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# **Livelihood Vulnerability Assessment For Just Transition Among Oil And Gas Bearing Communities In Port Harcourt Metropolis, Rivers State**

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## **ABSTRACT**

This study investigated how vulnerable livelihoods are during the shift away from oil and gas in host communities within Port Harcourt, Rivers State, Nigeria. We used a cross-sectional design and focused on the 1,865,000 adults living in the Obio/Akpor and Port Harcourt City Local Government Areas. To gather data, we used a multistage sampling technique to select 200 participants. First, we intentionally chose communities dependent on oil and gas within Port Harcourt. Second, we proportionally selected four communities Choba, Elemenwo, Eneka, and Trans-Amadi—representing the North, South, East, and West parts of the study area. Finally, we randomly selected 50 individuals from each community, giving us our sample of 200. Data was collected using a questionnaire called the "Livelihood Vulnerability Assessment for Just Transition among Oil and Gas Bearing Communities questionnaire" (LVAJTOGBCQ), along with interviews of key community members. Environmental experts confirmed the questionnaire's validity, and a test-retest method showed it to be reliable, with a coefficient of 0.80. We analyzed the data using descriptive statistics like percentages, charts, and graphs. The interview data was analyzed thematically, following Braun and Clarke's six-stage framework. The results showed that most people in these communities rely on fishing, farming, and small trading. Many lack a secondary income source. Interestingly, most residents are aware of the move away from oil and gas and have skills or access to training for other sectors, suggesting their livelihoods aren't necessarily vulnerable to this transition. In conclusion, the study indicates that moving away from oil and gas doesn't threaten the livelihoods of people in these communities, even with their low incomes and lack of diverse income streams. We recommend that government agencies and NGOs support value-added agriculture, small agribusinesses, and micro-enterprises as part of livelihood diversification programs.

**Keywords:** Livelihood, Vulnerability Assessment, Transition Oil and Gas, Communities Metropolis, Environmental Harm, Environmental Management .

## **INTRODUCTION**

Nigeria's economy underwent a significant shift in 1956 when crude oil was discovered at Oloibiri. It caused the nation to become heavily dependent on petroleum instead of being predominantly an agrarian nation. The oil industry has been the primary source of national income since we began exporting oil in 1958, significantly increasing export revenues and government revenue. However, Nigeria is now more susceptible to fluctuations in the world's oil prices and economic ups and downs due to this reliance (Nwankwo & Ojo, 2022). Although the country's infrastructure and economy have benefited from oil

revenue, not everyone has benefited equally, particularly in oil-producing areas like the Niger Delta. These regions still experience socioeconomic issues and environmental harm.

Oil and gas operations continue to revolve around oil-bearing areas, like as Port Harcourt. They continue to suffer from the adverse effects of oil exploration, including gas flaring, oil spills, and water and land degradation. Traditional lifestyles like farming and fishing have been severely disturbed by these environmental problems, increasing household vulnerability and restricting their capacity to maintain food security and make a steady income (Andrews, Ekong, & Udoh, 2021). In this context, livelihood vulnerability refers to the degree to which communities are exposed to environmental risks, their sensitivity to these risks, and their capacity to manage and recover from them. As the environment continues to deteriorate, many households are seeing fewer economic opportunities, increasing poverty, and worsening social inequalities.

In recent years, the global move towards cleaner energy has brought about the idea of a just transition. This highlights the need to protect vulnerable communities from being unfairly affected as economies reduce their dependence on fossil fuels. For oil and gas communities in Port Harcourt, this transition presents both opportunities and uncertainties, especially considering current industry shifts like multinational oil companies divesting and a greater focus on gas development (Izuaka, 2024). Without proper planning and inclusive policies, these changes could make existing vulnerabilities even worse. Despite the growing importance of this issue, there's not much solid evidence on the extent of livelihood vulnerability and how well affected communities in Port Harcourt are adapting. Many households are still struggling with environmental degradation, unemployment, and limited access to other ways of making a living. Yet, we lack sufficient data to guide effective policy solutions. Therefore, this study seeks to conduct a livelihood vulnerability assessment for a just transition among oil and gas bearing communities in Port Harcourt metropolis, Rivers State.

#### **Aim and Objectives of the study**

The aim of this study is to evaluate the level of livelihood vulnerability assessment for just transition among oil and gas bearing host communities in Port Harcourt metropolis, Rivers state, Nigeria. The objectives of this study are:

1. Examine the nature of livelihood across the selected communities in Port Harcourt metropolis
2. Assess the nature of vulnerability of livelihood to just transition in selected communities in the area of study.

