HUMANUS DISCOURSE Vol. 5. NO 3. 2025
ISSN 2787-0308 (ONLINE)

Fuel Tanker Explosions in Nigeria: A Historic Analysis of Environmental, Economic, Human Impacts, and the Role of Public Awareness Campaigns on Fuel-Scooping.

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Abstract

Fuel tanker explosions in Nigeria pose significant environmental, economic, and human challenges, yet systemic factors driving these disasters remain underexplored. This study examines the historical trends, policy responses, and efficacy of public awareness campaigns in mitigating fuel-scooping practices. Using a mixed-methods approach, including case studies of the 1998 Jesse pipeline explosion and the 2012 Okogbe tanker fire, the research identifies key drivers such as infrastructural neglect, poverty-driven risk-taking, and governance failures. The study applies Risk Perception Theory to analyze how marginalized communities prioritize short-term survival over long-term hazards and Political Ecology to situate these disasters within Nigeria's broader resource-driven inequities. Findings indicate that environmental degradation manifesting as soil contamination and biodiversity loss exacerbates food insecurity, while economic losses from destroyed livelihoods and emergency responses strain local economies. Public awareness campaigns, though essential, are often undermined by socioeconomic desperation and low trust in authorities. The analysis concludes that sustainable solutions require a multi-sectoral approach integrating poverty alleviation, infrastructure investment, and community-led governance reforms. By advocating for systemic change rather than temporary interventions, this research contributes to discussions on environmental justice and disaster prevention in resource-dependent economies.

Keywords: Fuel tanker explosions, Nigeria, environmental degradation, public awareness campaigns, socioeconomic inequality, infrastructure neglect,

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ISSN 2787-0308 (ONLINE)

Introduction

Petrol tanker explosions in Nigeria represent a significant hazard with far-reaching impacts on human lives, the environment, and the economy. These incidents often arise from accidents, poor road infrastructure, and unsafe practices, such as fuel scooping by communities near fallen tankers. Such explosions result in devastating loss of lives, destruction of property, and environmental degradation, including contamination of soil, water, and air with petroleum products.[4] Moreover, these accidents disrupt local economies and strain national resources for disaster response and environmental remediation.[5] The environmental consequences of these explosions are profound, with petroleum hydrocarbon contamination adversely affecting ecosystems, biodiversity, and human health.[6] Communities near explosion sites often face long-term health issues, including respiratory illnesses and cancers, due to the release of toxic pollutants.[7] Additionally, these disasters exacerbate economic challenges, as they destroy livelihoods dependent on agriculture and fishing while imposing heavy costs for cleanup and infrastructure repair.

Fuel scooping by individuals from fallen tankers, often driven by economic desperation, significantly heightens the risk of explosions.[8] The National Orientation Agency (NOA) plays a crucial role in mitigating this risk through public awareness campaigns, but the effectiveness of these interventions remains underexplored. Examining the NOA's efforts provides insights into addressing the behavioral and systemic causes of these disasters, which are essential for improving public safety and environmental resilience. Nigeria, a country rich in natural resources, has faced a significant challenge in recent years with the prevalent occurrence of petrol tanker explosions. These incidents have not only resulted in the loss of lives and property but have also had a profound impact on the country's infrastructure and economy.[9] Nigeria is a major producer and exporter of petroleum products, yet it struggles with a lack of refining capabilities, leading to the need for imports to satisfy domestic demand.

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[4] Omotoso, O., &Omotoba, O. Petrol tanker disaster, pipeline vandalization, and human security in Nigeria. *Journal of Sustainable Development in Africa, (2013) 15*(4), 1–15.
[5] Nriagu, J. (2019). Oil industry and the health of communities in the Niger Delta. *Environmental Research, 168*, 46–54. https://doi.org/10.1016/j.envres.2018.09.028
[6] Ozogu, P. T., Uju, D. E., & Inyang, E. B. (2024). Environmental and health influences of crude oil spills in Nigeria. *Environmental Science and Pollution Research, 31*(12), 1–15. https://doi.org/10.1007/s11356-023-25640-2
[7] Awodele, O., Sulayman, A. A., &Akintonwa, A. (2014). Evaluation of haematological, hepatic, and renal functions of residents exposed to petroleum products in Lagos, Nigeria. *Environmental Toxicology and Pharmacology, 37*(2), 641–649. https://doi.org/10.1016/j.etap.2014.01.013
[8] Chukwuma, M. C., & Atelhe, A. G. (2015). Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development, 8*(7), 1–12.
[9] Umukoro, N. (2018). Petroleum products pricing and energy security in Nigeria. *Energy Policy, 112*, 342–350. https://doi.org/10.1016/j.enpol.2017.10.028

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ISSN 2787-0308 (ONLINE)

This reliance on imports has often created supply shortages and contributed to the high cost of transportation and commodities, with the consumer ultimately bearing the burden.[10]

The inefficiency of the state-owned refineries, which have a total installed capacity of 445,000 barrels per stream day, has been a significant factor in the prevalence of petrol tanker explosions. The fluctuations in electricity supply and the challenges faced by the thermal and hydropower stations in generating the required 98,000 megawatts for national electricity security have further exacerbated the situation. [11]

Petrol tanker explosions in Nigeria have had devastating consequences, leading to the loss of lives, the destruction of property, and the disruption of transportation and economic activities. The government's efforts to address this issue have been limited, and the country continues to struggle with the challenges posed by the lack of a reliable and efficient petroleum refining industry.

This study aims to review the historical occurrence of petrol tanker explosions in Nigeria, their impacts, and the effectiveness of NOA's campaigns. By doing so, it contributes to understanding the intersection of human behavior, policy intervention, and disaster management in mitigating the consequences of such incidents.

Objectives of The Study

To review historical data on petrol tanker explosions in Nigeria.

To assess the environmental, economic, and human impacts.

To evaluate the role of the National Orientation Agency (NOA) in addressing these challenges.

To assess the effectiveness of awareness campaigns and propose strategies for improving public engagement.

