very important to mention that Kokori is led by the Okhaorho Elders council and the Kokori Progressive Union (KPU) as the administration arm that is responsible for the day-to-day activities, negotiations, and developmental projects within and around the community. Under the KPU are different committees such as the Development committee with which negotiations with OECs are made.



Export Terminal

Figure 1.6 Oil Fields in OML 30 Source: Shoreline Website (n.d)

1.5.5: Ugborodo Host community is located at the coastline of the Atlantic Ocean in the Warri South-West Local Government of Delta State of the Niger Delta. The name "Ugborodo" itself held profound significance. Translated, it means 'Dry land in the Sea,' this speaks of its unique character as a substantial island surrounded by the waters of the sea. It was said to have been founded by Ijebu fishermen, drawn to the area by the bountiful waters that teemed with life. Two brothers and their five sons embarked on a journey of settlement, each fanning out to establish distinct communities within Ugborodo (Omatete, 2000). Being an island and rural community, Ugborodo people are predominantly fishermen historically. Fishing is more than just a means of livelihood, but it is a culture to them. The very essence upon which the community was founded.

Ugborodo and the its estuary was and it is still the entrance to the Delta ports and this played a very important role in the transnational slave trade historically that has led to the nick- naming of the community, port, and shorelines 'Escravos', a portuguese word which means 'slave'(Omatete, 2019). This name and identity have robbed the people of Ugborodo community of their identity and this according to Omotete, (2019), has been encouraged by OECs in the community that name several facilities and projects using the demeaning name 'Escravos'. Examples of such projects are two extraction plants by Chevron Nigeria Limited and named Escravos Gas to Liquid (EGTL) phases 1 and 2. This according to Omatete, (2019) has a serious impact on the social fabrics of the community and people.

Oil and gas exploration and its associated pollution and degradation started in 1954 in Ugborodo when Shell-BP Company first landed in the island community for preliminary seismic explorations with explosives being released into the earth crust which caused houses in the Village to vibrate and shake (Omatete, 2019). This vibration and sound pollution marked the beginning of the endless environmental pollution of the community. After this incident and discovery by Shell-BP company, Italian, French, and American oil Companies followed. By the year 1960, American company Gulf (Now Chevron) found a large deposit of oil offshores of Ugborodo. This discovery by Chevron led to the disposition of the indigenous people of their land under the pretence of long-term lease for oil infrastructural development (Omatete, 2019). More demeaning act apart from the disposition, was the naming of these facilities on Ugborodo land 'Escravos terminal and Airstrip instead of Ugborodo Terminal and Airstip constantly bringing to memories colonial pasts (Omatete, 2019). Just like the Kokori community, the presence of oil explorations can be seen across the community, network of pipelines, tank farms, marine and transportation vessels etc. From these facilities come the oil spills which are the major pollutant of the environment (water, land, air, and sound).

Ugborodo community plays host to Several exploration companies involved in offshore oil exploration. Companies such as the Shell Petroleum Development Company of Nigeria Limited (SPDC) that drills in the shallow waters (Saghara, Otumara, Sara creeks), Chevron Nigeria Limited which is into mid to deep-waters operations (Agbami field etc) with multiple projects and exploration infrastructure such as Escravos Gas to Liquid Project (EGTL), on the shores of the community.

Furthermore, Like the Kokori community, the Ugborodo community has a governing or administrative body called the Ugborodo Community Trust (UCT). This body acts as a mediator between the community and OECs for development programs and projects. They also mediate in times of conflicts and major oil spills that lead to protests and demonstrations.



Map 1.2 A Map showing the locations of the Research Case Study Source: Google Maps

Saghara Flow station owned by Shell.



Chevron Escravos terminal (For preliminary crude oil treatment and Tank farm)

EGTL Facility, a 33,00barrel-per day Gas-to-liquid plant operated by Chevron (75%) and the NNPC (25%)

Map 1.3 Satellite Map showing the Ugborodo Host Communities and the Escravos Gas-To-Liquid Project (EGTL) site run Chevron Nigeria Limited in Delta State of the Niger Delta of Nigeria. Source: Google Maps

Chapter 2 | IMPACTS OF OIL AND GAS EXPLORATION

2.1: Overview

In a broader spectrum, the United Nations Conference on Trade and Development (UNCTAD) (2007, P.95) according to Darkwah, (2010), states that extractive activities, including oil and gas exploration, can have enormous positive impact on development by creating creation of employments, stimulates businesses (in the case of Temi) and provide infrastructural development such as roads, electricity education and health to host and remote communities. As true as this may sound, evidence from all around the world indicates that a nation's or community's ability to profit from the discovery of oil and gas depends on how that nation is positioned in relation to other nations (Darkwah, 2010; Hartzok, 2004; Bloomfield, 2008; UNCTAD, 2007; National Academy of Science, 2003). In most cases it seems local people, host communities and oil and gas producing companies in the global north (West) seem to derive more 'blessings or benefit from oil and gas discoveries compared to those in the global south. An excellent example is Norway, which at the end of the 1960s was the poorest nation in Scandinavia; nevertheless, by the end of the 1990s, it was the richest, mostly due to the discovery of oil in 1969. Larsen (2006) credits Norway's success to its capacity to eliminate corruption and rent-seeking, two practices that have been highlighted as essential components of the resource curse (Stevens 2003). Reflecting on this, I beg to ask; what are the factors that hinders the local people and host communities in the global south from being 'blessed' from oil and gas explorations? If the issues of corruption and rent-sinking are eliminated could there be a little hope of 'blessing'? I was just thinking aloud anyways! This is not the focus of this study. The impact of oil and gas exploration in the case of Norway was viewed from the lens of social and economic impacts.

However, oil and gas exploration being a form of extractivism inherently has negative impacts on the environment and ecological system in communities where exploration activities are carried out. Olsgard and Gray, (1995)'s analysis on the effects of offshore oil and gas exploration and production on the Benthic Communities of Norway shows the environmental degradation of offshore operations on host communities and water bodies of the Norwegian Continental Shelf. He attributed the main sources of pollutants to oil spills from the discharges of drill-cutting, oil-based drilling muds and industrial effluents. In the same way, Bakke et., al., (2013)'s work on Environmental Impacts of produced water and drilling wastes discharges from Norwegian offshore petroleum industry indicates the degradation that occurs in offshore oil operations, and he attributed the main pollutants of the water bodies and aquatic biodiversity to wastewater from drilled hydrocarbons and drill cutting. All these impacts affect host communities and shape their experiences and stories.

Yes, I know what you may be thinking. Why is he telling all these stories outside of the Niger Delta Area of Nigeria which is his focus in this study? Yes, it's ok to ask this. But this is a deliberate attempt to show that the issue of environmental degradation because of oil and gas exploration is not peculiar to the Niger Delta region of Nigeria but what may be different is the management of the impacts and, this is to give a better understanding of the context of Nigeria. Nigeria being a part of the Global South (though I see this as a form of promoting the concept of inequality), already has some factors that may change the experiences of host communities in a parallel manner compared to the experiences of host communities in the global north. Also, this is to show that

may be different because of the obvious reasons that make countries to be classified as global south and north.

2.2: Environmental Impacts of Oil and Gas Exploration in the Niger Delta Region of Nigeria

Shifting from this larger spectrum of the impact of Oil exploration to the focus of this study, which is the region of the Niger Delta of Nigeria, Kadafa, (2022) stated that the Niger Delta region of Nigeria being the home of the largest mangrove and freshwater swamps, rainforest and wetland in Africa has been polluted by oil and gas explorations. This pollution was attributed majorly to oil spills that have contaminated rivers, forest and destroyed biodiversity. Kadafa (2022) described the region as an ecological wasteland with the indigenous people and host communities who depend on the ecosystem for their livelihood and survival being the most affected. Since the discovery of crude oil in 1956 in commercial quantity by Shell British Petroleum (now Royal Dutch Shell) in Bayelsa State, about 9 to 13 million (1.5million tons) of oil has been spilled on the ecosystem of the region (Tolutope, 2004; Onuoha, 2008; Anifowose, 2008; Kadafa, 2022). The historical instance of oil spillages has been referred through a study, by Kadafa, (2022, p. 21) where it has been mentioned that in July 1979, about 570,000 barrels of crude oil were spilled into the Forcados estuary because of incidents that occurred at Forcados Tank 6 Terminal in Delta State. A disastrous outcome of this incident was the contamination of the adjacent marsh forest and aquatic habitat (Ukoli, 2005; Tolulope, 2004). Following this, the Funiwa No. 5 well in the Funiwa Field had a disastrous blowout that resulted in the estimated 421,000 barrels of oil being released into the ocean between January 17 and January 30, 1980, before the oil flow was eventually contained (Ukoli, 2005; Gabriel, 2004; Tolulope, 2004). Even worse, within a six-mile radius of the shoreline, this tragedy tragically destroyed some 836 acres of mangrove vegetation. Another oil crisis occurred in August 1983 in River State Oshika host community. This one was caused by the Ebocha-Brass (Ogada-Brass 24) pipeline, which released 5,000 barrels of oil into the surrounding area, flooding the lake and swamp forest. Interestingly, there had already been a smaller oil spill in this area in September 1979, 500 barrels, that killed off several aquatic animals, including shrimp, fish, and crabs. Eight months after the 1983 leak, a high embryonic shrimp death rate was noted, and the oil in the lake sediments was blamed for the decreased reproduction (Gabriel, 2004).