#### **Research questions**

The following research questions guided the study;

1. What is the nature of livelihood across the selected communities in Port Harcourt Metropolis?
2. What is the nature of vulnerability of livelihood to just transition in selected communities in the area of study?

### **Literature Review**

#### **Just Transition**

The term "Just Transition" describes a development strategy that strikes a balance between social justice and environmental sustainability by making sure that workers, communities, or vulnerable groups are not disproportionately harmed as ecologically damaging economic activities give way to greener ones. Concerns that climate policies could lead to job losses, economic marginalization, and social injustice if social factors were disregarded gave rise to the idea among the labor movement, especially trade unions (International Labour Organization [ILO], 2015; ILO, 2018). It has been defined in various ways by scholars and institutions. The International Labour Organization describes Just Transition as a framework that promotes a fair and inclusive shift toward environmentally sustainable economies while creating decent work opportunities and leaving no one behind (ILO, 2015). Similarly, the United Nations Environment Programme views it as a process that integrates environmental action with social protection measures to safeguard livelihoods during the transition to low-carbon development (UNEP, 2020).

Overall, Just Transition emphasizes fairness, inclusion, and the equitable distribution of the costs and benefits associated with environmental and economic transformation.

Just Transition represents a holistic and people-centered approach to environmental sustainability that recognizes the inseparable link between ecological protection and social justice. By emphasizing fairness, participation, and shared benefits, the concept provides a critical pathway for managing environmental change in a manner that supports livelihoods, protects vulnerable groups, and fosters sustainable development in both developed and developing contexts (Sovacool et al., 2023).

### **Livelihood**

The abilities, resources, and pursuits that people or households employ to obtain a means of subsistence are referred to as livelihood. The idea has developed from a limited emphasis on generating income to a more comprehensive, multifaceted viewpoint that takes institutional, social, and environmental aspects into account (Chambers & Conway, 1992). Natural, human, financial, physical, and social capital are examples of both tangible and intangible resources that influence people's capacity to maintain their well-being (DFID, 1999).

According to Ellis (2000), scholars stress that livelihood is dynamic, involving the combination of resources and activities that households utilize to satisfy their needs and adapt to changing circumstances. A livelihood is considered sustainable when it can withstand shocks, adapt to stresses, and maintain or enhance its assets over time. Access to resources is also critical, as it is influenced by social relations, institutions, and power structures that determine who can benefit from available opportunities (Ribot & Peluso, 2003).

In resource-dependent regions such as the Niger Delta, livelihoods are often shaped by environmental conditions and economic disruptions. Oil exploration has degraded natural resources, forcing households to diversify into alternative activities such as trading or informal work, often with limited stability (Nwajiuba & Onyeneke, 2010). Overall, livelihood is best understood as a holistic and adaptive process through which people mobilize resources and strategies to achieve sustainable living. Because resource conflicts, environmental degradation, and economic dependence have disrupted traditional livelihood patterns, the concept of livelihood is particularly significant in communities that produce oil and gas. Ebegbulem, Ekpe, and Adejumo (2013) found that oil exploration activities in the Niger Delta have destroyed farmlands, damaged water sources, and dislocated local economies, eroding the natural capital that sustains most rural lifestyles. As a result, households have been forced to diversify into unconventional sources of income like small-scale trading, casual labor, and artisanal refining, often with negative social and environmental consequences.

Because livelihood in these situations entails intricate relationships between nature, politics, and social justice, it cannot be described solely in terms of economics. Because many households on the outskirts of the city rely on small-scale farming and activities centered around natural resources, peri-urban agriculture continues to contribute significantly to livelihoods despite Port Harcourt's high level of urbanization, according to Akinola and Adeyemo (2019). Small-scale fish farming, vegetable gardening, poultry, and cassava processing are important sources of income for households with low and intermediate incomes in outlying areas such Rumuolumeni, Elemenwo, Rukpokwu, and Ozuoba (Nlerum & Albert, 2021). Additionally, a study by Mpigi (2020) found that a large number of low-income urban households use small-scale agriculture (vegetables, fish, and poultry) as an additional source of income; these activities are integrated into social networks and food provisioning networks. Similarly, Mathias (2024) found that the majority of respondents in his study on food security and coping mechanisms of migrants in Port Harcourt City had extremely low wages; only 5% made ₦51,000 or more per month, with the majority falling into lower income bands. To survive, many migrants turned to urban agriculture and food connections between urban and rural areas.