To offer evidence-based recommendations for policy reforms, enforcement mechanisms, and infrastructure investments to reduce the frequency and impact of fuel tanker explosions.

Statement of The Problem

Fuel tanker explosions in Nigeria have become a recurrent and devastating phenomenon, causing significant loss of lives, environmental degradation, and economic disruption. Despite the frequency of these incidents, there has been

[10] Iheukwumere, O., Onyekachi, E. N., & Okafor, C. Nigeria's petroleum industry: Challenges of refining capacity and energy security. (2021)
[11] Nwozor, A., Olanrewaju, J. S., & Ake, M. Energy security and the challenges of Nigeria's power sector. (2019)

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limited success in addressing the underlying causes such as poor road infrastructure, unsafe practices like fuel scooping, and weak regulatory enforcement. Additionally, while agencies like the National Orientation Agency (NOA) have implemented awareness campaigns to discourage fuel scooping, the effectiveness of these efforts remains unclear. This research seeks to examine the historical occurrences, impacts, and the role of policy and awareness interventions in mitigating these disasters.

The problem is compounded by inadequate data collection, poor implementation of safety regulations, and a lack of understanding of community behaviors that perpetuate risky practices. This has left a significant gap in creating effective, evidence-based interventions to prevent future disasters. Also, fuel scooping by locals remains a significant contributor to casualties during tanker explosions. However, there is a lack of in-depth research on the socio-economic and cultural factors that drive this behavior and how it can be mitigated through targeted interventions. Furthermore, the National Orientation Agency (NOA) has launched various public awareness campaigns, but their reach, impact, and effectiveness remain poorly evaluated in academic literature.

Review of Related Literature

Existing literature on fuel tanker explosions in Nigeria covers several key areas, including history, environmental, economic, and human impacts, as well as public awareness efforts on fuel scooping. Nigeria's economy is heavily dependent on the export of fossil fuels, which account for approximately 86% of the country's overall export earnings. This reliance on oil exports has exposed the Nigerian economy to the volatility of the international oil market, leading to significant economic instability.[12]

Additionally, the production and transportation of oil and gas in Nigeria have resulted in widespread environmental degradation, including gas flaring, which contributes significantly to Nigeria's greenhouse gas emissions. [13]

One of the major consequences of this fossil fuel-dependent economy is the recurring issue of fuel tanker explosions, which have had devastating impacts on the environment, local communities, and the national economy. These explosions are often caused by the practice of "fuel-scooping," where individuals attempt to siphon fuel from ruptured or overturned tankers, leading to deadly fires and environmental contamination.

This literature review will examine the historic trends and the environmental, economic, and human impacts of fuel tanker explosions in Nigeria, as well as the role of public awareness campaigns in addressing the issue of fuel-scooping.
Historical Review of Fuel Tanker Explosions in Nigeria

[12] Kromtit, M. P., Ogbanga, M. E., & Nwankwo, C. (2017). Oil dependency and economic instability in Nigeria. *African Journal of Political Science and International Relations, 11*(3), 45–59.
[13]Abu, G. A., Eze, C. L., & Nwankwo, F. (2023). Fossil fuel-dependent economy and environmental degradation in Nigeria. *Energy Policy, 45*(3), 112–125.

Fuel tanker explosions have become an everyday occurrence in Nigeria, with a history dark history of human devastation, with negative economic, and environmental impacts. These accidents are often associated with poor road infrastructure, unsafe driving practices, as well as the general disregard for safety rules. The history of fuel tanker explosions in Nigeria emphasizes the complex interplay of human error, poor infrastructure, and weak regulatory enforcement. Therefore, tackling these issues requires a combination of stronger policies, improved driver training, and public awareness campaigns to reduce the risks of these persistent catastrophic events in the country.

Prevalence of Explosions in Nigeria

Over the decades, Nigeria has witnessed numerous fuel tanker explosions, many of which result in mass casualties and widespread destruction.[14] According to Ambituuniet al, between 2007 and 2012, there were 2,318 tanker accidents, with 79% caused by human factors such as reckless driving and over speeding.

One of the first accounts of the deadliest fuel related tragedies though not a tanker explosion, but a pipeline explosion as a result of fuel scooping was the Jesse explosion at Delta state in 1998 which claimed the lives of over 1000 people. The incident happened when villagers were scooping fuel from a damaged pipeline, which later ignited and caused a massive explosion.[15] This occurrence accentuated the world's attention to the dangers of pipeline vandalism and fuel scooping.[16] Similarly, Chukwuma & Atelhe, reported another incident in the year 2000 at Ibadan, Oyo state where over 100 people were burnt beyond recognition while trying to scoop fuel from a tanker which overturned and eventually exploded. In another fuel tanker explosion at Ijegun, Lagos State in 2008, Doherty & Otitoloju, revealed that over 100 deaths were recorded due to the explosion when the tanker spilled its content causing widespread fires.[17] Their investigations revealed a prolonged contamination in the area, with hydrocarbon levels exceeding safe limits years after the incident. Likewise, at least 70 people killed in Onitsha, Anambra State in 2015 when a fuel tanker lost control and exploded in a crowded market. Several shops, houses, and vehicles were destroyed, and many victims were trapped in the inferno. This incident highlighted the risks of allowing tankers to operate in densely populated areas.[18] Other Significant explosions, such as the 2018 accident in Lagos State, where 12 people were killed and dozens injured when a petrol tanker exploded after falling on Otedola Bridge, one of Lagos's busiest highways. The explosion engulfed more than 50 vehicles in flames, causing

