Artisanal Refining of Crude Oil, Human Security, and Alternative Livelihood Outcomes in Obhan-Emeyal (Kolo Creek) Area of Ogbia LGA in Bayelsa State

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Abstract

This study examines government efforts to curb oil bunkering in the Kolo Creek axis of Ogbia Local Government Area, Bayelsa State. Driven by poverty, unemployment, and marginalisation, artisanal oil refining has persisted despite severe environmental and security risks. Drawing on the assumptions of the Relative Deprivation Theory, this study examines how perceived economic exclusion fuels resistance to government interventions. A descriptive phenomenological methodology was adopted, employing in-depth interviews, focus group discussions, and key informant interviews to collect data from participants in Otuegwe II, Ibelebiri, and Oruma communities. Findings reveal that although military interventions disrupt illegal refining, they also exacerbate human insecurity, deepen economic distress, and upscale community distrust. Participants reported increased violence, displacement, and theft following the cessation of oil bunkering, with some youths turning to palm kernel oil production as an alternative means of livelihood. However, the economic hardship and lack of sustainable opportunities have made the allure of illegal refining enduring. The study recommends a shift from militarised responses to community-driven solutions. Government and stakeholders should prioritise sustainable livelihood programmes, such as agriculture, aquaculture, and value chains for palm kernel oil, to address root causes of poverty and unemployment. Meaningful community engagement and infrastructural development are critical for achieving long-term success in eradicating oil bunkering.

Keywords: Artisanal Refining, Human Security, Crude Oil, Niger Delta, Alternative Livelihood.

Introduction

Globally, illegal oil activities have evolved beyond isolated economic crimes to become significant threats to national and human security, particularly in conflict-prone regions such as Iraq, Libya, and parts of the Gulf. When poorly governed, oil exploitation often becomes intertwined with insurgency, criminal networks, and corruption, particularly in regions experiencing governance deficits and socio-economic marginalisation. The Kolo Creek community in Ogbia Local Government Area (LGA) of Bayelsa State has recently become a hotspot for oil bunkering and artisanal refining activities (Environmental Justice Atlas, 2022). These activities are deeply rooted in the socio-economic challenges of the region, driven mostly by youth unemployment,

widespread poverty, and persistent marginalisation of communities hosting oil facilities in the Niger Delta (Jack and Tokpo, 2021).

Artisanal refining, often referred to locally as 'kpo-fire', emerged as a means of economic survival despite its severe environmental and health impacts (Hart, 2024). This activity poses a significant human security challenge both for the refiners and their communities. This aligns with the understanding of the concept of human security as 'a way to protect the vital core of all human lives in ways that enhance human freedoms and human fulfillment' (Behnassi and McGlade, 2017). The Kolo Creek region, with its proximity to formal commercial oil installations, became a strategic location for these illicit activities, which became increasingly complex with the involvement of militant groups and local actors (Jack and Tokpo, 2021).

The Nigerian government has intensified efforts to combat oil bunkering, considered illegal, destroying nearly 6,000 illegal refineries and removing over 4,800 illegal pipeline connections. In late 2024, the Nigerian Navy launched Operation Delta Sanity to further curb oil theft (Vanguard, 2023; Nadig, 2024). These interventions have included the use of indigenous-based security firms (such as Tantita) and the Nigerian military for operations aimed at dismantling bunkering camps, without initiatives to promote sustainable livelihoods for former bunkerers (Ikelegbe, 2005). However, the effectiveness of these efforts has been mixed. While military interventions have resulted in a significant reduction of illegal bunkering activities by periodic disruptions (Iniemiesi and Yoroki, 2024), the persistence of economic hardship and the allure of quick financial gains have made it difficult to eradicate the practice completely. Moreover, local communities often view these operations with suspicion, as they are perceived to lack genuine engagement and fail to address the root causes of illegal refining (Nwachukwu and Tumba, 2023). Hence, this study aims to assess the human security impact of government schemes and the livelihood alternatives to bunkering as indigenes navigate through the realities of living with oil.