### **Vulnerability**

The term vulnerability refers to the degree to which individuals, households, or communities are exposed to risks and lack the capacity to cope with or recover from shocks and stresses. It is widely recognized as a multidimensional and dynamic concept shaped by social, economic, environmental, and institutional

factors rather than merely physical exposure to hazards (Birkmann et al., 2022). Contemporary scholarship emphasizes that vulnerability arises from the interaction of three key elements: exposure to hazards, sensitivity to their impacts, and adaptive capacity, with weakness in any of these dimensions increasing overall risk (IPCC, 2022).

From a socio-economic perspective, vulnerability is closely linked to inequality, marginalization, and limited access to resources such as income, education, and healthcare, making certain groups more susceptible to external shocks (UNDP, 2023). In environmental and climate contexts, vulnerability reflects the predisposition of populations to be adversely affected, particularly in regions dependent on natural resources or exposed to environmental degradation (IPCC, 2022). Scholars further argue that vulnerability is socially constructed, arising from structural conditions such as poverty, weak governance, and exclusion (Wisner et al., 2004). In oil and gas producing regions, vulnerability is intensified by environmental degradation, loss of livelihoods, and limited adaptive capacity, trapping many households in cycles of risk and deprivation (Ebegbulem, Ekpe, & Adejumo, 2013). Overall, vulnerability can be understood as a condition influenced by exposure, sensitivity, and the ability to adapt, making it both context-specific and shaped by broader social and institutional structures (Kelly & Adger, 2000).

Tao et al. (2023) in their study discovered that economic vulnerability persisted due to lack of skills and access to capital. In the same vein, Zabbey et al. (2021) averred that about 68% of respondents depended directly or indirectly on oil-related activities for income. Traditional livelihoods like farming and fishing declined due to pollution, leading to loss of income and food insecurity. Hence, high dependency on oil activities undermines local resilience and increases vulnerability to oil market fluctuations. Zhao (2024) conducted a study on livelihood outcomes in a coal city transitioning to sustainability. The result of the study revealed that transition improved income diversity but increased short-term job losses. They discovered that local institutions mediate vulnerability outcomes.

### **Theoretical Framework**

The theoretical underpinning of this study is derived from Environmental Justice Theory. The theory was propounded by Robert Bullard in 1990, it states that environmental benefits and burdens are unevenly distributed, with low-income and marginalized communities bearing more hazards and fewer benefits (Bullard, 2005). David Schlosberg (2007) notes that this inequality is rooted in social, economic, and political structures that shape decision-making and resource allocation. Thus, the theory extends beyond environmental protection to issues of equity, fairness, and human rights. Scholars have expanded the theory over time. Bullard (2005) highlights its role in preventing institutionalized environmental inequality, while Schlosberg (2007) presents it as a multidimensional framework linking social justice with sustainability. Joan Martínez-Alier (2014) connects it to political ecology, emphasizing conflicts over resources and power, especially in the Global South.

The theory is relevant to this study as it explains why oil- and gas-hosting communities face environmental degradation, livelihood loss, and vulnerability despite contributing to economic growth (Bullard, 2005; Martínez-Alier, 2014). It highlights unequal pollution burdens, limited community participation in decision-making, neglect of local knowledge, and the need for compensation and livelihood support to achieve a just transition in Port Harcourt metropolis.

### **METHODOLOGY**

This study employed cross-sectional research design to examine livelihood vulnerability assessment for just transition among oil and gas bearing host communities in Port Harcourt metropolis, Rivers state, Nigeria. The design is important to this study because it allows the researcher to assess the current state of livelihood vulnerability and community perceptions of Just Transition among oil and gas-bearing communities in Port Harcourt at a single point in time. The population of the study comprised 1,865,000 residents of Port Harcourt Metropolis. These include individuals from various occupational and socioeconomic backgrounds who are living within the two local government areas (Obio Akpor and Port Harcourt City). A total of 200 respondents were selected using a multistage sampling technique. In the

first stage, purposive sampling was used to select oil- and gas-bearing communities within Port Harcourt metropolis. In the second stage, proportionate sampling was applied to select four communities, one each from the North, South, East, and West (Choba, Elelenwo, Eneka, and Trans-Amadi) to represent the study area. In the third stage, a random sampling technique was used to select 50 respondents from each community, resulting in a total sample size of 200. Data were collected using structured questionnaires styled “Livelihood Vulnerability Assessment for Just Transition among Oil and Gas Bearing Communitiesquestionnaire” “(LVAJTOGBCQ)”and key informant interviews. The instrument contained both closed- and open-ended questions covering relevant themes. It was validated by environmental management experts, while reliability was established through a test–retest method, yielding a coefficient of 0.80, which indicates that the instrument was reliable. Data were analyzed using descriptive statistics, percentages, charts, and graphs, while data from structured interviews were analyzed using thematic analysis following Braun and Clarke’s six-stage framework. Ethical considerations such as informed consent, confidentiality, and voluntary participation were strictly observed to ensure research integrity and the protection of participants’ rights.