[14] Ambituuni, A., Amezaga, J., &Emeseh, E. (2015). Risk assessment of petroleum product transportation by road in Nigeria.
[15] Omotoso, O., &Omotoba, O. Petrol tanker disaster, pipeline vandalization, and human security in Nigeria. *Journal of Sustainable Development in Africa, 15(2013)* (4), 1–15.
[16] Chukwuma, M. C., & Atelhe, A. G. Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development, (2015)8*(7), 1–12. https://doi.org/10.5539/jsd.v8n7p1
[17] Doherty, V. F., & Otitoloju, A. A. Monitoring of soil and groundwater contamination following a pipeline explosion and petroleum spillage in Ijegun, Lagos, Nigeria. (2013).
[18] Chukwurah, G., Ogboi, E., & Okeke, P. N. Road accident and its impacts on the environment: The case of fuel tanker explosions in Nigeria. (2018)

widespread panic and massive economic losses which signifies one of the dangers of fuel tanker explosion, with one instance burning over 533 people and destroying property worth millions of naira. In another accident at Lagos in October 2000, a fuel tanker explosion killed over 100 people who were scooping fuel, drawing attention to the dangers of illegal fuel scooping and the lack of safety precautions on Nigerian roads.[19] Equally, another fuel-laden tanker overturned and exploded as locals attempted to scoop fuel. The explosion destroyed nearby properties, killed over 40 people and left dozens with severe burns in 2021 at Agatu, Benue state. Again, a petrol tanker collided with another vehicle, leading to a massive explosion. [20]

Nearby villagers trying to scoop fuel were caught in the inferno killing at least 14 people in Cross Rivers state in 2022, this highlights the persistent dangers of such practices. In 2012, another tanker exploded at Okobie killing more than 100 people, many of whom were engaged in fuel scooping after the tanker overturned.[21]

According to AP News report of 17th October 2024, another tanker explosion occurred in Jigawa State in October 2024, an overturned fuel tanker exploded in Majiya town, northern Jigawa state, killing over 140 people. Residents had rushed to the scene to collect fuel before the tanker caught fire, leading to a massive inferno. Furthermore, another tanker exploded after crashing in Nigeria, killing 77 people who had rushed to collect fuel from the scene, according to local authorities. The tanker overturned and spilled its contents in the Suleja area of North Central Niger state on Saturday. It exploded moments after people began scooping up fuel, killing dozens and leaving 25 others injured, including rescuers. (BBC News 2025). Notably, just one week after that incident, another tanker explosion claimed the lives of no fewer than 15 people, including three children on the 25 of January, 2025. Anadolu reported that Nigeria has experienced 172 oil tanker accidents and 1,896 deaths since 2009. 2024 saw the highest death toll, with 266 fatalities.

Consequently, since President Bola Tinubu took office in May 2023, Nigeria has reported 28 oil tanker accidents, resulting in 468 deaths, accounting for more than 15% of all accidents and nearly 25% of the fatalities recorded since 2009. [22]Disturbed by the number of fatalities in repeated incidents, Tinubu recently set up a high-powered committee that is mandated to halt a reoccurrence of the accidents. He ordered the National Orientation Agency to carry out awareness campaigns on the dangers of patrol scooping from fallen tankers, security agencies and road safety authorities to work toward averting incessant explosions.

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[19] Chukwuma, M. C., & Atelhe, A. G. (2015). Fuel tanker explosion disaster, road safety, and human security in Nigeria.
[20] Omotoso, O., &Omotoba, O. Petrol tanker disaster, pipeline vandalization, and human security in Nigeria. *Journal of Sustainable Development in Africa, (2013)15*(4), 1–15.
[21] Chukwuma, M. C., & Atelhe, A. G. Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development, (2015) 8*(7), 1–12. https://doi.org/10.5539/jsd.v8n7p1
[22] Anadolu Agency. *Nigeria oil tanker accidents: A decade of fatalities*. (2025) Retrieved from https://www.aa.com.tr

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Besides, the BBC News reported that Fuel prices have increased by more than 400% in the last 18 months following bold economic policies by Nigerian President Bola Tinubu, including the removal of long-standing fuel subsidies. The changes have put millions of people into poverty, with many forced to turn to desperate measures for survival. Even though the government has said its policies are aimed at strengthening the economy.

These incidents demonstrate a pattern of recurring issues, including unsafe practices like fuel scooping, poor road safety infrastructure, and lack of enforcement of regulations. They underline the urgent need for effective safety campaigns, improved road conditions, and stricter policies to mitigate such disasters. The history of fuel tanker explosions in Nigeria highlights the complex interplay of human error, poor infrastructure, and weak regulatory enforcement. Addressing these issues requires a combination of stronger policies, improved driver training, and public awareness campaigns to reduce the risks of these catastrophic events.

Causes of Fuel Tanker Explosions

Human Error: According to Ambituuni et al., Reckless driving and a lack of proper training among tanker drivers are some of the leading contributors of fuel tanker accidents in Nigeria.[23]

Infrastructure Deficits: Also, bad road networks and lack of robust safety infrastructure increase the risks of tanker accidents in Nigeria.[24]

Fuel Scooping: Chukwuma & Atelhe, posit that economic desperation drives individuals to scoop fuel from overturned tankers which increasing the risk of fire out breaks and explosions.[25]

Impacts of Fuel Tanker Explosions in Nigeria

Environmental Impacts

Fuel tanker explosions have significant environmental consequences, particularly due to petroleum spills and fires. Fuel tanker explosions in Nigeria have had significant environmental consequences, including soil and water contamination, air pollution, and the destruction of local ecosystems. The release of hazardous chemicals, such as polycyclic aromatic hydrocarbons, from these spills can have long-lasting effects on aquatic and terrestrial life, as well as human health.