In February 1995, about 24,000 barrels of oil were spilled at the Ogada-Brass pipeline leak, which was another major environmental degradation near Etiama Nembe. This overflow affected the ecosystems of brackish water mangrove swamps as well as freshwater swamp forests. It will be important to note that, within its operating region, the Shell Petroleum Development Company (SPDC) has documented a significant number of oil spill occurrences since 1989, averaging 221 incidents annually, totaling 7,350 barrels of oil discharged annually (SPDC Nigeria Brief, May 1995:3). Over the period from 1976 to 1996, a total of 4,647 oil spill incidents were documented, resulting in the release of approximately 2,369,470 barrels of oil into the environment, of which a staggering 1,820,410.5 barrels (approximately 77%) went unrecovered. It important to note that most of these oil spill incidents in the Niger Delta region occurred on land (Onshore), in swamp areas (shallow waters), and in the offshore environment (Nwilo and Badejo, 2004, 2005a, 2005b; Twumasi and Merem, 2006; Uyigue and Agho, 2007). Furthermore, the Nigerian National Petroleum Corporation (NNPC) estimated that 2,300 cubic metres of oil were spilled annually in 300 separate incidents between 1976 and 1996 (Twumasi and Merem, 2006).

These may sound like mere historical accounts or probably you may have skipped through the figure, confusing names, and dates. That is ok and it is quite understandable, I would have done so

if I was not from a host community because events and incidents mostly make sense and live in the minds of those that experience them. In these figures, names, and occurrences of environmental degradation of this region lies experiences and stories of indigenous people and host communities and choices on how to react to them in some cases may not be free-willed but shaped by several factors. This brings back the stories of Temi and Ayo and probably that of Maria. Could these experiences have occurred so long that they have given up crying, complaining, and fighting? and find solace in the little means of livelihood its (oil and gas exploration) activities could bring their way irrespective of the degradation? I am just thinking aloud because I wonder what development could mean for host communities and indigenous people in this situation of massive oil spills that pollute the environment? And comparing this with the global north, has such a volume of spills been recorded considering that most of the big OECs are from this part of the global divide? Again, I was just thinking aloud!

Looking at other stories of the impacts of oil and gas exploration in the Niger Delta region beyond academic literature is the case of Ogoniland of River State as given in the report of the United Nation Environment's 2011 Scientific assessment (UNEP, 2011). This independent Scientific assessment shows the history of pollution over 50 years of oil explorations in the region, and it covered more than 200 locations, surveyed 122 km of pipeline, reviewed more than 5000 medical records, and engaged over 23, 000 people across host communities. In this assessment, there was visible evidence of land (sub-soil and soil), water, and air pollution. For instance, in Nweekol community in Ogoniland, the concentration of Total Petroleum Hydrocarbon⁴ (TPH) in the soil was as high as 63, 800 mg/kg which is about 10 times above the intervention value⁵ of 5000 mg/kg³ as stipulated by the Environmental Guidelines and Standards for the Petroleum Industries in Nigeria (EGASPIN) by legislation. This implies that the soil is highly unsafe, contaminated and poses a threat to human, animal, and plant life. For groundwater, the assessment at 41 sites shows the groundwater has been polluted by hydrocarbons way above the 600 micrograms per litre ($\mu g/l$) intervention value. With this, it was found that the drinking water (surface and groundwater) from which the host communities consume is about 900 times polluted with Benzene concentration more than what the World Health Organization (WHO) guideline recommends being safe $(10\mu g/l).$

It could be quite difficult to know the water that is pure and safe for consumption by local people. Could it be assumed that the rainwater is safe enough for drinking, especially when it is collected before getting in contact with the polluted soil? or should it be judged by the colour that it displays? Or could it be assumed that the absence of smell, odour and physical impurity implies pure water? Or water from deep groundwater aquifers should be considered since they come from a particular soil layer, soil stratum that is considered to produce one? These dilemmas and others that surround what a good water is, how best to identify one and the conceptual separation of land and water as extensively studied by Cortesi, (2021), are still being faced by the host communities of oil exploration like those in Ogoniland. But in all of these, drinkable water is a need for survival, so what choice do they have as a people?

³: ⁴ Hydrocarbons are naturally occurring organic compounds comprising hydrogen and carbon and the most common hydrocarbons are natural gas and oil.

⁵ Intervention Value: this is the amount of TPH which when present in the soil, land, air or water etc should trigger efforts to clear it up.

The sites in Ogoniland with the five highest concentrations of TPH in groundwater are listed in the table below; the local government region of each location is displayed in brackets.

Site	Maximum groundwater TPH (µg/l)	
Okuluebu Ogale (Eleme LGA)	2,740,000	
Bara-Alue (Tai LGA)	1,760,000	
Ajeokpori-Akpajo (Eleme LGA)	1,720,000	
Korokoro (Tai LGA)	1,180,000	
Kpite/Biara (Tai LGA)	1,140,000	

Table 2.1: Five Sites in Ogoniland with the highest concentration of TPH in groundwate

Source: UNEP, 2011

With all these visible negative impacts of oil exploration and production on the environment, Nigeria still intensifies its operations in the sector with the justification that it must be done for the interest of the people for poverty reduction and economic growth. These excuses and justifications also resonate in other part of the world especially in the global south regions like latin America as shown in Arsel, et., al., (2016)'s work.

Furthermore, apart from oil spill being the major source of environmental pollution in the Niger Delta region, there exist other sources of pollution. These include enormous noise from drilling, transportation, and operational equipment, Black Carbon soot from the flared gases and gas flaring operations etc. There are about 123 gas flaring sites across the different host communities of the Niger Delta. With expansion and intensification; this number should be more by now. From these gas flaring sites, about 1.8billion cubic feet of gas are being flared daily and 45.8billion kilowatts of heat discharged into the atmosphere in the region (Agbola and Olurin, 2003). Aside, the pollution of the environment by Black Carbon soot from gas flaring, the combustion of fossil fuels that contain nitrogen oxide and sulfur dioxide contributes to the release of greenhouse gases (GHGs) into the atmosphere, ultimately leading to the formation of acid rain (Elum, 2016). In the Niger Delta region, acid rain is a prominent environmental concern (Shaaban and Petinrin 2014). The origins of acid rain in this region can be traced to the emission of sulfur dioxide (SO₂) from fossil fuel power plants, such as coal-fired facilities, and the release of carbon dioxide (CO₂) from petroleum industries (Kellett 1990; Watson et al. 2012). Specific urban areas in the Niger Delta, notably Port Harcourt and Warri, both prominent in oil production, have been significantly affected by acid rain, as evidenced by recorded pH values of 4.86 and 5.22 respectively making rainwater unsafe for consumption. These phenomena have profound implications for both the environment and public health (Orisakwe 2011). Additionally, it is important to note that approximately 80% of associated gas is flared by oil companies operating in the region (Ebegbulem et. al., 2013).

2.3: Socioeconomic Impacts of Oil and gas exploration in the Niger Delta Region of Nigeria

Moving forward, the impacts of oil and gas exploration on the environment and ecosystem has consequences on the social and economic livelihood of host communities which are generally rural settlements clustered in small villages. These villages provided security in the precapitalist society to indigenous people which by their dependence on their natural environment (access to land and natural resources) are peasants and Small Commodities Producers (SCPs) and they operated to assure a 'Minimum income' as against senseless accumulations (Popkin, 1980). Capitalist ventures such as oil exploration and production threaten this very security (sustainable income and livelihood, social wellbeing, and peace) that host communities once enjoyed. Pollution of the environment (Natural resources) available for rural communities is a threat to the livelihood and a threat to livelihood of a people is a threat to peace, harmony, progress, and development.

According to Scoones, (1998; 2009), Livelihood resources (Natural capital, economic and financial, Human, and social) available to rural communities form the assets or capital for livelihood strategies, trade-off, combination, and sequencing. And that access to natural resources could give access to other assets or capital. For example, a coastal rural community (like Ugborodo) blessed with plentiful water resources possesses a greater likelihood of relying on fishing and fishing-related occupations as a primary source of income (financial asset). Conversely, communities (like Kokori) endowed with expansive arable lands tend to favour crop production over their coastal counterparts. The significance of natural capital is consistently underscored as a critical factor in achieving a sustainable livelihood.

Agricultural (farming and fishing) and other agrarian activities as means of livelihood for rural host communities have been adversely affected by environmental problems caused by oil exploration in the Niger Delta Region which has led to economic crisis (food insecurity, hunger, and poverty) to most dwellers (Eweje, 2006; Apata, 2010; Elum, et., al., 2016). Consequently, with the increasing loss of livelihood in the region there has been surge in rural-urban migration of young people for a search of better opportunities thereby putting pressure on the already pressurised urban settlements (Clancy et., al., 2007; Africapolis Team, 2008). These destination urban settlements who still depend on the rural host communities for food supplies share in the ripple effects of the food insecurity rural people face due to environmental degradation, shortage of human capital for food production (migration effect), land grab and disposition.

All these effects and impacts of oil exploration and production in the Niger Delta region does not only affect the environment, ecology, and economic wellbeing of host community, it also affects the social fabrics of these communities. Unlike their counterpart communities that play host to oil exploration activities in the global north as aforementioned, the host communities in the Niger Delta region of Niger cannot see all these consequences of oil exploration as a trade-off for social and infrastructural development. With the natural endowment and tremendous financial contribution of the region to the Nigeria government's coffers, the Niger Delta region still has one of the extreme cases of poverty, unemployment (over 85%) and infrastructural underdevelopment (Odalonu & Eronmhonsele, 2015; Elum, et., al., 2016; Bodo and Gimah, 2019). In a region that constitutes more than 80% of Nigeria's total oil production, an extensive oil and gas infrastructure with over 600 Oil fields, 5,284 oil wells, 10 oil and gas export terminals, 275 flow stations, 10 gas plants, and a substantial liquefied natural gas facility (Ibaba, 2009; Aghedo, 2011; Odalonu & Eronmhonsele, 2015), the availability of basic social amenities (electricity, good road networks, drinking water, schools and hospitals etc) is reported to be highly limited. These deficiencies place the region below the national average across various developmental indicators (Ibaba, 2009; Ejovi, Ebie, & Akpokighe, 2014; Odalonu & Eronmhonsele, 2015).