Literature Review

Comparing Global and Nigerian Perspectives on Oil Bunkering and Artisanal Refining

Oil bunkering and artisanal refining occur in multiple oil-producing regions worldwide, each shaped by unique socio-political and economic conditions. In Libya, the post-2011 civil war era has witnessed increased illicit oil activities, fueled by weak state control and armed group involvement. A notable example is the Mardi oil tanker, which vanished from tracking systems for a month in March 2024 before reappearing near Libya after smuggling 13,000 tonnes of diesel to Benghazi's old harbor, highlighting ongoing challenges in resource governance (Financial Times, 2025). Similarly, Iraq has faced large-scale fuel smuggling networks that reportedly generate $1 billion annually, exploiting state-subsidized fuel allocations intended for asphalt plants. Between 500,000 and 750,000 metric tons of fuel are siphoned off for export, primarily to Asia,

demonstrating how regulatory loopholes enable illicit trade (El Dahan and Saba, 2024). In Russia, international sanctions have led to the rise of a "shadow fleet" transporting oil covertly. In December 2024, the United Kingdom sanctioned 20 such vessels responsible for smuggling over 4 million barrels of Russian oil, underscoring the complexities of enforcing global trade restrictions (Ravikumar, Piper and Young, 2024).

Nigeria's Niger Delta region remains one of the most severely affected by illegal oil bunkering and artisanal refining, with an estimated 200,000 to 300,000 barrels of oil lost daily (Obenade and Amangabara, 2011). The underlying drivers—poverty, unemployment, and perceptions of economic marginalisation—align with global trends, however, Nigeria's case is further exacerbated by environmental devastation and the sheer scale of operations. Unlike Iraq, where fuel subsidies are exploited for profit, Nigeria's artisanal refiners often claim to be responding to local fuel shortages. Compared to Libya, where political instability fuels smuggling, Nigeria faces a complex mix of state neglect and entrenched local resistance. The commonalities across these regions suggest that addressing illegal oil activities requires not only enforcement but also robust economic diversification and community-inclusive governance strategies. Figure 1 below provides a clearer comparative picture of the loss of oil between these countries.