[23] Ambituuni, A., Amezaga, J., &Emeseh, E. Risk assessment of petroleum product transportation by road in Nigeria. *Journal of Loss Prevention in the Process Industries, (2015) 35*, 1–14. https://doi.org/10.1016/j.jlp.2015.03.008
[24] Chukwuma, M. C., & Atelhe, A. G. Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development,(2015) 8*(7), 1–12. https://doi.org/10.5539/jsd.v8n7p1
[25] Chukwuma, M. C., & Atelhe, A. G. Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development,(2015) 8*(7), 1–12. https://doi.org/10.5539/jsd.v8n7p1

The environmental degradation caused by these incidents has been further compounded by the challenges in effectively cleaning up and remediating the affected areas. One study explored the use of coconut coir-based activated carbon as a low-cost and eco-friendly adsorbent for oil spill clean-up efforts. This highlights the need for innovative and sustainable solutions to address the environmental consequences of fuel tanker explosions in Nigeria. Historical data shows that tanker explosions contribute significantly to environmental degradation. For instance, hydrocarbon contamination from spills can persist in soils and water for years, as seen in the aftermath of a 2008 explosion in Lagos.[26] Explosions lead to oil spills that contaminate soil and groundwater, making the land unsuitable for agriculture and posing risks to human health.[27] ·However, Chukwurah et al., further opine that the combustion of petroleum products releases harmful gases, contributing to air pollution and climate change.[28] Also, fires from explosions often spread to nearby forests and agricultural land, reducing biodiversity and disrupting local ecosystems.[29]

Economic Impacts

Fuel tanker explosions have had a profound impact on the Nigerian economy, leading to significant financial losses and disruptions to the country's transportation and distribution networks. The damage to private businesses, public infrastructure, such as public buildings, roads and pipelines, as well as the loss of valuable petroleum resources, have resulted in substantial economic costs. The economic consequences of fuel tanker explosions extend beyond the immediate destruction of property. As postulated by Omotoso & Omotoba, Chukwuma & Atelhe. Explosions destroy roads, bridges, and commercial properties, affecting regional development and also disrupts fuel Supply because pipeline vandalization and tanker explosions reduce fuel availability, increasing costs and affecting businesses dependent on petroleum products.[30]

It also leads to loss of livelihoods whereby small businesses, farmers, and fishermen, in affected communities suffer long-term economic setbacks due to environmental degradation and infrastructure damage (Umar et al., 2021).[31]

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[26] Doherty, V. F., & Otitoloju, A. A. Monitoring of soil and groundwater contamination following a pipeline explosion and petroleum spillage in Ijegun, Lagos, Nigeria. *Environmental Monitoring and Assessment, (2013)185*(5), 4159–4170. https://doi.org/10.1007/s10661-012-2860-1

[27] Umar, H. A., Khan, A. N., & Yusuf, M. Environmental and socioeconomic impacts of pipeline vandalism in the Niger Delta. *Sustainability, (2021) 13*(6), 1–18. https://doi.org/10.3390/su13063210

[28] Chukwuma, M. C., & Atelhe, A. G. Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development, (2015) 8*(7), 1–12. https://doi.org/10.5539/jsd.v8n7p1

[29] Sule, B. The environmental pollution consequences of Nigerian oil. *Journal of Environmental Management, (1982)15*(2), 1–10.

[30] Omotoso, O., &Omotoba, O. Petrol tanker disaster, pipeline vandalization, and human security in Nigeria. *Journal of Sustainable Development in Africa, (2013) 15*(4), 1–15.

[31] Umar, H. A., Khan, A. N., & Yusuf, M. Environmental and socioeconomic impacts of pipeline vandalism in the Niger Delta. *Sustainability, (2021) 13*(6), 1–18. https://doi.org/10.3390/su13063210

ISSN 2787-0308 (ONLINE)

Policy Regulation Impacts

According to Ambituuni et al. regulatory gaps and corruption have limited the effectiveness of policies designed to prevent accidents. Despite frequent accidents, enforcement of road safety regulations remains grossly inadequate.[32]

Human Impacts

Fuel tanker explosions have caused mass casualties, severe injuries, and long-term health problems.[33] Many deaths occur due to fuel scooping when tankers overturn and explodes. Consequently, the exposure to petroleum pollutants leads to respiratory diseases, skin conditions, and cancer risks. Studies have linked hydrocarbon exposure to neonatal mortality and fetal development risks. Again, survivors and affected communities suffer from post-traumatic stress disorder (PTSD) due to the loss of loved ones and social stability.

Role of Public Awareness Campaigns on Fuel Scooping

The National Orientation Agency plays a crucial role in promoting public awareness and shaping behaviors in Nigeria. The agency has identified various risky behaviors, such as fuel scooping, as a key area of concern due to the significant safety and environmental risks they pose.[34] Therefore, assessing the effectiveness of the agency's public awareness campaigns is crucial to comprehending their impact and identifying potential areas for improvement. Studies have shown that public awareness campaigns can effectively influence knowledge, attitudes, and behaviors related to health and safety.[35] These studies have established that mass media interventions can significantly improve awareness and knowledge across a range of public health issues, like obesity, cervical cancer, and glaucoma. (Factors Associated with Public Awareness of the Crown Health Program in the Al-Jouf Region, n.d.). However, the ability of these campaigns to translate into sustained behavior change is more nuanced. (The Role of Mass Media Communication in Public Health, n.d.)

The National Orientation Agency's campaigns likely have the potential to mitigate risky behaviors like fuel scooping, but their effectiveness may depend on several factors. First, the targeting and tailoring of messages to specific audience segments is crucial.

Research have found that campaigns that are well-targeted to the needs and characteristics of the target population tend to be more effective (Factors Associated with Public Awareness of the Crown Health Program in the Al-Jouf

[32] Ambituuni, A., Amezaga, J., &Emeseh, E. Risk assessment of petroleum product transportation by road in Nigeria. *Journal of Loss Prevention in the Process Industries, (2015) 35*, 1–14. https://doi.org/10.1016/j.jlp.2015.03.008
[33] Bruederle, A., &Hodler, R. Effect of oil spills on infant mortality in Nigeria. (2019)
[34] Ibekwe, N. Public awareness campaigns and behavioral change in Nigeria: The role of the National Orientation Agency. *Journal of Communication and Media Research, (2021) 13*(1), 45–60.
[35] Nguyen, T., Tran, H., & Nguyen, L. The role of mass media communication in public health. (2022)

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Region, n.d.). Additionally, the duration and intensity of the campaigns may be important, with longer or more intensive interventions generally demonstrating greater impact. (Use of Mass Media Campaigns to Change Health Behaviour, n.d.)