Furthermore, reading all these occurrences and experiences of host communities to the impacts of oil explorations in the Niger Delta region only, removes peace from the reader's mind. Not to talk about the communities that directly experience these. The relative peace enjoyed by host communities in the region was sacrificed on the 'altar' of Oil and gas exploration since 1956 when oil was discovered in commercial quantity in the region. The discovery of oil has been a source of 'strife and violence' in the region (Vangham, 2011; Bodo and Gimah, 2019). These act of conflicts, violence and unrest affects all stakeholders (the government, OECs, and host communities) (Elum, et., al., 2016; Bodo and Gimah, 2019). And these conflicts often stem from frustrations and unemployment that drive youth into the crimes and vandalization of oil pipelines; inter and intra community struggles over oil proceeds sharing and debates of 'who owns what and to what extent; awareness and self-realizations that lead to protests, riots, and pressure movements; and fight against marginalization and neglects etc.

A typical example of conflicts that ensues from the oil operation is the massive protests of the Jesse people in 1998 caused by the fire outburst of a pipeline that killed over 1200 people (Elum, et., al., 2016). This, according to reports by the government, was caused by the vandalization of the pipeline by aggrieved people in the community that took laws into their hands in attempts to get a share of the oil wealth. Most of the affected people who died in the incidents where indigenous people that were entrapped by poverty and neglect and decided to help themselves by bailing into cans the spilled oil from the vandalised pipes regardless of the danger. Indeed, they were killed when the pipeline burst into flames. Though this narrative by the government is still being debated because some sources claimed that the break of the pipeline was due to lack of maintenance. Of course, these forms of narrations are common with government officials that have continuously compromised and bribed by oil companies at the detriment of the common people in host communities as also seen in the case of Ken Saro Wiwa whose life was an exchange in 1995 (Vangham, 2011; Bodo, 2019; Bodo and Gimah, 2019).

Ken Saro Wiwa and the people of Ogoni land is a typical case of conflicts that ensues from awareness and self-determination. In 1979, the Federal Government of Nigeria established the oil deposit as National asset following the 1978 Land Use Degree by the then military government of General. Olusegun Obasanjo. This ensured that every oil exploration, operations, and asset in Nigeria is solely owned and controlled by the government thereby depriving host communities any form of ownership and control (Asuni, 2009). This form of resource ownership, and right of appropriation given solely to the government in the 1990s always favoured the oil producing companies who at that time has no form of Corporate Social Responsibilities (CSR) operations at the detriment of the host communities who suffered the resultant effect of their operations (Asuni, 2009). In this era, the Ogoni people, whose UNEP, (2011) environmental assessment report has been mentioned above, have been experiencing the heavy weight of the impacts of oil exploration and the obvious marginalization by the OECs and neglect by the government. And they were at the point of extinctions by the operations of Shell Petroleum Development Company (SPDC). The awareness of the situation of the Ogoni people created by Ken Saro Wiwa that drew the attention of the international communities, brought about serious conflicts among the ogoni community, the government and the SPDC (Bodo, 2018; Bodo, 2019). The awareness and struggle through the pressure group called Movement for the survival of the Ogoni people (MOSOP) which was non-violent but well organised and civilised protests with specific demands drew so much attention and became a threat to the government and the OECs. The fight and demand of the movement was simple, TREAT US FAIRLY! Ken Saro Wiwa and MOSOP attributed the injustice, marginalization, and neglect to the fact that the Ogoni people are regard as minorities and accused the government leaders at that time that belongs to majority groups of robbing the region of its wealth and using it to develop their regions (Lagos and Abuja) at the detriment of the ogoni land and the Niger Delta region in general (Osaghae, 1995). He, along with the MOSOP and the Ogoni community at large, sought improved treatment from Multinational Oil Companies due to the rising lack of basic amenities in the region. Despite the simplicity of these requests, they sparked numerous conflicts, protests, and riots. The Ogoni people boldly demanded better conditions despite being considered a minority. This boldness was highlighted by Lieutenant Colonel D.M. Komo, the then military administrator of River State, who stated, "they don't have the monopoly

of petroleum in Nigeria and cannot make demands that other (oil producing) communities are not making" (Osaghae, 1995; Bodo and Gimah, 2019). The government and OECs' refusal to meet these demands resulted in direct confrontations and subsequent involvement of military, police, and paramilitary forces to suppress protests. These conflicts persisted for a long time until the government allegedly provoked inter-communal clashes between the Ogonis and their neighboring Andoni community in 1993 (from July to September). The tensions extended to involve the Okrikas from Port Harcourt within the same River State, resulting in numerous casualties and extensive property damage. Osaghae (1995) and Bodo (2019) implicated the government and SPDC in these conflicts, citing the military's involvement equipped with sophisticated firearms against local communities armed with basic tools like knives and cutlasses. After the Ogoni conflict, four prominent ogoni leaders Albert Badey, Theophilus Orage, Samuel Orage and Edward Kobani) and Ken Saro Wiwa was arrested alongside eight other who were at the forefront of the Ogoni struggle. The government and SPDC were accused to have bribed to bear false witness against Ken and other leaders of the MOSOP. In 1995, Ken Saro Wiwa paid the ultimate price for fighting for his community that was evidently being exploited, degraded, and marginalized. He was executed by the then Nigerian Military government with the charges of Incitement to murder (Vaughan, 2011; Bodo, 2019). The Ogonis publicly accused SPDC of masterminding the murder of Ken Saro Wiwa and his associates. Furthermore, SPDC dismissed any involvement in Ken Saro Wiwa's execution, asserting that the accusations were baseless (Bodo, 2019; SPDC, 2019).

In 2009, SPDC opted for an out-of-court settlement, agreeing to pay \pounds 9.6 million to the affected families (Vangham, 2011).

The execution of Ken Saro Wiwa led to a crisis in the Niger Delta region, prompting direct attacks against the Nigerian government and multinational oil companies (Bodo, 2019). This involves kidnapping of oil company's workers for ransoms, constant confrontations of Military personnel by Militant groups. This crisis and the executions awakened the boldness of militant groups that heightened the demeaning business of hostage-taking and dangerous oil bunkering ventures (Vandalization and illegal refining of crude oil aka 'kpo fire') in the region. Militant groups such as the Movement for the Emanciation of the Niger Delta (MEND), the Niger Delta Vilantes (NDV) and Niger Delta Strike Force (NDSF) emerged (Asuni, 2009; Bodo and Gimah, 2019). The activities of these groups in confrontation with the government and OECs that often cause unrest are still seen today across the region.

Today, Ken Saro Wiwa's leadership during the 1990s uprising has emboldened other ethnic groups in the Niger Delta to speak out.

Consequently, the outcomes of these continuous fights, conflicts, strife, and violence in the Niger Delta region of Nigeria because of oil exploration have always been unemployment and crimes, bribery and corruption, politicization if environmental issues, youth restiveness and an overall poor standard of living by directly affected host communities and the region generally (Bodo and Gimah, 2019). Over six decades the stories seem to be the same. So, when will the light of development shine on the region? Fossil fuel extractivism and reserves are finite and non-renewable as we can see in the case of OML 30 in the previous chapter. Eleven oil fields, out of which three are marginal wells. Marginal wells are wells that have depleted in the amount of crude oil in barrel per day (usually about 10 to 60 Barrels or less per day). These are oilfields that were very productive. Rumours also had it that Kokori Oil field was sold to Shorelines Natural Resources after five decades of exploitation because its already getting to its marginal state. These show how finite and non-renewable fossil fuels could be. The questions now are, has the oil exploration been a blessing to the people of the Niger Delta or a cause? What happens when all the

over 5000 oil wells dry up? Will the region still be thought about? If the cries of the host communities are not heard and their pains are not felt when they are still seen as the treasure mines, what happens when all of these are gone, and they are faced with the aftermath of exploration and extractivism? Regeneration and restorations are very expensive and time consuming. Only time can truly heal a destabilized ecosystem and environment. Just like the case of the Ogoni people, operations were simply shut down by SPDC, and they evacuated the sites. But the effects on the people and host communities will still linger for decades. According to the UNEP (2011) assessment report, the complete restoration of Ogoni land may take up to 25 years. Of course, this will be dependent on conscious and deliberate restoration programs. But we know that the factors that make Nigeria a global-south country may have effect of the time of restoration.

All these experiences holistically shape the stories and perceptions of local people in host communities about oil and gas explorations.

Chapter 3 | METHODOLOGY AND METHODS

This research used the phenomenological paradigm approach of qualitative research methodology by focusing on the lived experiences of the participants through in-depth interviews. Using this methodology and approach enabled me to get a deep understanding of the feelings and reactions of participants as they tell their stories born out of their daily lives and experiences of oil and gas explorations in their communities. The phenomenological paradigm approach, according to Lester (1999, p. 1), gives access to obtaining 'deep' information, perceptions, opinions, and first-hand experience of situations through inductive, qualitative methods such as interviews, participation observations, and discussion from the perspectives of the participants. Also, this research method helps to look beyond assumptions and normative perceptions of situations, things, and people. For example, the assumption that a group of people living close to a river must be fishermen and women. Or it is easy to assume that host communities (all individuals) experience a very high level of environmental degradation. It may be true, false, or not always true or false. So, these assumptions could be managed using this method.

Phenomenological research shares commonalities with various qualitative methodologies, such as ethnography, hermeneutics, and symbolic interactionism. However, the primary aim of pure phenomenological research is to provide descriptions rather than explanations (Lester, 1999). It begins with an unbiased perspective, devoid of any preconceived notions or hypotheses. And qualitative methods such as interviews, conversations, participation observation, action research, focus group discussion, and the analysis of personal text could be used.

With these in mind, this study looked at the lived experiences of individuals from host communities (Kokori and Ugborodo) that are host to onshore and offshore oil explorations and production to see the uniqueness and overlaps in their experiences, perceptions, and stories. This was done using very minimally structured interview questions with an emphasis on maximum depth to guide conversations. The sampling, method of data collection, sample size and challenges encountered are discussed below. Chapters 4 shal deal with the research findings and discussion.