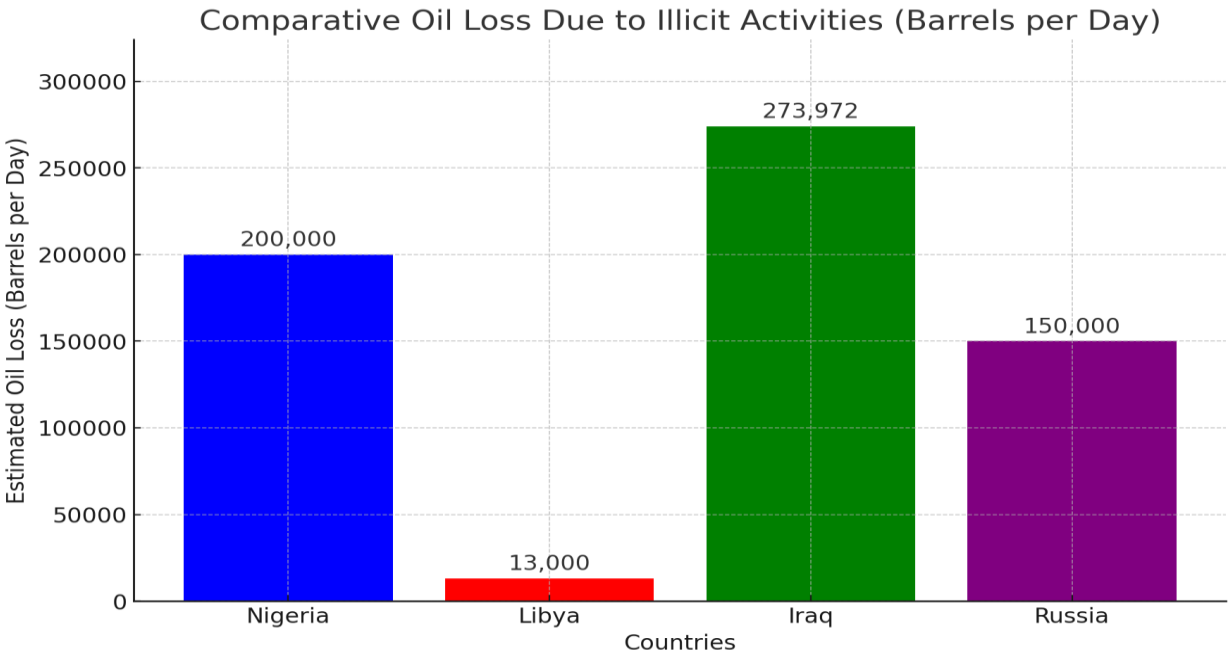

Figure 1: Estimated oil losses due to illicit activities in Nigeria, Libya, Iraq, and Russia (**Sources:** El Dahan and Saba, 2024; Obenade and Amangabara, 2011; Ravikumar et al., 2024).

Historical Overview of Oil Bunkering and Government Interventions in the Niger Delta

Artisanal refining, also known as illegal refining, involves the unauthorised processing of crude oil using rudimentary methods to produce petroleum products. This practice is predominantly carried out by local operators who construct makeshift refineries in remote locations, often near oil pipelines or creeks. Artisanal refining has emerged as an alternative means of economic survival for communities in the Niger Delta, where formal employment opportunities are scarce. While it provides a source of income, it also contributes to severe environmental pollution, deforestation, and health hazards due to the release of toxic chemicals and crude refining waste (Sam, Pegg and Oladejo, 2024).

The rise of oil bunkering, which encompasses the illegal syphoning, theft, and sale of crude oil, has been closely linked to the evolution of artisanal refining (Bodo, et al 2020). Initially, oil bunkering was driven by political and economic instability, but it expanded significantly in the 1990s as local actors and organised groups sought to profit from the region's vast oil resources (Sam et al., 2024). The involvement of local youths, ex-militants, and criminal networks has further entrenched this illicit economy, making it a persistent challenge for both the government and oil companies operating in the region (Nwozor, Olanrewaju and Ake, 2020).

The Niger Delta, a region blessed with abundant crude oil reserves, has been plagued by the challenges of oil bunkering and artisanal refining for decades (Raimi, 2023). Oil bunkering escalated in the 1990s, decades after oil was discovered in Oloibiri in 1956 (Watts and Ibaba, 2011), in Ogbia Local Government Area, leading to widespread environmental degradation, economic losses, and social unrest (Ojo and Beaulieu, 2024). The situation in Kolo Creek, Ogbia LGA, exemplifies the broader issue in the Niger Delta, where local communities, driven by poverty, unemployment, and the economic marginalisation from oil wealth, engage in these illegal activities to sustain their livelihoods.

The Nigerian government has implemented policy-based (Uzorka and Henshaw, 2022), community-partnered (Jack and Tokpo, 2021), and militarised (Naku, 2024) interventions aimed at curbing illegal oil bunkering in the region. The Nigerian government has used militarised responses to combat illegal refining, such as the destruction of 65 illegal refineries in 2024 (Naku, 2024), the November 2024 operation that dismantled 46 illegal refining sites in Ebuocha in Rivers State (Omonobi, 2024), the January 2025 crackdown on 20 illegal refineries in Akwa Ibom, Bayelsa, Delta, and Rivers states (Orugbani, 2025), and the March 2025 state of emergency in Rivers State aimed at curbing pipeline vandalism (Reuters, 2025). These operations have led to the destruction of makeshift refineries and the seizure of stolen crude oil. Despite these efforts, the effectiveness of militarised interventions has been questioned due to the cyclical resurgence of illegal refining and the community's dependence on it as an economic lifeline. Militarised interventions against illegal refining do not also provide a sustainable remedy (Omozue, 2021), as they fail to address the root socio-economic drivers like poverty and unemployment.

In recent years, the Nigerian government has broadened its interventions against illegal oil bunkering beyond militarised operations to include environmental and socio-economic initiatives.