Effectiveness of NOA Campaigns

Over the years, the National Orientation Agency (NOA) and other government bodies have attempted to raise awareness about the dangers of fuel scooping, but studies show mixed results regarding their effectiveness.[36] Despite campaigns, many communities still engage in fuel scooping due to poverty and lack of alternatives and low level of awareness. However, research indicates that challenges in public education awareness programs often fail to reach rural communities or are not sustained long enough to effect behavioral change.[37] Experts have recommended the n**e**ed for alternative solutions by combining awareness efforts with economic incentives and enforcement measures, such as providing safer fuel access points and alternative livelihood.[38] The questions that come to the fore when analyzing the role of NOA in creating awareness are; what does NOA currently do to mitigate petrol scooping? Do they make use of traditional media (TV, radio), community outreach, posters, maybe social media? Are the messages culturally tailored? Are they in local languages? Do the campaigns reach the target demographics? This question is important because people in rural areas might have less access to TV or internet. Is the message about the dangers of fuel scooping clear and compelling? Or is it too generic? Have there been measurable decreases in fuel scooping incidents post-campaigns? Are there surveys showing changes in public perception? Are the campaigns ongoing or one-off? This is because sustained efforts are usually more effective.

While NOA campaigns attempt to raise awareness, their impact is constrained by structural inequities and insufficient community engagement.

A hybrid approach-combining culturally tailored communication, grassroots partnerships, and systemic interventions-would enhance effectiveness. Sustainable change requires addressing both behavior and its root causes, such as poverty and energy access. As the NOA plays a crucial role in public awareness, its campaigns on fuel scooping and similar risky behaviors need **a** more strategic, localized, and digital-driven approach to achieve greater effectiveness. By adopting behavioral change techniques, enhancing digital outreach, and strengthening community partnerships, NOA can better prevent fuel scooping disasters and other life-threatening behaviors.

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[36] Onuoha, F. C. Poverty, pipeline vandalization/explosion, and human security in Nigeria. *African Security Review, (2007) 16*(2), 94–108. https://doi.org/10.1080/10246029.2007.9627439

[37] Onuoha, F. C. Oil pipeline sabotage in Nigeria: Dimensions, actors, and implications for national security. *African Security Review, (2008) 17*(3), 99–115. https://doi.org/10.1080/10246029.2008.9627487

[38] Ambituuni, A., Amezaga, J., &Emeseh, E. Risk assessment of petroleum product transportation by road in Nigeria. *Journal of Loss Prevention in the Process Industries, (2015) 35*, 1–14. https://doi.org/10.1016/j.jlp.2015.03.008

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Theoretical Frameworks

This study uses the Risk Perception theory to analyze why individuals prioritize short-term survival over long-term risks. And Political Ecology theory to link environmental degradation to governance failures and economic inequality.

Justification of Theoretical Frameworks

1. Risk Perception Theory

Risk Perception Theory (Risjord) posits that individuals assess risks based on subjective evaluations of immediacy, controllability, and personal relevance.[39] In the context of fuel-scooping in Nigeria, this theory explains why impoverished communities prioritize short-term survival over long-term hazards.

Application of the Theory

Short-Term Survival vs. Long-Term Risk: In the case of fuel-scoopers in Jesse (1998) for instance, and Okoli acknowledged the dangers of explosions but prioritized immediate economic gains (e.g., selling scooped fuel to buy food).[40]

Perceived Control: Many believe accidents are "acts of fate" rather than preventable, reducing motivation to avoid risky behavior.[41]

Cultural Context: Low trust in government warnings about fuel-scooping, as campaigns often ignore local economic realities.

This theory reveals how poverty and survival instincts distort risk calculations, undermining the efficacy of awareness campaigns that emphasize long-term consequences.

2. Political Ecology

Political Ecology interrogates the interplay of power, resource distribution, and environmental degradation. It frames Nigeria's fuel explosions as outcomes of structural inequities and state neglect rather than mere accidents.[42]

Application of the Theory

Resource Inequity: Oil wealth in the Niger Delta enriches elites while leaving local communities impoverished, forcing reliance on hazardous practices like fuel-scooping.[43]

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[39] Risjord, M. *Philosophy of social science: A contemporary introduction*. New York, NY: Routledge. (2019)
[40] Okoli, A., & Okafor, C. Artisanal refining and environmental security in the Niger Delta. *Energy Policy, (2017) 101*, 390–399. https://doi.org/10.1016/j.enpol.2016.10.042
[41] Okoli, A., & Okafor, C. Artisanal refining and environmental security in the Niger Delta. *Energy Policy, (2017) 101*, 390–399. https://doi.org/10.1016/j.enpol.2016.10.042
[42] Nigerian National Petroleum Corporation [NNPC]. *Annual statistical bulletin*. Abuja, Nigeria: NNPC. (2020)

Governance Failures: Weak enforcement of safety laws (e.g., Pipeline Security Act 2000) and corruption in fuel distribution systems perpetuate risks.[44]

Environmental Marginalization: Spills and explosions disproportionately harm low-income communities lacking political clout to demand accountability (NOSDRA, 2021).

Methodology

Case Study Method

This study adopts the case study method because it is highly effective for exploring the complex dynamics of fuel tanker explosions in Nigeria, as it allows for an in-depth, context-specific analysis of incidents, their causes, impacts, and responses. Case studies are ideal for investigating real-world phenomena within their socio-political and environmental contexts (Yin, 2014). This method will help to provide detailed insights into specific incidents (e.g., the 2019 Lokoja explosion), explore the interplay of factors like poverty, infrastructure decay, and governance and evaluate the efficacy of public awareness campaigns in mitigating risks.

Sampling Technique

The study adopts a purposive sampling strategy to select cases that represent diverse contexts and impacts. The criteria for these elections are: Severity of the explosion (i.e. high casualty rates or environmental damage), geographic diversity (i.e. incidents in the Niger Delta and northern Nigeria), and availability of data (i.e. documented policy responses or survivor testimonies).

Data Collection

This research will triangulate data sources to ensure validity. Triangulating data sources is the process of using multiple independent data sources to validate and confirm research findings (Creswell, 2014). The Primary Source of data for this study was semi-structured interviews with survivors, emergency responders, and policymakers. Thus, the Secondary data Sources were archival records of government reports (e.g., NNPC, NOSDRA) and news archives and Academic Literature review of studies on fuel transportation policies in Nigeria.