3.1: Sampling and Method of Data Collections

Considering the type of qualitative methodology (phenomenological paradigm) that I am employing in this research, this study used few considerations in sampling and making choices in the selections of participants. These include (i) Participate should have lived in the community for a reasonable amount of time (at least 4 years) and have substantial experience of the community. (ii) The role of participants (community leader, committee member, traditional leader etc). (iii) occupation (farming, student, fishermen and women, trading etc). The study did not expressly consider age, but all participants were above the age of consent and the distribution was a bit even. For the Ugborodo community being a community that is unfamiliar to me was a bit of challenge in knowing who to approach before arriving at the community in person. I had to use snowball methods of sampling. Snowball sampling according to O'leary, (2010, p.170) involves building a sample through recommendations. It simply means getting a key informant in the community who could fit into the set criteria for sampling then asking for their recommendations for the next potential participant. This strategy worked perfectly for the Ugborodo community. While in the Kokori Community, a mixed approach was used. I used the snowball approach and, I created a digital interest form which I posted in a WhatsApp group containing over 100 indigenous people.

3.2: Methods of Data Collection

Data were collected via video calls, and recordings were made after the introduction of the research and topic and signing of the consent form. After the sampling process using the set criteria, I engaged a research assistant who happens to be my elder brother. The choice of using my brother was based on trust and his experiences working in the area in the past. He also understood the nature of the research and the importance of quality data. He was still aware of self-presentations in relation to respondents' perceptions. So, he was careful of his dressing, conversations during the snowballing process, and patience because of the influence they may have on respondents.

The research assistant role was to go to the offshore community, whose access to get preliminary information was difficult because I was not familiar with the community and had no link to someone that was familiar either. However, the interview sessions were facilitated by me via video calls. My research assistant travelled to the Ugborodo community on the 31st of July 2023, and left on the 5th of August 2023, for a total of 6 days. For the Kokori community, I got thirteen (13) responses via the online interest form.

All participants were given a research participation letter (see Appendix 1) explaining the research objectives and their role in the research and attached to all research letters were copies of consent forms (see Appendix 2) that they signed before the commencement of the interview. For the Ugborodo community, there was the challenge of who to meet; however, my research assistant approached a businessman who operates a cyber cafe in the community. He was very helpful and could be considered a key informant. He was interviewed, and he started the snowball process by recommending and introducing us first to a formal youth leader whom we interviewed, and he continued with other recommendations. Printed research letters and consent forms were given to them to sign, and only the consent forms were withdrawn. Participants from the Kokori community were reached via emails, phone calls, and WhatsApp mobile messenger. The participation letter and consent forms were sent via these channels, and copies of the signed consent forms were also retrieved through the same means. They were offered five thousand naira (equivalent to 8 euros at the time of exchange) as compensation to cover the cost of printing and other logistics. However, some participants turned down the offer because they were happy to be part of a research project that may contribute to the development of their community in the future. Also, participants from Ugborodo were also given monetary compensation. The amount given ranged from five thousand naira (8 euros) to ten thousand naira (12 euros at the time of exchange). It is important to note that these compensations were given as reimbursement to cover out-of-pocket expenses such as printing and internet costs and any other form of inconvenience. Also, this serves as motivation to dedicate some time for the interview session since it has to do with storytelling of their experiences. They feel appreciated when they are compensated for their efforts and expenses; the gesture is what really matters, and I can attest to this as an indigenous person of the Niger Delta region. This really has no influence on their thoughts, responses, stories, or perceptions.

The interviews lasted for about 45 minutes to an hour, with in-depth discussions and the willingness of participants to share their experiences. Minimally structured sets of questions were used for the interview to guide the conversations, and all participants participated willingly and freely without any form of intimidation, cohesion, or disrespect, and their consent was adequately sought and given before the commencement of every interview session.

3.3: Sample Size and Description of Respondents

A total of thirteen (13) respondents were interviewed from both communities.

In Kokori community, I had the privilege of engaging with six individuals who shared their experiences. For this study, they will be referred to as Maro, Victor, Benson, Andrew, Agnes, and Moses. These individuals exhibited exceptional warmth and eagerness to share their stories and perspectives. Maro, a 65-year-old man, holds a PhD degree and serves as a lecturer at one of Nigeria's premier public universities. Notably, he also assumes a leadership role within the Kokori Progress Union (KPU). Maro was born, raised, and had his primary and secondary education within the Kokori community. Victor, much like Maro, is elderly 70-year-old resident who has lied in the community for a long time. His academic accomplishments align with his counterpart, as he is an educated individual and actively participates in the leadership of KPU. Agnes, the only female respondent, is a prominent champion and advocate for marginalized women. She runs a Non-Governmental Organization (NGO) dedicated to combating gender-based violence and advancing women's empowerment on a national scale. This 60-year-old businesswoman, born, raised, and educated within the Kokori community, has also organized numerous outreach initiatives to support marginalized women in the area. Benson, in contrast to Maro, Agnes, and Victor, is a 26-yearold farmer who sustains his education through agricultural activities. His origins trace back to one of the villages in the Kokori community that has suffered extinction due to environmental pollution. Benson resided in a section of the community known as Erhioke, where the flow stations and gas flaring facilities are situated. Furthermore, Andrew and Moses are recent university graduates with aspirations of securing employment soon.

While in In Ugborodo community I met six respondents. These respondents are Ayo, Temi, Mike, Grace, John, Jacob, and Peter.

You may recall Ayo, the entrepreneur, and Temi, the fisherman, from Chapter 1. Ayo, who also played a pivotal role as a key informant in facilitating the snowballing process, is a 36-year-old businessman. He manages a small cyber cafe and a Point of Service (POS) for locals to perform financial transactions such as withdrawals and deposits. Although he is trained as a crane operator, Ayo struggled with unemployment for an extended period before embarking on this entrepreneurial venture to support himself and his family. He was born and raised in the Ugborodo community. Temi, a 40-year-old fisherman, who resides in the community has a primary school, and his livelihood primarily revolves around fishing.

Also, Mike and John, both 38 years old, hold positions as community youth leaders. John served as the former leader of the Youth Committee responsible for youth empowerment, employment, and development within the community. While Mike is an incoming member of the Ugborodo Community Trust (UCT). They were born and raised in the community, and both have a substantial level education. Grace, the only female respondent from Ugborodo community is a farmer and a mother of four children, possessing education up to the secondary school level. And Jacob is a small-scale trader who sources goods from hinterland communities and sells them to residents. Peter, on the other hand, is a businessman who offers dry cleaning services to both community members and employees of the OECs in the area.

Roles in the community	Kokori Community	Ugborodo Community	Age Range (years)
Community Leaders	2	2	35 - 70
Farmer/Fishermen	1	2	24 - 40
Business owners	1	2	25 - 75
Students (Fresh Graduates)	2	1	24 - 28
Traders	-	1	34
Total	6	7	
Total Respondents	13		

Table 3.1: Respondents Distributions

3.4: Challenges Encountered

The major challenge I faced was not being able to travel to Nigeria myself for field work because of security and cost reasons. The proposed time of travel was at the peak of a series of agitations caused because of fuel subsidy removal by the new administration of President Bola Ahmed Tinubu. Other challenges faced were making a convenient arrangement between me and participants for the interview sessions, considering their busy schedules. We had to make a series of arrangements before we could have a session. There were people who showed interest in participating, but we never came to a convenient time for an interview. Initially, I had 20 potential respondents, 10 each from both communities. I ended up having sessions with 6 out of the 10 potential participants from Kokori and 7 out of 10 from the Ugborodo community.

Chapter 4 | RESEARCH FINDINGS AND DISCUSSIONS

4.0: Overview

At the end of the interviews, interesting findings were made from my in-depth conversations with participants from the two communities, Kokori and Ugborodo. This chapter presents these findings in themes and discusses and analyses them in relations to academic papers, other notable experiences of host communities, previous research or commentary, personal experiences, theories, and even common-sense opinions.

The findings include.

4.1: The Influence of Complex identities and Intersectionality on People's Experiences of the impact of oil and gas explorations.

Identity plays a very huge role in the sharpening of the experiences and perceptions of people, and this perfectly reflected in the responses of participants in both communities, kokori and Ugborodo. This influences of Identities on the experiences of common events in host communities of oil explorations can be linked to the Identity theory developed by Peter Burke and others.

Stets and Burke, (2009) states that the 'self' exhibits reflexivity by being capable of perceiving itself as an object and assigning specific categorizations, classifications, or names to itself in the connection with other social categories or classification. This self-categorization according to identity theory by Burke and Stets puts one as an occupant of a role and the incorporation into oneself of the meanings and expectation that comes with that role and its performance (Burke and Tully, 1977; Thoits, 1986). I am a man, she is woman, I am a farmer, he is a fisherman etc all imposes a sense of expectations that comes with the identities. This shapes one to perceive and experience events in different ways. For example, Temi outrightly condemned the operations of the OECs and oil and gas explorations totally because of their effect on the environment. Not just the effect on the environment but effect on aquatic lives which is his source of livelihood as a fisherman. Being a fisherman that has imposed on himself the duty to have a good catch for him to survive makes the effects rather personal because it is a threat to his livelihood and a risk to his life when he attempts to go far into the ocean to get a good catch. Whould Temi has perceived differently if he was carpenter? I guess so.

"... I do not see fish anymore around us. Most of the fishes have died because of oil spills covering the water. we can just wake up and see traces of oil spills on the water with fishes floating on the water. The few fishes that survive these spillages have run away far into the ocean because of the constant disturbance of the water by the big and heavy boats these oil companies use for their work. Even if we go far into the ocean, we need to go very far, about 2 hours boat drive to go and 2 hours to come back. We often face the challenge of running out of fuel for our boat and, we risk our boat capsizing because of the very high waves and tides of water caused by those heavy boats and ships the exploration companies use." - **Temi** On the other hand, Ayo, still from the same community with similar environmental experiences which he attested to be harmful to his health and business but never wished the operations stops because he believes the profitability of his business is dependent on the number of people the exploration activities attract to the community. For Ayo, His identity as a businessman who needs to maximise profit sees the negative impacts that also affects his health as trade-off to his economic survival.