**RESULTS AND DISCUSSION**

This section presents and discusses the results of the study on livelihood vulnerability assessment for just transition among oil and gas bearing communities in Port Harcourt metropolis, Rivers State. The findings are based on data collected from respondents.

**Table 1: The percentage distribution and retrieval of questionnaires**

S/No	Respondents	Questionnaire Distribution	Questionnaire Retrieved	Percentage Response
1	200	200	190	95%

Source: Field Survey (2025)

Table 1 below indicates that 190 copies of questionnaires were completed and returned out of 200. This represents 95% percent return rate.

**Table 2: Sex of respondents**

Variables	Frequency	%
Male	130	68.4
Female	60	31.6
<b>Total</b>	<b>190</b>	<b>100</b>

Source: Field Survey (2025)

Table 2 above shows the gender distribution of respondents. It revealed that 130 respondents (68.4%) are male, while 60 respondents (31.6%) are female.

**Research Question 1: What is the nature of livelihood across the selected communities in Port Harcourt Metropolis?**

**Table 3: Nature of Livelihood across selected communities in Port Harcourt Metropolis**

S/N	Primary source of livelihood	Frequency	%
1	Fishing	90	47.4
2	Farming	70	36.8
3	Petty trading	20	10.5
4	Oil related jobs	7	3.7
5	Others	3	1.6
	<b>GRAND TOTAL</b>	<b>190</b>	<b>100</b>

**Source:** Field survey (2025)

Table 3 indicates that 90 (47.4%) respondents revealed that fishing is their primary livelihood. 70 (36.8) agreed that farming is their primary livelihood. 20 (10.5%) respondents revealed that petty trading is their

primary source of livelihood. 7 (3.7%) respondents revealed that oil related jobs is their primary livelihood while 3 (1.6%) of the respondents have other source of livelihood.

Similarly, qualitative result revealed that livelihoods across interviews remain rooted in farming, fishing, petty trading, and small business activities. Respondents identified no organised industries or formal employment opportunities. Some respondents noted that;

“*We do business, farming.*”(Respondent 3),

“*It’s fishing.*”(Respondent 3),

“*It’s mainly petty trading.*” (Respondent 17)

“*It’s fishing... we are managing ourselves*” (Respondent 17)

Communities rely heavily on low-income, climate-sensitive, informal economic activities.

**Table 4: Nature of Livelihood across selected communities in Port Harcourt Metropolis**

S/N	Secondary source of Livelihood	Frequency	%
1	Yes	20	10.5
2	No	170	89.5
<b>GRAND TOTAL</b>		<b>190</b>	<b>100</b>

**Source:** Field survey (2025)

Table 4 above revealed secondary source of livelihood of respondents, 20 (10.5%) of the respondents agreed that they have secondary source of livelihood while 170(89.5%) of the respondents do not have secondary source of livelihood.

Similarly, qualitative result revealed livelihood instability, alternative jobs or income sources are nearly nonexistent.

“*No alternative income.*” (Respondent 27)

“*No income-generating opportunities.*” (Respondent 21)

“*Nothing is generating income.*” (Respondent 5)

The absence of secondary source of livelihood further revealed that the people predominantly depend on farming, fishing, trading and other commercial activities for survival without depending on paid employment.

**Table 5: Nature of Livelihood across selected communities in Port Harcourt Metropolis**

S/N	Average monthly income from Livelihood	Frequency	%
1	Below ₦50,000	30	15.8
2	₦50,000–₦100,000	125	65.8
3	₦101,000–₦200,000	20	26.3
4	₦201,000–₦300,000	10	10.5
5	Above 300,000	5	2.6
<b>GRAND TOTAL</b>		<b>190</b>	<b>100</b>

**Source:** Field survey (2025)

Table 5 above show the average monthly income from livelihood, it revealed that 30(15.8%) of the respondents have average monthly income below ₦50,000. 125(65.8%) of the respondents have average monthly income between ₦50,000–₦100,000. 20(26.3%) of the respondents have average monthly income from livelihood between ₦101,000–₦200,000. 10(10.5%) of the respondents have average monthly income from livelihood between ₦201,000–₦300,000 while 5(2.6%) of the respondents have average monthly income from livelihood above 300,000.

with the number of respondents 125(65.8%) whose average monthly income from livelihood (₦50,000–₦100,000) greater than those whose average monthly income from livelihood exceeds ₦100,000 and above; it can be concluded that the average monthly income from Livelihood is between ₦50,000–₦100,000 across selected communities in Port Harcourt Metropolis.