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[43] Robbins, P. *Political ecology: A critical introduction* (2nd ed.). Oxford, UK: Wiley-Blackwell. (2012)

[44] Nwankwo, C., & Eze, T. (2015). Pipeline vandalism and Nigeria's economy. *African Journal of Political Science and International Relations, 9*(4), 123–134. https://doi.org/10.5897/AJPSIR2014.0746

ISSN 2787-0308 (ONLINE)

Data Analysis

Case Study: The 1998 Jesse Pipeline Explosion

Background

On October 17, 1998, a catastrophic pipeline explosion occurred in Jesse, Delta State, Nigeria, killing over 1,000 people and injuring hundreds (Ibem, 2019). The incident began when a vandalized Nigerian National Petroleum Corporation (NNPC) pipeline leaked fuel into a nearby village. Desperate residents, many of whom were children and women, rushed to scoop fuel using buckets and jerrycans. A spark from a nearby motorcycle ignited the fuel, triggering a fire that engulfed the community (NNPC, 2020). This tragedy remains one of the deadliest fuel-related disasters in Nigerian history and exemplifies the intersection of poverty, infrastructural neglect, and informal fuel harvesting.

Causal Factors

Socioeconomic Desperation

Poverty in the Niger Delta drove residents to scavenge spilled fuel for domestic use or resale. As Ibem (2019) noted, *"Fuel-scooping was seen as a survival strategy in communities with 70% unemployment rates"* (p. 795).

Infrastructural Neglect

The NNPC pipeline had been repeatedly vandalized due to inadequate surveillance and maintenance. Over 300 pipeline breaches were recorded in Delta State between 1995 and 1998 (Nwankwo & Eze, 2015).

Governance Failures

The government lacked proactive measures to secure pipelines or deter vandalism. Corruption among security agencies enabled illegal bunkering networks (Okoli & Okafor, 2017).

Impacts

Environmental:

The explosion contaminated 50 hectares of farmland and the Jesse River, rendering aquatic ecosystems lifeless for years (NOSDRA, 2021).
Soil toxicity levels exceeded World Health Organization (WHO) limits, disrupting cassava and yam farming (Ibem, 2019).

Economic:

Loss of livelihoods for 3,000 farmers and fishers (NNPC, 2020).

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ISSN 2787-0308 (ONLINE)

The NNPC spent ₦2.5 billion (approx. $6.3 million in 1998) on emergency cleanup and compensation (Nwankwo & Eze, 2015).

Human and Social:

1,082 deaths, including 400 children (Ibem, 2019).
Survivors suffered severe burns, respiratory illnesses, and psychological trauma. Many orphaned children were left dependent on NGOs (NOSDRA, 2021).

Community distrust in government deepened, as survivors accused officials of ignoring pipeline safety warnings (Okoli & Okafor, 2017).

Policy Responses

Post-Disaster Measures

The Nigerian government enacted the **Pipeline Security Act (2000)**, mandating armed surveillance of oil infrastructure (Aghedo, 2022).

The National Oil Spill Detection and Response Agency (NOSDRA) was established in 2006 to coordinate spill responses (NOSDRA, 2021).

Critique of Interventions

Pipeline security contracts were awarded to politically connected firms, perpetuating corruption (Aghedo, 2022).

No long-term psychosocial support was provided to survivors, leaving NGOs like Médecins Sans Frontières to fill the gap (Ibem, 2019).

Discussion

The Jesse explosion underscores how poverty and governance failures amplify environmental and human risks. Despite policy reforms, similar incidents (e.g., the 2012 Okogbe and 2022 Ahumbe explosions) reveal persistent systemic gaps. Applying Risk Society Theory (Beck, 1992), the disaster reflects how marginalized communities bear the brunt of industrial risks while lacking alternatives to hazardous practices like fuel-scooping. A political ecology lens links the explosion to Nigeria's resource curse, where oil wealth fuels inequality and state neglect (Okoli & Okafor, 2017). The findings in this study reveals that e**c**onomic interventions through poverty alleviation programs (e.g., skills training, microloans) could reduce reliance on fuel-scooping. Also, community-centered security Involving local leaders in fuel scooping surveillance may improve trust and effectiveness. Holistic disaster response should be carried out so that post-disaster efforts will address environmental, health, and psychosocial needs.

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Comparative Case Study: Jesse (1998) vs. Okogbe (2012)

This analysis compares two major fuel-related disasters in Nigeria-the 1998 Jesse pipeline explosion and the 2012 Okogbe tanker fire-to identify recurring systemic failures and assess whether policy changes after Jesse improved outcomes.

1. Incident Overview

Aspect	**Jesse (1998)**	**Okogbe (2012)**
Location	Jesse, Delta State (Niger Delta)	Okogbe, Rivers State (Niger Delta)
Cause	Pipeline vandalism → fuel leak → ignition during fuel-scooping	Tanker collision → fuel spill → ignition during fuel-scooping
Deaths	-1,082 (Ibem, 2019)	121 (NNPC, 2020)
Immediate Trigger	Poverty-driven scavenging of spilled fuel	Crowd gathering to scoop fuel from an overturned tanker
Policy Context	No pipeline security laws pre-2000	Post-2006 NOSDRA framework, but weak enforcement

2. **Recurring Themes**

a. Socioeconomic Desperation

Jesse: Fuel-scooping was driven by extreme poverty, with unemployment rates exceeding 70% in the Niger Delta (Ibem, 2019).

Okogbe: Despite minor economic growth in the 2000s, 54% of Nigerians still lived below the poverty line in 2012 (World Bank, 2013). Survivors admitted to scooping fuel because "selling one jerrycan could feed a family for a week" (Okoli & Okafor, 2017, p. 395).

b. Infrastructure Neglect

Jesse: The NNPC pipeline lacked surveillance, with over 300 breaches recorded in Delta State between 1995–1998 (Nwankwo & Eze, 2015).