"...for me, the major problems I experience are the very offensive odour that comes with oil spillages and dead fishes floating on the water. Look around me, you can see that we live in a riverine area with water even flowing in front of my shop. I even must lock up my shop sometimes when it gets critical. But What can I do? Business must go on. The presence of the companies often attracts a lot of people that form my customer base..." ... Ayo

This complexity of identities was still reflected in the responses of participants from Kokori community.

Also, Social identities according to the Hogg and Abram, (1998) as the knowledge of a person that he or she belongs to a social category or group was noticed to be an influencing factor to the experiences of individuals of host communities. For instance, in kokori community, Maro who is an executive member of the KPU shared that the categorizations, differentiation and stratification that has been caused by the OEC by dealing with some group of people that they call the 'oilfamilies' at the detriment of the community has created inequalities and diverse opinions among individuals in the community (Waters, 1994). The so called 'oil-families' which forms a social identity, are the direct owners of the lands on which the oil wells and infrastructures are installed. This social identity has influence on the experiences of the individuals of the group, oil-families and consequences on those that do not belong to the group. This often led to difference perceptions of the people witnessing the same events and incidences.

Identity theory still acknowledge the possibilities of an individual possessing several identities and the overlapping of these identities. Hence, the Intersectionality theory coined by Kimberle Crenshaw. This theory examines how individual's multiple social identities (race, gender, class, occupation, educational status etc) intersect and impact their experiences of events and incidences. Intersectionality theory being a classic theory that centred women of colour scholar-activist striving for liberation-focused social movement has gradually moved into the analysis of complex academic studies while acknowledging its normative agenda (Collins, 2000; Collins, 2000; Alinia, 2015, Berry, 2014; Al-Faham, et., al., 2019).

From my interactions with individuals in Kokori and Ugborodo communities, it became evident that the intricate interplay of overlapping identities makes it challenging to assert shared experiences. The intersectionality of various identities, such as gender, social classification and differentiation, and other factors, adds complexity to the experiences of individuals in host communities of oil exploration. This complexity results in individuals potentially experiencing privileges at one point and marginalization at another, simultaneously navigating multiple aspects of their identity.

For instance, Maro, a community leader with a high level of education and a university lecturer, perceives oil and gas exploration in Kokori differently compared to Agnes, a woman advocating for marginalized women. Because, aside his educational identities, his overall experiences are made

up of his personal experiences and those of others he attended to as a community leader. Maro's multifaceted identity, shapes his understanding of the impacts of oil exploration. However, without the 'oil-family' identity especially at this point when the OEC boycotts his administration and leadership by dealing directly with the 'oil-families', he may not be considered when economic benefits are to be prioritized.

Furthermore, examining the story of Agnes reveals how gender, class, occupation, and education influence the well-being and growth of women in Kokori. According to Agnes, women constitute a larger number of the farming population in the community. This makes them with their children the most affected by the negative impacts of oil exploration, particularly concerning access to farmland for agricultural activities. And despite the adverse impacts leading to food insecurity among agrarian households, women, even those from 'oil-families,' are excluded from economic benefit sharing. This pattern is mirrored in Grace's experiences in Ugborodo, where, as a woman and a mother dependent on farming, she faces similar challenges. Reinforcing the intersectionality in varied identities such as gender and class, the experiences of Benson showed the conflicts that occurs among 'oil-families' in Kokori. In his story, it was seen that families among the so-called 'oil-families' that has more male children tend to fight for more benefits and leadership roles at the expense of the families that has majority of females. On most occasions the families are represented by only the males in meetings, negotiations, and decision-making processes.



Figure 4.1: The Influence of identities and Intersectionality on Experiences of individuals in Host communities Source: Author

Furthermore, it became apparent that the impact of identity on experiences extends beyond the individual level to the community level. Nigeria, as a nation, is characterized by its multi-ethnic composition, with ethnic groups often categorized as majority and minority. This phenomenon, referred to as Identity politics by Ogbogbo (2008), has played a significant role in the historical marginalization of the Niger Delta host communities, predating the oil boom of the 1960s. As seen in the case of the Ogoni people in chapter 2 of this study.

The Niger Delta region predominantly consists of minority ethnic groups such as the Urhobo, Ijaws, Isoko, Itsekiri, among others. Among the nine states in the Niger Delta Region, certain states belong to the majority ethnicity, such as Imo state (Igbos) and Ondo state (Yorubas). The major ethnic groups in Nigeria include the Fulani-Hausa, Yoruba, and Igbos, representing the Northern, Southwestern, and Southeastern parts of the country respectively. Conversely, the minority groups are primarily concentrated in the South-South region. This identity complexity intensifies within the Niger Delta oil-producing communities, giving rise to the categorization of certain groups as 'oil-minorities,' denoting ethnic groups within the Niger Delta but not part of the major ethnic groups. Notably, the Urhobos (Kokori), the Itsekiris (Ugborodo), Ogonis (Ogoni land) fall within this classification. The determination of majority and minority status is largely dependent on population which influences representations in positions of power. The minority ethnic group in the Niger Delta region has experienced detrimental, laws and policies and a typical example of such laws, acts and policies is the 1978 Land Use Decree now known as Land Use Act signed into law by General Olusegun Obasanjo. This Land Use Act abolished every existing land tenure system including the customary laws which was based on the customs and traditions of the various communities with the chiefs, community leaders or family heads being the trustees of land on behalf of the families or community (Yahaya, 1999). With this law, all control and ownership of lands and resources therein were invested on the state government. This means whosoever, plays the flute determines the rhythm! With the majority groups being at the position of power, the allocation of lands and resources are done by them and in most cases at the detriment of the minority group. Currently, this is the case in the Niger Delta region because more than 83% of the Oil Assets (Oil fields and blocs) in the region are owned by the Fulani-Hausa people from the North. It is such an irony, right? What you have in your land is owned and controlled by someone, somewhere, miles away from you. This made a former member of the senate, Ita Enang, the Chairman, Senate Committee on rules and business to call for all oil blocs to be revoked because of the inequitable and unfair distribution that favours mostly the Fulani-Hausa people from the North at the detriment of the very people that historical owns the lands and suffers the impacts of the explorations and operations in the south (Premium Times, 2013). This also resonated in Mike's story about his experiences in Ugborodo community.

Conclusively, the influence of identity on experiences of host communities is similar across onshore and offshore host communities and this forms part of the social-economic-environmental nexuses of the impact of oil exploration in the Niger Delta region.

4.2: Ecological systems: Unique and Overlapping Experiences

Oil and gas exploration as a form of extractivism as seen in the introductory chapter of this paper has some impact on the ecological system, resource depletion, and biodiversity loss. With this as a baseline, the nature of impacts to a very large extent may be informed by the geographical locations and composition of the community. And host communities with these different environmental systems interacts with these unique impacts differently too. This can be explained by Ecological system theory (EST) developed by Urie Bronfender. The EST explores how individuals interacts with different environmental systems, emphasizing the interconnectedness of various levels, from immediate surrounding (microsystem) to a broader cultural context (macrosystem) (Hertler, et., al., 2018). Ugborodo and Kokori community has different ecological make up i.e., different ecosystems; plants, animals, microorganisms (biotic components) and physical environments such as water, soil, rocks, and local atmosphere (abiotic components). With the introduction of pollutants and effluents from oil and gas exploration and production activities to these varied ecosystem, different effects or impacts may be experienced by the individuals and households (microsystem) and the communities (macrosystems) in general.

Ugborodo as a coastal and island community is characterised by the abundance of sea water bodies cutting across the community. It lies within the Mangrove ecoregion (arcgis.com) which is characterised by its humid climate (high saturation of moisture), saline environment, waterlogged soil on which plants grow and are capable tolerating about 2% to 90% salinity (Selvanm and Karunagaran, 2004). Mangrove regions like Ugborodo is globally known for its economic and biological endowment with a number of beneficial ecosystem services such as fisheries (nursery, habitat and aquaculture), ecotourism and recreation (Duke and Schmitte, 2015; Duke, 2016).

In the incidences of oil spills and other pollutants which often occurs as experienced by participants, the impacts are evident in the different part of the ecosystem. For instance, participants from the community reported that from experience, the major pollutants include oil spills from broken pipes, transportation systems, effluents from processing facilities, lubricant oil and wastes in form of sludges, bitumen, sea and water vibrations and black carbon soot and methane generated by gas flaring operations. These reports by participants are known and common sources as recorded in the works of Ogri, (2001); Agbola and Olurin, (2003); Agbogidi, et., al., (2005); Nwilo and Badejo, (2004), (2005a), (2005b), 2006; Twumasi and Merem, (2006); Uyigue and Agho, (2007).

According to Temi and Ayo, in the events of oil spillage in the community which are usually from aged pipelines and in rare cases, vandalization; drilling sites and marine vessels and equipment, that the water bodies are often polluted. Depending on the volume of oil that is spilled, the pollution spread very fast across the community irrespective of where it originated (Nwilo and Badejo, 2006). This can be attributed to the presence of water (physical environment) that is constantly flowing because of the high currents produced by heavy marine vessels and equipment constantly operating on them. This according to Temi, kills a lot of aquatic lives (fishes and other biotic organisms). And with the sensitive nature of mangrove vegetations to oil exposure (Duke, 2016), the vegetative covers of the coastlines and the biodiversity that depends on these covers are destroyed. And 'bush' animals that depends on them are affected too. The deaths and destruction of non-human lives (biotic species) is said by Attfield, (2014) to be against ecological or environmental ethics theory that condemns death of biotics (aquatic and terrestrial) due to anthropogenic source.