Notably, the Hydrocarbon Pollution Remediation Project (HYPREP) was established to implement the Ogoni Clean-Up Project, aiming to remediate environmental damage in Ogoniland caused by oil spills (Stakeholder Democracy Network, 2021; HYPREP, 2025). Additionally, the Niger Delta Development Commission (NDDC) has undertaken various projects to improve infrastructure and economic development in the region. However, the effectiveness of these initiatives in counteracting oil bunkering remains questionable. Reports indicate that HYPREP has faced significant challenges, including mismanagement and inadequate execution of cleanup efforts, leading to continued environmental degradation and community dissatisfaction (Ayodele, 2025). Similarly, the NDDC has been criticised for inefficiency and corruption, undermining its capacity to provide meaningful socio-economic alternatives to communities involved in illegal refining (Baala and Nwinkol, 2022).

The persistent environmental pollution and lack of substantial economic opportunities have perpetuated local grievances, contributing to the ongoing prevalence of illegal oil bunkers (Atoyebi, Sanni and Ugoh, 2024). Additionally, the government has initiated amnesty programmes for former militants involved in bunkering, offering them alternative livelihoods in an effort to transition them away from illegal activities. The profitability of illegal operations, combined with the absence of viable economic alternatives, creates a vicious cycle. For instance, the 2022 explosion at an illegal refinery in Imo State, which killed over 100 people, highlighted the risks but did not deter operators due to the high rewards (Reuters, 2025). A report by the British Broadcasting Corporation (BBC, April 2022) in Rivers State revealed that several individuals willingly abandoned careers in fields such as photography and computer science to engage in oil bunkering, citing significantly higher earnings despite the associated human security risks.

Effectiveness of Government Efforts in Kolo Creek: Challenges and Community Engagement

In Kolo Creek, Ogbia LGA, the government's attempts to curb illegal oil bunkering have been part of broader regional strategies aimed at reducing artisanal refining in the Niger Delta. These efforts have included military deployments to secure pipelines and oil installations, as well as coordinated operations to dismantle bunkering sites (Jack and Tokpo, 2021; AriseNews, 2024). However, the reliance on security forces has not been fully effective in eliminating the issue. Reports suggest that some security personnel have been complicit in oil theft, either by colluding with bunkering operators or by turning a blind eye to their activities (Transparency International 2019). Additionally, the difficult terrain of the Niger Delta, with its dense mangroves and waterways, allows illegal refining operations to relocate and evade law enforcement.

Despite periodic crackdowns, economic hardship remains a significant factor sustaining illegal bunkering. Many local residents, facing unemployment and lack of alternative income opportunities, see artisanal refining as their only viable livelihood. Environmental degradation from oil spills and gas flaring further exacerbates their economic difficulties, as fishing and

farming, the primary sources of traditional income, have been severely affected (Environmental Justice Atlas, 2022). The persistence of illegal refining in Kolo Creek points to the deep-rooted socio-economic problems that such interventions often fail to address (Achunike, 2020). Illegal oil bunkering in Kolo Creek is widespread and deeply rooted in the community's economy. Many residents rely on it due to unemployment and poverty, viewing government interventions as ineffective. Despite crackdowns, bunkering persists, with operations resuming even after deadly incidents (Iniemiesi and Yoroki, 2024).

A critical aspect of the government's failure to achieve sustained success in Kolo Creek lies in its limited engagement with local communities. Residents of Kolo Creek and the Niger Delta have long felt marginalised from oil wealth controlled by the federal government and multinational companies (Oluwaniyi, 2010; Usang and Ikpeme, 2015). This exclusion fosters mistrust, with communities perceiving military interventions as punitive rather than rehabilitative. In 2017, the Imiringi community forced Shell to relocate a gas pipeline blocking Kolo Creek, highlighting frustrations over decisions made without local input (Punch, 2017). Community leaders argue that government strategies often fail to involve local stakeholders, further deepening distrust (Olowola, 2025). In 2021, Kolo Creek communities threatened to disrupt Shell's operations over unfulfilled electricity promises, viewing mediation efforts as superficial (Allafrica, 2022).