**Research Question 2:** *What is the nature of vulnerability of livelihood to Just Transition in selected communities in the area of study?*

**Table 6: Nature of vulnerability of livelihood to just transition in selected communities in the area of study**

S/N	Nature of vulnerability of livelihood to just transition	Yes	No
1	Are you aware of the concept of a 'just transition' (shifting from fossil fuels to cleaner energy sources)?	160 (84.2%)	30(15.8%)
2	Do you have skills that could help you work in non-oil and gas sectors	150 (78.9)	40(21.1)
3	Does your community have access to training or support for alternative livelihoods	170 (89.5%)	20(10.5%)

**Source:** Field survey (2025)

Table 6 above shows the nature of vulnerability of livelihood to just transition. 160(84.2%) of the respondents agreed that they are aware of the concept of a 'just transition' (shifting from fossil fuels to cleaner energy sources while 30(15.8%) of the respondents are not aware. Similarly, 150(78.9%) of the respondents have skills that could help you work in non-oil and gas sectors while 40(21.3%) of the respondents do not. Furthermore, 170(89.5%) of the respondents agreed that their community have access to training or support for alternative livelihoods while 20(10.5%) of the respondents disagreed.

Furthermore, the qualitative result revealed that respondents request government aid, skill acquisition, leadership intervention, and financial support. Some noted that:

*"If the government should help us."*(Respondent 40)

*"Skill acquisition."*(Respondent 35)

*"Financial support is the only support I need."*(Respondent 29)

Communities recognize the need for capacity building and financial empowerment to adapt to any economic transition.

Similarly, on reliance on divine providence as a coping strategy;

Responses emphasized "by the grace of God" as a survival mechanism. As respondent noted that;

*"By the grace of God."*(Respondent 12)

*"We're just living by the grace of God."*(50)

This reflects coping through faith due to lack of institutional support and limited agency.

## DISCUSSION OF FINDINGS

The first finding (2025) shows that livelihoods in the selected communities are mainly fishing, farming, and petty trading, with most people lacking secondary income sources, earning below ₦100,000 monthly, and having no additional family support despite over 10 years of engagement.

This aligns with Mpigi (2020), who notes that many low-income urban households rely on small-scale agriculture as a supplementary livelihood. It also supports Mathias (2024), which found that most respondents earn low incomes, with only 5% earning ₦51,000 and above monthly. Similarly, Akinola and Adeyemo (2019) and Nlerum and Albert (2021) highlight the importance of peri-urban farming activities in Port Harcourt for sustaining livelihoods. This trend may be explained by the fact that most respondents were farmers, fishers, petty traders, and artisans with low monthly incomes.

The second finding (2025) shows that communities exhibit a relatively strong readiness for a just transition, with little livelihood vulnerability, as many are aware of the concept and possess skills or access to training for non-oil and gas sectors. This aligns with Zhao (2024), who emphasizes the role of local institutions in shaping vulnerability outcomes, and Tao et al. (2023), who link vulnerability to

limited skills and capital. It also supports Zabbey et al. (2021), noting that dependence on oil activities weakens resilience and heightens vulnerability to market fluctuations.

The plausible explanation to this trend could be that most persons who responded to the instrument are gainfully engaging in their livelihood which does not have any connection with oil and gas. Furthermore, most persons who responded to the instrument have skills that will help them work in non-oil and gas sector.

## CONCLUSION

Based on the findings of the study, it concludes that a shift away from oil and gas does not pose a threat to the livelihoods of the people in the selected communities in Port Harcourt Metropolis, despite their low-income levels and lack of diversification.

## RECOMMENDATION

Based on the findings and conclusion of the study, the followings are recommended;

1. Value-added agriculture, small-scale agribusiness development, and micro-enterprise support should be included in livelihood diversification programs funded by government agencies, non-governmental organizations, and community development partners.
2. There should be concerted effort by governments and NGOs to strengthen non-oil economic pathways.

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