"...Shell and Chevron drill oil in our community. Shell does more of shallow waters in the creeks or swamp across the community. Creeks such as Saghara, Otunara, Sara while Chrevron company has their tank farm facilities in our community. Chevron drills crude oil far in the sea, then they transport it to the tank farm through pipelines that they run through the water to the tank farm. Sometimes they use very large storage boats to transport this crude oil. When the pipelines bring the crude oil to the tank farm for temporary storage, they also do some treatment on it before sending them through pipelines to the export terminals. Shell has an export terminal in Forcados... so most of the time, oil always leaks and pollutes the water surrounding us" ... Mike



Figure. 4.2: Oil exploration facility on a polluted water body (creek) in Ugborodo community Source: Author

Another peculiar environmental pollution caused exploration and transportation marine vessels and boats is the enormous water vibrations and nose they make. This Temi said has caused the surviving fishes from the small creeks and water bodies around the community to migrate far away into the Atlantic Ocean.

"... we do not see fish anymore around us. Most of the fishes have died because of oil spills covering the water. we can just wake up and see traces of oil spills on the water with fishes floating on the water. The few fishes that survive these spillages have run away far into the ocean because of the constant disturbance of the water by the big and heavy boats these oil companies use for their work." Temi



Figure 4.3: Polluted water body (creek) in Ugborodo community Source: Author

Furthermore, Mike shared that the operations of heavy marine boats and vessels used for oil production which increases sea currents and tides coupled with the effects of climate change (irregular and prevalent rainfall, increase in sea levels) often result to the flooding of the community and coastal erosion thereby reducing the landmass of the island community. This resonates with Omatete, 2000; 2019 works, that lamented the loss of his ancestral home in Ugborodo to the Atlantic Ocean. According to him, in rainy seasons coupled with these high tides from marine equipment, the flooding incidents are so devastating that they usually wreak havoc in the lives and live-lihoods of people in the community. These current occurrences of flooding in Ugborodo community as well as other coastal communities globally can be said to be cruel and it often facilitates water pollution (spread of oil spills, dead aquatic animals, and its associated odour), water-related diseases, mudslides, aquifer depauperating as also researched by Camango and Cortesi, (2019).

I also found out that natural gases are still flared in the community because participant complained about some black substances that are found just by putting one's fingers in the nose. This form of air pollution from gas flaring practices which most countries in the global north consider illegal has consequences not only to human health but also on the entirety of the ecosystem (biotic and abiotic). Gas flaring emits harmful gases such as methane, Sulphur dioxide, Carbon dioxide heat and other greenhouse gases (GNGs) which can lead to the formation of acid rain with a pH value less than 5.6 (WHO 1970 limit for rain acidity) as rightly recorded by Ubani and Onyejekwe, (2013); Elum, (2016) works. Communities like Ugborodo that surrounded by water bodies often find the access to drinking water very difficult because the water available are sea water with high salinity, hence, majority of the dwellers depend on rainwater which may be poisoned (acid rain) already before getting to the ground. This has high health risks for human and animals as well.

Kokori community, unlike Ugborodo, lies within the Tropical and subtropical Moist broadleaf forest ecoregion (arcgis.com) characterised by it evergreen and semi-deciduous forest tree species and biodiversity. These ecoregions are home to the highest number of terrestrial ecosystem (In Site Ecology Pocket Guide, 2019). Kokori community is predominantly land measuring about 196 Square Kilometres with pockets of small rivers and streams (fresh water).

Considering the unique ecosystem of kokori, some participants demonstrated a very strong knowledge and first-hand experiences of environmental degradations. Being a community dominated by land, participants share varied experience, I found out that some people like Agnes, Moses, just like myself, never witnessed direct impacts of environmental degradation. At least visible ones. However, people like Maro, Victor, Andrew, and especially Benson stated that the main type of pollution that they have experienced are land, air, noise and or sound pollution. And the sources of these pollution included oil spillages and other common sources typical of oil exploration as reported above in the case of Ugborodo. However, the sources of noise apart for production equipment, are trucks, tankers, trailers, and motor vehicles used for movement of equipment, supplies and personnels as against marine vessels and boats used in Ugborodo because of the difference in physical environmental features (water and land).

However, I found distance matters! In the direct experiences of the impact of oil exploration in the case of Kokori and most likely in other onshore host communities. The effects reduce as one move away from the exploration sites. This unlike Ugborodo community that has water as one of its physical features capable of flowing and spreading effects, in kokori oil spillages and pollution is somewhat static.

However, With the unique terrestrial ecosystems endowed with biodiversity and freshwater aquatic lives, the incidences of oil spillages in any part of the community have enormous impact of the ecosystem. The survival of animals and other biodiversity that depends on the vegetational cover of the community's flat land, the good condition of the soil, cannot be guaranteed and deaths of these biotic animals are often recorded. According to Maro, the incidences of continuous minor or major leakages and spills of oil has led to the possible death or migration of some 'bush' animals that he once fed on as a growing young boy who hunted in the different parts of the community. This he said happened gradually over the years.

"... the biodiversity is completely gone, you go into the bush today, Those days, we used to go to the bush and when you set traps around your farm, you can come home with three grasscutter or two or four in one day, and when you go fishing your catch of fish can last for maybe a week or two, or sometimes even a month but these days, it is no more like that, you go you can go for fishing for 24 hours and you catch nothing. The same thing with this biodiversity in terms of all these animals." ... Maro

The rivers and streams across the community especially those that are very close to the exploration sites and pipeline networks that are often installed above the ground are not spared either. Oil spills are often visible even just walking pass the side of the river and they are usually spotted with their glazy reflections of the sunlight. These ecological effects do not only affect the aquatic biodiversity but also have implications on the health of local people who usually depend on these freshwater rivers for drinking water while they walk to their farms. Although not all rivers have same level of pollution. Some rivers like those in Ugborodo are linked at one point or the other, so it is the volume of oil spilled on a particular river that will depend on the different levels of pollution as it flows into the rest of the connected rivers. But usually, pollution reduces drastically as rivers are situated away from the primary polluted river because there not driving forces like the marine equipment in Ugborodo. Apart from these connected rivers and streams, other river and streams are mini lakes, whose sources and volume depends solely on the amount of rainfall seasonally. So, in incidences whereby these types of streams are polluted, the effect on other rivers is very limited. This is not to say that the impacts of oil exploration are low in kokori community, but it is just experienced differently compared to Ugborodo.

Also, unlike Ugborodo community where the waters are disturbed by the vibrations from heavy marine and exploration boats and vessels used for transportation, Kokori being mostly land and soil experiences nothing of such. Kokori's access routes are land which means modes of transportation road based. With the operations of oil explorations in the community, there are frequent movement of trucks, lorries, and trailers in and out of the community carrying one form of exploration equipment to be installed or the other and even crude oil sometimes as reported by Maro. What those this mean to the ecosystem of the community? There could be three implications of these movements; the compaction of the soil, the spilling of oil or petroleum products from the trucks themselves and/or the oil being transported along community roads and the noise pollution they cause.



Figure 4.4: A river in Erhioke part of Kokori community with traces of oil spills Source: Author

Kokori being a rural community still has majority of her access roads especially those leading to exploration sites (mostly forest routes) untarred with bitumen, stones, or concretes. This exposed soil often gets compacted when these heavy transportation vehicles journey along. The compaction of these forest or access route caused serious damages such as alterations to the soil structure, disturbance of the physical features and destruction of soil biodiversity. This consequently affect plant nutrition, increases plant stress making them vulnerable to diseases, reduces soil aerations, change in the pattern of rooting systems of species and makes road unfit for use by farmers who depend on the earthen roads as access roads to their farmlands (especially in rainy seasons). This aligns with the study of Batey and Mckenzie, (2006) on soil compaction: identification directly in the field. Aside, the compaction of soil by these trucks, participants also reported that they do see traces of oil along the sides of access roads.



Figure 4.5: Community road with visible traces of oil pollution close to an exploration site in Kokori. Source: Author

Another impact of these transportation means, and exploration equipment is the noise they produce, which has effects on the ecosystem and the people. Benson, a participant who grew up close to one of the exploration sites reported that some people who live close to the sites are known to have partial hearing impairment because of this sound pollution.

Furthermore, like Ugborodo community, Kokori experiences the effects of gas flaring which has ffects plants, crops, flora, and fauna and ultimately the people. The study of Oseji, (2010) about the 'Thermal gradient due to Gas flared at kokori/Erhioke flow station' shows that the ecosystem within 40m radius in four sides from the flare point is badly affected with crops like cassava, plantain, palm trees, yam having visible traces of stunted growth and red leaves because of thermal and gaseous emissions from gas flaring operations. The study also shows that habitats who live less than 210m from the flaring point are at high risk of health issues. Also, due to gas flaring, participants reported abnormally increased temperature in the community compared to neighbouring communities. Although, they asserted that this effect reduces as one moves farther away from the flaring point. The study of Anomohanran, (2015), on Evaluating the thermal impacts of Gas flaring in Kokori, southern Nigeria, confirms this finding. In the study, Anomohanran, (2015) found that decrease in temperature with respect to distance from flaring point is about 0.060°C/m during the rainy season and 0.12°C/m during the dry season. While the average difference between kokori community's temperature and neighbouring communities is 1.54°C during the rainy season and 2.70°C during the dry season. This means that kokori has a higher atmospheric temperature compared to surrounding communities due to the gas flaring facilities installed and operated in the community.



Figure. 4.6: Kokori Flow Station Source: Author

Figure. 4.7: Gas Flaring Facility in Kokori community



Figure 4.8: Schematic Diagram showing the Unique and overlapping ecological experiences of Ugborodo and Kokori

4.3: Host communities and Socio-economic impacts of Oil Exploration.