In order to overcome these obstacles, some scholars and practitioners advocate for a more inclusive approach to development and governance in areas where illegal bunkering occurs. This would involve working with local communities to develop sustainable livelihood alternatives, such as agriculture, aquaculture, and skills training programmes (Giardi, 2023). There is also a growing recognition of the need for environmental justice in the region, as the communities affected by both legal and illegal oil activities bear the brunt of environmental degradation, which threatens their health, agriculture, and overall livelihoods. According to one of the participants, 'they burnt our farms and the waters, then the government came to stop it, and honestly speaking, we gained nothing in doing this' (CDC Member 2024, personal communication, 22 February).

The environmental degradation resulting from illegal oil bunkering and artisanal refining is severe, leading to pollution of water bodies, destruction of arable land, and loss of biodiversity (Ofurumazi et al., 2025). These adverse effects not only harm the ecosystem but also directly impact the health and livelihoods of local communities. However, despite the detrimental environmental consequences, the immediate economic benefits derived from these illegal activities often outweigh environmental concerns for many individuals. Consequently, while awareness of environmental damage exists, the pressing need for economic survival continues to drive participation in oil bunkering activities. A conversation with one study participant vividly illustrates this tension, directly connecting the cessation of artisanal refining and the rise in social disorder:

> …Me as a person, I'll want the artisanal refining to come back to Ibelebiri because I think it will reduce stealing and bring back some peace to our community... but

> now, with the business gone and no jobs to replace it, the boys are idle, and their desperation pushes them to rob neighbours and cause trouble... the refining kept things stable in a way we're missing now (S. Opukani 2024, personal communication, 3 March).

Theoretical Framework

Relative Deprivation Theory

The Relative Deprivation Theory was popularised by sociologist Samuel Stouffer and later developed by Ted Robert Gurr in his work *Why Men Rebel* (1970). Gurr emphasised the link between perceived deprivation and collective action, particularly in the context of social and political discontent. The theory assumes that individuals or groups compare their situation to a reference group and perceive themselves as relatively disadvantaged. This perception of inequality, especially when expectations do not align with reality, leads to feelings of frustration, anger, and discontent. In turn, these emotions may drive individuals or groups to seek redress through legitimate or illegitimate means.

Critics argue that the theory oversimplifies complex social phenomena by focusing predominantly on subjective perceptions of deprivation without adequately accounting for structural factors or the role of agency (O'mahony, 2009). Additionally, it has been criticised for its inability to predict specific behaviours since not all individuals or groups experiencing relative deprivation resort to conflict or illegal activities (Demmers, 2016; Pepper and Nettle, 2017).

The Relative Deprivation Theory is particularly relevant in analysing government efforts to curb illegal oil bunkering and artisanal refining in Kolo Creek. Many local residents perceive themselves as deprived of the economic benefits from oil resources while bearing the environmental and social costs of extraction activities. The sense of exclusion among Niger Delta residents has driven many to engage in artisanal refining and illegal oil bunkering as alternative economic pathways. According to the Relative Deprivation Theory, when individuals perceive a significant gap between their expected and actual welfare, they may resort to unconventional methods to bridge this disparity. In the Niger Delta, structural inequalities and corruption among political elites have contributed to such criminal behaviours (Rodrigue, 2021). Applying the Relative Deprivation Theory to this study, it becomes evident that the grievances of local communities stem from longstanding economic and political marginalisation. The theory helps explain why these communities continue to engage in illicit refining activities despite governmental crackdowns.

Methodology

In this study, data was collected through in-depth interviews (IDI), focus group discussions (FGD), and key informant interviews (KII). These methods enabled a detailed exploration of the lived experiences of indigenous community members and former oil bunkerers. The study area comprises the Otuegwe II, Ibelebiri, and Oruma communities in the Kolo Creek area, chosen for its status as a site for widespread illegal refining of crude oil. Participants were selected using purposive (snowball/referral) sampling. This technique ensured that those most knowledgeable about or affected by government interventions were included in the study. The respondents were also drawn from those who had lived in the communities before and during the rise of oil bunkering activities. Respondents were made up of refiners and community members. The data collected through the various interview methods were analysed using the thematic approach.