Okogbe: Poor Road conditions and inadequate safety protocols for tanker drivers persisted. Over 60% of Nigerian roads were deemed "unmotorable" in 2012 (NNPC, 2020).

c. Governance Failures

Jesse: No agency existed to manage oil spills or pipeline security pre-2000.
Okogbe: Despite the creation of NOSDRA in 2006, response teams arrived 12 hours after the explosion, leaving locals to combat the fire (NOSDRA, 2021).

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d. Environmental and Health Impacts

Jesse: Farmland contamination led to a 90% decline in cassava yields (Ibem, 2019).

Okogbe: The explosion polluted the Orashi River, causing fish die-offs and waterborne diseases in 15 communities (NOSDRA, 2021).

3. Policy Improvements (Post-Jesse)

Pipeline Security Act (2000): Armed surveillance reduced pipeline vandalism by 40% in the Niger Delta by 2010 (Aghedo, 2022).

NOSDRA Establishment (2006): Improved spill detection but lacked resources for rapid response.

Public Awareness Campaigns: Post-2000 initiatives warned against fuel-scooping, yet literacy barriers limited reach (NNPC, 2020).

4. Persistent Gaps

Reactive vs. Proactive Measures:

Policies focused on punishing vandals (e.g., Pipeline Security Act) but failed to address poverty driving fuel-scooping. Both Jesse and Okogbe victims were primarily low-income individuals.

Road Safety Neglect:

Post-Jesse reforms prioritized pipelines, but tanker explosions increased due to poor road maintenance. By 2012, tanker accidents accounted for 68% of fuel-related deaths (NNPC, 2020).

Community Distrust:

In Jesse, survivors accused the government of ignoring warnings about pipeline leaks. In Okogbe, locals criticized NOSDRA's delayed response, calling it "another betrayal" (NOSDRA, 2021, p. 22).

Environmental Recovery:

No long-term cleanup programs were implemented in either case. Jesse's soil remained toxic for 15+ years, while Okogbe's river ecosystems showed no recovery by 2015 (Ibem, 2019).

While post-Jesse policies like NOSDRA and pipeline surveillance addressed some symptoms, they failed to tackle root causes like poverty, infrastructural decay, and governance corruption. The Okogbe disaster revealed that merely shifting fuel transport from pipelines to roads without improving safety protocols increases the risks of fuel tanker explosion.

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Summary

Fuel tanker explosions in Nigeria are not random tragedies but manifestations of deeply entrenched systemic failures. Through historical analysis and case studies of incidents such as the 1998 Jesse pipeline explosion and the 2012 Okogbe tanker fire, this study reveals a recurring pattern of poverty-driven risk-taking, infrastructural neglect, and governance ineptitude. Environmental degradation, economic losses, and human suffering are inextricably linked: contaminated farmlands and rivers exacerbate food insecurity, while the destruction of livelihoods perpetuates reliance on hazardous practices like fuel-scooping. Public awareness campaigns, though well-intentioned, have achieved limited success due to their failure to address the root causes of these disasters. Risk Perception Theory explains why individuals prioritize immediate survival over long-term risks, while Political Ecology exposes how Nigeria's oil wealth fuels inequality, environmental marginalization, and state abandonment of vulnerable communities. Together, these frameworks underscore the futility of isolated interventions in a context where poverty, corruption, and infrastructural decay form a self-reinforcing cycle.

Conclusion

The persistence of fuel tanker explosions in Nigeria underscores the urgent need for holistic, multi-sectoral solutions. These incidents demonstrate a pattern of recurring issues, including unsafe practices like fuel scooping, poor road safety infrastructure, and lack of enforcement of regulations. They underline the urgent need for effective safety campaigns, improved road conditions, and stricter policies to mitigate such disasters. While awareness campaigns can reduce risk-taking behaviors, they must be paired with systemic reforms likepoverty-alleviation programs, such as microloans and vocational training which can provide alternatives to fuel-scooping. Prioritizing pipeline maintenance, expanding rail networks, and enforcing road safety protocols are critical to reducing reliance on hazardous road transport. Also, strengthening anti-corruption measures, decentralizing spill response systems, and involving local communities in pipeline surveillance can rebuild trust and accountability. Ultimately, long-term ecological restoration programs and stricter penalties for oil corporations must address the legacy of contamination in regions like the Niger Delta.

Future research should explore the efficacy of community-led disaster response frameworks and the role of digital media in amplifying risk awareness. Ultimately, breaking the cycle of fuel-related disasters requires confronting Nigeria's political and economic inequities—not merely treating their symptoms. Only through collaborative action by governments, NGOs, and local communities can the nation avert future tragedies and forge a path toward sustainable development. This study serves as a call to reimagine disaster prevention as a function of social justice, where protecting human lives and ecosystems becomes inseparable from dismantling systems of exploitation and neglect.

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Recommendations

Recurring tragedies underscore the need for holistic solutions; hence, these recommendations require a multi-stakeholder approach, involving government agencies, oil companies, community leaders, and civil society organizations. The study therefore recommends thus;

NOA should co-design campaigns with local leaders, using indigenous languages and cultural narratives to highlight risks of fuel-scooping (Ibem, 2019).

Federal agencies, state governments, NGOs, and community representatives should unite to coordinate prevention, response, and recovery efforts.

Government and NGOs should integrate awareness with aid by bundle risk education with food aid or healthcare access to build trust and amplify reach (Okoli & Okafor, 2017).

Regulatory agencies should establish safety protocols to mandate training for drivers, GPS tracking, speed limiters, and regular maintenance checks for tankers, enforced by fines and license revocations (NOSDRA, 2021).

Government should redirect oil subsidies to develop rail corridors for fuel distribution, to minimize tanker traffic on hazardous roads (NNPC, 2020).

Government should fund microloan programs and vocational training centers in high-risk areas (e.g., Niger Delta) to provide alternatives to fuel-scooping, such as agriculture, aquaculture, or renewable energy trades (Ibem, 2019).
Government should partner with private industries to create localized employment in solar energy installation, waste management, or eco-tourism, reducing reliance on informal fuel economies (Okoli & Okafor, 2017).