During this research, I found a strong historic connection between the economic livelihood of the people of Ugborodo and kokori and their environments and the influence of this interaction on the social and cultural dynamics of the people. I may be tempted to link this to the theory of Environmental determinism that posits a direct influence of the physical environment on human culture and societies which is very logical amidst all its criticism of its oversimplification of the complex human-environment interaction and environmental racism. On the other hand, organizational theory which posits the role of free-will or strategic choices in the determination of human culture and societies still has an interplay in the case of these two communities (Gopalakrishnan and Dugal, 1998). Ugborodo community according to Omatete, (2000), was found by a group of fishermen who settled in the region for the purpose of fishing activities as sources of livelihood. This also applied to Kokori community that came about when Agbon people led by Ukori settled in the present day kokori for the purpose of family activities (Akpojotor, 2011). All these historical events that gave birth to these communities and it could be argued to be born out of strategic choices of an organised people, however, their choices of these locations were largely dependent on the Ecological endowments of the areas that align with their interests, and this continued to influence their social and cultural orientations. And being rural settlement, their environment and its natural resources still act as an entry point towards attaining a sustainable livelihood (Scoones, 1998; 2009) and a distortion to these environments is a distortion to the source of livelihood of the people which has social consequences among the people in these communities. And these consequences vary and overlap across these two communities. For instance.

In **Ugborodo community,** participants generally reported that oil and gas exploration activities have no significant positive influence on the economic and livelihood well-being of the community rather it has led to; the destruction of their sources of livelihood (environment), social strife and conflicts, endemic corruption, and deprivation of the people. What do I really make of these? it is true, their complaints and points are real and valid especially when comparison is made between these communities in the Niger Delta region with other towns and communities that host these types of extractive activities in the global north as shown in the second chapter of this paper in the case of Norway. And even more provoking when the economic and social conditions of these people are compared to other communities of the majority ethnic groups from the north and the capital territory where they have never drilled a drop of crude oil considering that the economy of Nigeria is largely dependent on it.

There is no doubt that the activities of oil exploration have greatly impact negatively on the economic activities of the community considering the negative impacts on the environment. For instance, in the case of Temi being a fisherman, the access to a healthy water environment is an entry level towards attaining a sustainable livelihood. This again is tied to identity of the individual person. Because as Temi cries and advocate the stoppage of exploration activities, Ayo, whose business is dependent on the population of people that the activities attract to the community will never wish it would stop. It is understandable and it's such a dilemma because the situation of things economically for him considering his skills as a crane operator without gainful employment has put him in a 'no-choice' situation. This also recall the case of Maria in Arsel et., a., (2019) and provoke the question of the extent these types of perceptions could be born out of free will or compulsion by their circumstances. Would Ayo and Maria have perceived things differently if they were in Temi's choose or among the people whose identities has placed them in a privilege situation in the community? Or would Maria has thought differently if she or any of her loved ones were victims of the series of conflicts born out of the extractive political struggles? These perceptions and experiences could be very complex. However, this does not change the visible facts that the economic livelihood of the people of Ugborodo has been affected in one way or the other. For example, Grace reported that the Ugborodo local market square once attracted several traders in neighbouring communities to trade their businesses especially fish businesses. However, it is now a shadow of itself because of the drop in the availability of these aquatic food items. She attributed this to the pollution of the environment and the migration of the youth that would have formed the work force in that sector to neighbouring communities and town in search of greener pasture (loss of livelihood resources in term of human capital Scoones, (1998 and 2009)). Also, she reported that aside the migration that takes away part of the population from fishing activities, that some people prefer to take up casual seasonal jobs in the oil companies or set up business ventures like what Ayo, Peter and Jacob did. Although these could be called livelihood strategies according to Scoones, (1998 and 2009).

Furthermore, apart from the context and condition; the livelihood resources (natural, financial, human, and social capital) and livelihood strategies (agricultural intensification, livelihood diversification and migration), participants blamed the institutional processes and organizational structures (leadership) of the community including the OECs for the economic redundancy within the community. They attributed these to the endemic corruption of their leaders and the unethical dealings of the OECs which rob off the community of any form of infrastructural development and availability of social amenities (school, electricity, health facilities etc). It was also gathered that the OECs mostly performs only pretentious CSR as a business strategy especially when people become agitated and pose as a threat to their operations. This is unethical by scholars such as Mintzberg (1983) and Moore (2003) who are of the opinion that businesses should carry out CSR because it is the ethical and right thing to do. That anything apart from this will means putting virtue at the service of avarice. However, with the Freeman stakeholder's theory which defines stakeholders as any individuals or groups with the potential to influence or be influenced by the attainment of the organization's goals, Hopkins, (2003), in its definition of CSR suggested that the consideration of Stakeholders interest in carrying out CSR, could lead to the growth of the business as well as the local communities and people. But in the case of ugborodo community, participant feel the CSR are not stakeholders oriented and insignificant compared to the oil-induced needs of the community. The claims of the ugborodo people about OECs CSR interventions being a business strategy based on its insignificant impact may be valid because of Ntekekpo, (2012), findings in his study of the empirical assessment of Chevron's Community development projects in the Niger Delta. In this study, he acknowledged Chevron Nigeria Limited's claims and efforts about community development activities as part of their CSR, although they tend to be insignificant. However, he recommended that Chevron should have a re-appraisal of her community development efforts in host communities to ensure need-based projects for the people and the need to adopt a bottom-up approach in doing so.

Also, it is good to know that all these experiences have consequences on the social fabric of the community. Respondents reported that there have been minor and major intra and inter communal conflicts, strife, and violence in the ugborodo commnity and they attributed this to the pains of marginalization, anger of deprivation and fight for self-determination in respect to resource control and benefits.

Kokori community has had its own share of the impacts of oil exploration on the socio-economic space of the community. Although, the experiences of the Kokori people are closely like those of Ugborodo community but the difference that I noticed is that there are more opportunities of livelihood strategies that the geography of kokori has given to her people. With Kokori community being predominantly land, there is more accessibility by people within and outside of the community for business and economic activities. Accessibility is one factor that I noticed may slow down economic activities in ugborodo because the people depend largely on canoes and boats which are limited in number as means of transportation. However, it was noticed that these livelihood strategies which are mainly agricultural intensification and extensification, livelihood diversification and migration (Scoones, 1998) are because of the negative impacts of oil exploration in the community. With the degradation of some part of the community especially those area that are near the exploration sites (resonates with the findings of Agbogidi et., al., 2005) the dwellers in those areas were subjected to disposition and forced migration to other parts of the community thereby by putting pressure on the limited land resources in those areas. In other to survive, agricultural intensification and extensification to other neighbouring communities become inevitable. Apart from environmental degradation, Maro, also reported that local people have been deprived access to large portion of community lands by OECs in collaboration with the government for the installation of exploration facilities such as networks of oil pipelines line that cover a very large hectarage of land across the community, flow stations and other operational infrastructures. This also according to him, increases the inaccessibility of land by local people which according to Scoones (1998), access to land is an entry point towards accessing other assets or capitals for sustainable livelihood of rural communities. Talking about Livelihood diversification as a livelihood strategy, Agnes in her

experiences shared that the little economic activities in the community today are not in any way related to being a host to oil explorations. That they are born out of individual struggles and need to diversify considering the fact that access to land is low, interest of young people to go into agricultural activities is drastically reduced because majority of them according to her prefer to struggle for the very few and limited job opportunities in the oil companies (the 'white-collar' job syndrome) and they don't often get them because opportunities go to certain people with some certain identity. This also affect the economic vibrancy of the community because out of frustrations, these youths migrate to other towns and cities in search of better opportunities (Agbogidi et., al., 2005). This she considers as a two-way loss: loss of markets and loss of workforce. And this has implications on food security and the local market that is gradually losing its glory as the biggest physical market for agricultural produces in that local area.



Figure. 4.9: A sign board by NNPC showing areas that cannot be used for any other purpose because of installed Pipelines and oil exploration infrastructure.

Source: Author

Maro also complained about the non-involvement of local content and expertise in the activities of the oil exploration in the community, that the OECs are dominated by foreigners from other parts of the country. And according to him, the OECs always give the excuses that there are no local people that are qualified for the skilled positions, this he said is not true.

"...there's very little to say about the impact of oil explorations on our economic engagement in this community in terms of local employment, and even expertise employment we there's little to say about it, although one would have expected at least with the location of the Flow station in that community, that most of the contract will be awarded to..., in fact, the state government has what they call the local content policy that is not being operated as it should be and the excuse they will always give is that people are not trained or qualified or whatever; that is the excuse they will always give. Normally what we should expect in a business of this nature is that the operators who should ensure that there is peace in the community, ought to also make sure they have training programs, by which people from the locality can be trained, and then be retained, to operate in that area. They will be the eyes of the company as well as the eyes of the community, but that is not being done." - Maro

Also, on the area of social amenities, participants lamented the deteriorating state of the few social amenities such as schools, hospitals, and electricity in the community. This also resonates with the findings of Agbogidi et., al., (2005). There is one hospital built by the SPDC in 1995 and currently being managed by Shoreline Nigeria limited and participant described the hospital to be in bad shade void of necessary medical equipment and personnels. The other health facilities present in the community are the few governments owned health care centers that have neither functional nor efficient medical deliveries. Local people are forced to take their sick loved ones to the few expensive privately owned clinics in the community or hospitals in neighboring communities in case of emergencies for medical treatment.



Figure 4.10: Erhioke Cottage Hospital, Kokori, built in 1995 by SPDC (Shell) but currently managed by Shoreline Natural Resources and Heritage Oil, its subsidiary. Source: Author



Figure 4.11 and 4.12: Primary Health Centre, Kokori built by the government. Source: Author

Generally, participants are of the opinion that oil exploration has no significant positive impact on the socio-economic livelihoods of the Kokori community.



Figures 4.13 and 4.14: Some classroom blocks of Erhijere Primary School, Kokori built by the State government.

Furthermore, like Ugborodo community, participants from Kokori community attributed deteriorating state of the community to corruption among community leaders, politicians who represents the community in government but always embezzles the funds meant for infrastructural development and the unethical dealings of the OECs. According to Maro and Benson, it was because of corruption that the building projects meant for disposed persons whose land were polluted, and villages drove into extinction was never completed. It was also gathered that the OECs prefers dealing directly with the 'oil-families' owners of the land (especially the ones with potential to cause trouble that may affect their operations) on which oil facilities are installed at the expense of the community. They see this as a deliberate attempt to short-change the community of the right benefits that accrue to her by law. And this they said has cause a lot of communal conflicts and discrimination among local people.