Findings and Discussion

Artisanal Refining and Human Security

Military intervention plays a significant role in shaping the human security experiences of participants in the artisanal refining sector in the Niger Delta. As detailed below, this study reveals that the constant threat of violence, destruction of property within the community, displacement, mass arrests, and loss of livelihood faced by artisanal refiners are disruptive. These factors highlight the significant and often traumatic influence of military actions on their sense of security. One participant recounted the risk of armed robbery faced by those transporting the illegally refined crude:

> One major challenge is the risk of armed robbery in the night; you might be a victim because, as they target the women who go to buy the product (illegally refined crude oil) in the night, you might be at the wrong place at the wrong time (P. Tarila 2024, personal communication, 3 March).

Another participant highlighted the dangers posed by militant security forces while simply attempting to cross the creek:

> Another risk is that when you're swimming across the creek, the general security made up of militants might think you are their opponent and shoot at you or not allow you to swim across and interrogate you or sometimes beat you up (G. Sunday 2024, personal communication, 5 March).

The entanglement with crime and violence (both from the military and the hired security of the refining site) significantly affects the human security of participants in the artisanal refining sector in the Niger Delta. Involvement in illegal refining activities often exposes individuals to criminal networks, conflicts over resources, and violent confrontations. The study reveals both direct and indirect forms of violence experienced by artisanal oil refiners, including threats, physical assaults,

and fatalities—often resulting from military operations and actions by contracted site security. These findings underscore the hazardous and volatile environment that local actors are forced to navigate daily. As one of the interviewees shared:

> The bad experience that made me stop was when I escaped death from gunshots by a different group that came to invade and take over the camp. That day I was at Otuegwe II in the bush; it was the first day I saw bullets like fire passing. That day, I was loading the pot (used for cooking crude oil) by 12 am, and after checking the line, I climbed the pot to check the level when I got a call from a friend to leave the area. Soon after, I heard gunshots and saw bullets passing, so I jumped down. Since my pot was at the end, we were the last people to escape; from a camp of over 200 people, only about 15 people were there. That was my first experience in 2021. The second one, in the same year, I was on top of the oven when it caught fire, but I jumped down. The third one was in 2022; while loading the pot, I was going to check when I met face-to-face with the Navy, and they told me they will shoot if I ran, but I still escaped, and their bullet missed me. Because of this experience, I said I wouldn't go back again when they called me last year (O. Alaibi 2024, personal communication, 7 March).

Severe safety and security risks associated with illegal oil refining in the Niger Delta profoundly impact the lives of those involved. The presence of armed robberies, as indicated by the targeting of women buying products at night, creates a constant threat of violence and theft. Additionally, the risk of being mistaken for opponents by militant security forces while crossing creeks exposes individuals to potential shootings and brutal interrogations. The harrowing personal accounts, such as narrowly escaping death from gunfire during camp invasions, avoiding fatal injuries from fires, and encountering armed forces, underscore the life-threatening dangers inherent in this activity. These security challenges not only endanger the lives of those directly involved but also contribute to a climate of fear and instability within the community, given that the communities witness frequent raids by the military as they search for those involved in oil bunkering.

All communities acknowledged a rise in distress and the feeling of a lack of safety. This was attributed to the constant fear of military raids, which affected both participants and non-participants in the community. Furthermore, the constant threat of fire outbreaks at cooking sites, along with serious health concerns, significantly affects the daily lives of residents. This situation can be considered a human security issue, as alluded to by a female farmer residing in the community.

Despite the financial appeal of artisanal oil refining, several community members expressed a deep sense of unease about its return. One female farmer from Otuegwe II reflected on the psychological toll it had on the village by noting that ‘if it were up to me, let it not return again because there is no rest of mind for the villagers. Although there is money, there is no peace of mind’ (O. Alaibi 2024, personal communication, 7 March). Another respondent from Ebelebiri echoed this anxiety,

stating, ‘when the business started, there was no rest in the community. Sometimes army men would come and chase people; we were always on the run’ (E. Wolo 2024, personal communication, 16 March).