"...Our situation is very pathetic. The body that should call these companies together is the Kokori progressive Union which I am the president general. But the company has gone behind to have a pseudo outfit which they call community development chairman, and then the families or the land owners where these oil wells and flow stations are located. They prefer to deal with them directly with the families of the land owners, the pseudo Community development chairman rather than deal with the legitimate community leaders that comprises Kokori Progressive Union, of which I am the President-General and the Council of Elders with whom they try to shortchange the entire community." - Maro

This act by the OECs really got me thinking about the use and implementation of laws, policies, and regulations. What really are the beautiful policies, laws, and regulations for? Undertaking this study has really made me realize the extent corruption has eaten deep into the Nigeria system at all levels; community, government and OECs. Just like Norway, if Nigeria fails to deal with and stop systemic corruption and rent-seeking as stated in Larsen, (2006) and Stevens (2003) (Please refer to chapter 2 of this paper), Host community will always be vulnerable to the impacts of oil explorations.



Figure 4.15: Schematic Diagram showing the Unique and overlapping Socio-economic experiences of Ugborodo and Kokori

Chapter 5 | Conclusions

Throughout this research I dealt with various academic literature, articles, life stories and personal experiences in zooming into the experiences of host communities of the Niger Delta region of Nigeria of oil and gas explorations with a focus on the geographical region (onshore and offshore using Kokori and Ugborodo host communities as case studies) which informed overlaps and unique experiences of these impacts. The literature materials reviewed showed a great deal of negative impacts of oil exploration which primarily includes environmental degradation its consequences on every aspect of human lives; social, cultural, economic, and health etc.

Oil and gas explorations being a form of extractivism was kept at the baseline while focusing on the impacts it has on host communities. With this a lot of unique, dynamic, and complex experiences were found and the major one is the influence of the geography and the ecosystem of a host community on the experiences of the impact of oil and gas explorations. This study shows that local people in the kokori and Ugborodo communities representing Onshore and offshore host communities respectively, experience the environmental impacts of oil exploration differently in the area of awareness and individual feel of impacts, rate and spread of pollution, the nature of degradation based on the peculiarity in ecosystems, the sources of pollutions (though there were overlapping sources) and the type of common pollutants (still overlaps in some areas). Also, overlapping experiences were still identified generally. These overlapping experiences include destruction of biodiversity, death of aquatic lives and thermal and air pollution as result of gas flaring. In the same way the socio-economic impacts were studied still putting into consideration the geographical influences of the communities into considerations. Here, a lot of overlapping experiences were recorded and of course few unique ones were also identified. The major overlapping experiences were systemic corruption, influence of identities, deprivations and marginalisation, lack of adequate infrastructural development, lack of primary social amenities, conflicts, and violence etc. And it is very important to note that findings in this research may not apply perfectly well to all onshore and offshore communities. Host communities are differs based on their location and they should treat as such.

It is interesting to see all these uniqueness and complex experiences rather than making the mistake of homogenizing them. With this the situation of communities will be closely studied for need-based interventions and community services to host communities. This form of bottom-up approach according to Ntekekpo, (2012) could be more impactful positively to host communities. Oil Exploration Companies (OECs), NGOs, Individuals and government agencies may find this approach and findings useful.

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APPENDICES

Appendix 1: Sample of Research Participation's letter sent to participants.

Erasmus University Rotterdam zafins

Dear (

August 1, 2023

Research Participation

Thank you for showing interest to participate in my research with the title: Comparative Studies of the Environmental and Socio-economic Impacts of Onshore and Offshore Oil Explorations on host communities of the Niger Delta Region of Nigeria: Kokori-Inland and Ogborodo Host Communities as Case Studies.

This research is part of the requirements to be fulfilled for me to obtain a master's degree at The International Institute of Social Studies of Erasmus University Rotterdam. Therefore, it is purely for academic purposes. Your participation is highly appreciated.

Furthermore, below are the next steps and actions to be taken.

- Reading and signing of the Consent form: As part of the Erasmus University Rotterdam Research policy and ethics, every participant is required to read, agree, and sign the consent form. Interviews conducted without the consent form would be invalid. This is to make sure that participants are not exploited and to ensure that they participated voluntarily. A copy of the consent form will be sent to you in a separate document. Please carefully read through, fill in the required and applicable fields, and sign. You can sign by kindly printing out ONLY the 4th page which contains the 'Declaration of Consent'. Then kindly scan or simply snap the signed copy and send it to me via WhatsApp at +31647340467 or email at <u>oruarumea@student.eur.nl</u>.
- Interview: questionnaires for this research shall be administered through interviews via online platforms. WhatsApp video call or Zoom. The choice of the platform is solely dependent on the participant.
- Compensations: this research is self-funded, so, there is no fixed amount reserved for monetary compensations. However, a token of Five thousand naira (N5, 000) will be given to participants to help with printing costs and other forms of inconveniences that may surround your participation.
- 4. Interview Date and time: please can you kindly provide your preferred date and time for an interview session? The interview session shall last for about 35 minutes, and you can decide to stop at any time and perform any other voluntary actions that are stated in the consent form.

Thank you once again for your interest. I am so grateful.

Kind Regards! Ejiroghene Andrew Oruarume Appendix 2: Sample of information and Consent Form given and signed by participants.

Ezafung

INFORMATION AND CONSENT FORM

RESEARCH TITLE:

Comparative Studies of the Environmental and Socio-economic impacts of onshore and offshore Oil explorations on host communities of the Niger Delta Region of Nigeria: Kokori-Inland and Ogborodo Host communities as Case Studies.

INTRODUCTION

I am EJIROGHENE ANDREW ORUARUME and I do research at the International Institute of Social Studies of Erasmus University Rotterdam, Netherlands. I am conducting research as part of my Master's Thesis. I will explain the study below. If you have any questions, please ask me. While reading, you can mark parts of the text that are unclear to you.

If you want to participate in the study, you can indicate at the end of this form.

WHAT IS THE RESEARCH ABOUT?

This research seeks to explore comparatively the peculiar environmental and socio-economic impact and experiences of host communities by putting into consideration the location and the type of explorations being carried out. In this case onshore and offshore oil explorations.

This research is relevant and important for exploration companies, governments, and policymakers in understanding the peculiarities in the host communities' experiences to help them to make informed decisions regarding the specific needs of the different host communities for effective interventions by relevant state and non-state actors.

WHY ARE WE ASKING YOU TO PARTICIPATE?

We are asking you to participate in this study because we believe that as an indigene of a host community of oil and gas exploration, you possess to a very large extent the required knowledge and experiences needed to give us accurate, reliable, true, and verifiable information from a first-hand perspective needed for good research and result. So, your participation will be a huge part of this research to help us understand the situations surrounding the topic.

AN INTERVIEW

I would like to conduct an interview which will expect to take about 35 minutes. If you do not want to answer a question during the interview, you are not required to do so. I will make an audio recording of the conversation.

At the end of the interview/discussion, you will have the opportunity to comment on your answers. If you disagree with my notes or if I misunderstood you, you can ask to have parts of them amended or deleted.

YOU DECIDE WHETHER TO PARTICIPATE

Participation in this study is completely voluntary. You can stop at any time and would not need to provide any explanation.

WHAT ARE THE POTENTIAL RISKS AND DISCOMFORT

I do not anticipate any risks or discomforts while participating in this study.

WHAT DO YOU GET FOR PARTICIPATING?

Your participation is very much appreciated. Also, you will receive a token for the inconvenience sounding your participation.

WHAT DATA WILL I ASK YOU TO PROVIDE?

During the interview, the following personal data will be collected from you: Name, age, gender, role in the community, and level of education.

WHO CAN SEE YOUR DATA?

• I store all your data securely.

• Recordings are transcribed. Your name is replaced with a number/made-up name (if preferable) \

• Data such as your, name, address...and recordings (direct personal data) will be stored by me and shall not be public.

• I may write an article, about the results of the study which will be published (publicly share the results) in (academic) journals and/or books. The results will be accessible to anyone.

• I may use your specific answers in the article. If your answer can be traced to you or we would like to mention your name, we will ask your permission first.

HOW LONG WILL YOUR PERSONAL DATA BE STORED?

According to the EUR Research Data Management Policy, your data will be retained for a minimum of 10 years. We retain the data so that other researchers have the opportunity to verify that the research was conducted correctly.

USING YOUR DATA FOR NEW RESEARCH

(Part of) the data we collect may be useful in pseudonymized form, for example for educational purposes and future research, including in very different research areas. Therefore, in the consent form, we ask you to give us permission to use your (personal) data [, excluding name, mail address, phone number, or any other personal data] (not directly traceable to you) for follow-up or other scientific research.

WHAT HAPPENS WITH THE RESULTS OF THE STUDY?

You may indicate if you would like to receive the results.

DO YOU HAVE QUESTIONS ABOUT THE STUDY?

If you have any questions about the study or your privacy rights, such as accessing, changing, deleting, or updating your data, please contact me.

Name: EJIROGHENE ANDREW ORUARUME Phone number: +31647340467 Email: <u>oruarumea@student.eur.nl</u>

Do you have a complaint or concerns about your privacy? Please email my supervisor at arsel@iss.nl.

Do you have a complaint or concerns about your privacy? Please email my supervisor at arsel@iss.nl.

DO YOU REGRET YOUR PARTICIPATION?

You may regret your participation. Even after participating, you can still stop. Please indicate this by contacting me. I will delete your data. Sometimes we need to keep your data so that, for example, the integrity of the study can be checked.

Or

You may regret your participation. Please indicate this by contacting me. Deleting your data is no longer possible if the data has been anonymized, making it impossible to trace which data came from you. Anonymizing the data is done within [indicate when it happens] period after the data was collected.

Or

Until you submit the survey, you can still decide not to take part in the research. [If you stop, your data will not be stored.] After you click 'send', we cannot trace what data you have shared with us anymore.