This sense of instability extends beyond the illegal operators to non-participants in the community. One interview participant revealed how even routine activities like farming became dangerous, stating:

> During that time there was fear of going to the farm because of the faces or people you would meet in the farmland. There was fear in families as army men regularly came to search houses and threaten people to confess their involvement in the *kpo-fire* business (M. Nengi 2024, personal communication, 11 March).

Fear and anxiety are also pervasive elements of the human security lived experiences for participants in the artisanal refining. In exploring how the dangers of law enforcement crackdowns, explosions, and health hazards contribute to a persistent state of fear and psychological stress, the research reveals that indigenes lived in a constant state of fear of raids, exposing the chronic anxiety and dual sense of human and environmental insecurity that define the lived experiences of artisanal refiners.

Ending Artisanal Refining and Alternative Livelihoods

This section examines the lived experiences of respondents following the cessation of oil bunkering activities in the study area. Illegal oil bunkering, a widespread yet unlawful practice, has profoundly shaped the socio-economic and environmental landscape of the region. As the government, through military intervention, intensifies efforts to eliminate these activities, communities that once depended on the illicit industry are undergoing significant transitions. Through detailed accounts from affected individuals, this section aims to highlight the complexities and consequences of the end of oil bunkering, as well as the coping strategies adopted by residents in response. Jack and Zibima (2020) identified key coping mechanisms for soot pollution in Rivers State, including keeping windows shut, wearing masks, and seeking medical care. However, these measures offer only temporary relief amid ongoing health risks. The following responses illustrate how residents are adapting to life without oil bunkering.

Following the cessation of oil bunkering, many community members noted a spike in petty crimes, particularly theft and robbery. The loss of income from the illicit refining business created a vacuum that some attempted to fill through criminal means. As Mr. K. Alaowei (2024, personal communication, 16 March) observed, ‘stealing and robbery have returned since there is no money to keep up with their standard’ of living from the financial gain of the *kpo-fire* business. This view was not isolated, as one other participant noted that ‘...me as a person, I'll want it to come back because I think it will reduce stealing. If you can be getting N20,000 a day, why will someone go

and steal something of 3,000 naira?' (D. Julius 2024, personal communication, 12 March).

Due to limited access to economic benefits such as employment opportunities for unemployed youths, income generation from the sale of refined petroleum, and the stimulation of local economies through related businesses like transportation and food supply, illegal oil refining has become a means of wealth accumulation. Some individuals use their profits to build houses and establish businesses, while in some cases, proceeds from illegal refining contribute to community development by funding local projects and providing financial assistance to families. However, when illegal refining operations (known as *kpo-fire*) ceased, some residents turned to stealing as an alternative source of livelihood. This stealing was not limited to men, as women also played a role by assisting their partners, as one of the participants noted, '… before there was money for them to spend, but now since there is no money, they (girls) join leagues with their boyfriends to steal basically as informants to their partners' (L. Famgbe 2024, personal communication, 24 March).

The appeal of illegal oil bunkering is intensified by prevailing economic hardship, making it an attractive option despite its serious human and environmental consequences. Interview insights revealed this sentiment clearly:

> If bunkering comes back again, the people who'll need it and join are more than those who will reject it because of the money they will get and the hardship today. So, like 90% of people will go back to bunkering if it comes back (E. Monday 2024, personal communication, 15 March).

This indicates that despite the human security challenges associated with oil bunkering, individuals still see it as a quick path to wealth. Even with the youths' desire for the *kpo-fire* business to return, believing its financial benefits outweigh the human and environmental risks, the eradication of illegal refining has forced residents to seek alternative livelihoods. In Otuegwe II, a growing number of youths are now turning to palm kernel oil production, a traditional economic activity that has long been a staple in the Ogbia region of the state. This shift was captured by one participant who observed that 'since there is no money, the boys have started stealing. But because of the palm kernel work, most boys don't steal again… palm kernel oil cooking is the new bunkering' (O. Abiri 2024, personal communication, 26 March).

Plate 1: A palm fruit collection site, Otuegwe II Community, Kolo Creek, Ogbia LGA (Photo Credit: Authors, 2024).

The cessation of illegal oil bunkering in the Kolo Creek area of the Ogbia Local Government Area has led to significant socio-economic disruptions, evidenced by increased criminal activities, economic hardship, and shifts to alternative livelihoods like palm kernel oil production. Former oil bunkerers, now facing severe financial uncertainty and instability, often turn to theft and robbery, exacerbating community insecurity. The economic strain is further compounded by the involvement of women in criminal activities alongside their partners. However, the shift towards palm kernel oil production among some youths reflects not only their resilience but also the potential for sustainable economic diversification. By participating in this traditional trade, they are utilizing a historically significant industry in the Ogbia region, which offers a more reliable and sustainable option compared to illicit oil refining. This adaptation also shows a readiness to investigate legitimate sources of income, which promotes independence and lessens reliance on illegal activity. Palm kernel oil production has the potential to be a sustainable economic pillar for the impacted communities, fostering stability and long-term growth, provided it is adequately bolstered by training, resources, and market access.

Conclusion

This study illustrates that the suppression of artisanal oil refining in the Kolo Creek area has exacerbated human insecurity rather than alleviating it. While the assumption was that ending bunkering would lead to improved security and economic stability, the reality has been far more complex. Drawing from Nwajiaku-Dahou's (2012) analysis of the political economy of oil and rebellion in the Niger Delta, it becomes evident that the persistence of insecurity stems from structural inequalities, economic exclusion, and the failure of state interventions to provide sustainable alternatives. The displacement of former refiners has resulted in increased financial

distress, criminal activities, and community tensions, demonstrating that insecurity is not merely a consequence of illicit oil activities but also of state policies that fail to address underlying socio-economic grievances. As Nwajiaku-Dahou (2012) argues, the state's reliance on militarised responses often exacerbates instability, reinforcing patterns of resistance and deepening the sense of economic marginalisation. In this context, any meaningful resolution must go beyond enforcement measures to address the core issues of poverty, unemployment, and socio-political alienation that drive engagement in artisanal refining. While some individuals transition to alternative livelihoods, such as palm kernel oil production, these opportunities remain limited and insufficient in absorbing the displaced workforce. Without proactive economic policies and inclusive development strategies, the region risks continued cycles of deprivation and insecurity.

Recommendations

To mitigate the unintended consequences of ending artisanal refining, the following interventions are recommended:

1. Vocational and Technical Training: Establish training centres within affected communities, offering certification programmes in oil-related trades such as pipeline maintenance, marine transport operations, and equipment fabrication. These should be directly linked to employment opportunities within the oil and gas sector to ensure job placement.
2. Community-Managed Modular Refineries: Facilitate the establishment of small-scale, legal refineries operated as cooperatives by former artisanal refiners. Government support should include seed funding, regulatory guidance, and technical training to ensure compliance with environmental and safety standards.
3. Palm Oil and Aquaculture Development Programmes: Expand existing agricultural initiatives by providing interest-free loans, land access, and market linkages for former refiners transitioning to palm oil processing and aquaculture. The government should establish structured supply chains and cooperative societies to stabilise incomes and ensure market access.
4. Microfinance and Targeted Business Support: Launch a tailored microcredit scheme that provides low-interest loans for small-scale businesses, focusing on ventures such as fishing equipment rentals, agro-processing, and renewable energy businesses. Financial literacy and entrepreneurial training should accompany this support.
5. Infrastructure and Market Integration: There is a need to improve road networks and transport facilities to ensure the efficient movement of agricultural and locally manufactured goods to larger markets. This should be complemented by the development of storage and processing facilities to enhance value addition and reduce post-harvest losses.
6. Community-Led Security and Development Committees: Establish local security and economic planning committees that integrate community leaders, former refiners, and

government representatives. These committees should oversee development initiatives, ensuring transparency, participation, and alignment with community needs.

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