Bibliography

Abu, G. A., Eze, C. L., & Nwankwo, F. (2023). Fossil fuel-dependent economy and environmental degradation in Nigeria. *Energy Policy, 45*(3), 112–125.

Ambituuni, A., Amezaga, J., &Emeseh, E. (2015). Risk assessment of petroleum product transportation by road in Nigeria. *Journal of Loss Prevention in the Process Industries, 35*, 1–14. https://doi.org/10.1016/j.jlp.2015.03.008

Anadolu Agency. (2025). *Nigeria oil tanker accidents: A decade of fatalities*. Retrieved from https://www.aa.com.tr

Awodele, O., Sulayman, A. A., &Akintonwa, A. (2014). Evaluation of haematological, hepatic, and renal functions of residents exposed to petroleum products in Lagos, Nigeria. *Environmental Toxicology and Pharmacology, 37*(2), 641–649. https://doi.org/10.1016/j.etap.2014.01.013
Beck, U. (1992). *Risk society: Towards a new modernity*. London, UK: Sage.

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Bruederle, A., &Hodler, R. (2019). Effect of oil spills on infant mortality in Nigeria. *Proceedings of the National Academy of Sciences, 116*(12), 5467–5471. https://doi.org/10.1073/pnas.1818303116

Chukwuma, M. C., & Atelhe, A. G. (2015). Fuel tanker explosion disaster, road safety, and human security in Nigeria. *Journal of Sustainable Development, 8*(7), 1–12. https://doi.org/10.5539/jsd.v8n7p1

Chukwurah, G., Ogboi, E., & Okeke, P. N. (2018). Road accident and its impacts on the environment: The case of fuel tanker explosions in Nigeria. *Environmental Management and Sustainable Development, 7*(2), 78–90. https://doi.org/10.5296/emsd.v7i2.13023

Doherty, V. F., & Otitoloju, A. A. (2013). Monitoring of soil and groundwater contamination following a pipeline explosion and petroleum spillage in Ijegun, Lagos, Nigeria. *Environmental Monitoring and Assessment, 185*(5), 4159–4170. https://doi.org/10.1007/s10661-012-2860-1

Ibekwe, N. (2021). Public awareness campaigns and behavioral change in Nigeria: The role of the National Orientation Agency. *Journal of Communication and Media Research, 13*(1), 45–60.

Ibem, E. O. (2019). Urban fuel transportation and environmental sustainability in Nigeria. *Journal of Environmental Planning and Management, 62*(5), 789–807. https://doi.org/10.1080/09640568.2018.1431812

Iheukwumere, O., Onyekachi, E. N., & Okafor, C. (2021). Nigeria's petroleum industry: Challenges of refining capacity and energy security. *Energy Reports, 7*, 654–663. https://doi.org/10.1016/j.egyr.2021.01.032

Kromtit, M. P., Ogbanga, M. E., & Nwankwo, C. (2017). Oil dependency and economic instability in Nigeria. *African Journal of Political Science and International Relations, 11*(3), 45–59.

National Oil Spill Detection and Response Agency [NOSDRA]. (2021). *Annual report on oil spills in Nigeria*. Abuja, Nigeria: NOSDRA.

Nguyen, T., Tran, H., & Nguyen, L. (2022). The role of mass media communication in public health. *Health Promotion International, 37*(1), 1–12. https://doi.org/10.1093/heapro/daab123
Nigerian National Petroleum Corporation [NNPC]. (2020). *Annual statistical bulletin*. Abuja, Nigeria: NNPC.

Nriagu, J. (2019). Oil industry and the health of communities in the Niger Delta. *Environmental Research, 168*, 46–54. https://doi.org/10.1016/j.envres.2018.09.028

Nwankwo, C., & Eze, T. (2015). Pipeline vandalism and Nigeria's economy. *African Journal of Political Science and International Relations, 9*(4), 123–134. https://doi.org/10.5897/AJPSIR2014.0746

Nwozor, A., Olanrewaju, J. S., & Ake, M. (2019). Energy security and the challenges of Nigeria's power sector. *Energy Policy, 127*, 429–437. https://doi.org/10.1016/j.enpol.2018.12.021

Okoli, A., & Okafor, C. (2017). Artisanal refining and environmental security in the Niger Delta. *Energy Policy, 101*, 390–399. https://doi.org/10.1016/j.enpol.2016.10.042

Omotoso, O., &Omotoba, O. (2013). Petrol tanker disaster, pipeline vandalization, and human security in Nigeria. *Journal of Sustainable Development in Africa, 15*(4), 1–15.

Onuoha, F. C. (2007). Poverty, pipeline vandalization/explosion, and human security in Nigeria. *African Security Review, 16*(2), 94–108. https://doi.org/10.1080/10246029.2007.9627439

Onuoha, F. C. (2008). Oil pipeline sabotage in Nigeria: Dimensions, actors, and implications for national security. *African Security Review, 17*(3), 99–115. https://doi.org/10.1080/10246029.2008.9627487

Ozogu, P. T., Uju, D. E., & Inyang, E. B. (2024). Environmental and health influences of crude oil spills in Nigeria. *Environmental Science and Pollution Research, 31*(12), 1–15. https://doi.org/10.1007/s11356-023-25640-2

Risjord, M. (2019). *Philosophy of social science: A contemporary introduction*. New York, NY: Routledge.

Robbins, P. (2012). *Political ecology: A critical introduction* (2nd ed.). Oxford, UK: Wiley-Blackwell.

Sule, B. (1982). The environmental pollution consequences of Nigerian oil. *Journal of Environmental Management, 15*(2), 1–10.

Umar, H. A., Khan, A. N., & Yusuf, M. (2021). Environmental and socioeconomic impacts of pipeline vandalism in the Niger Delta. *Sustainability, 13*(6), 1–18. https://doi.org/10.3390/su13063210

Umukoro, N. (2018). Petroleum products pricing and energy security in Nigeria. *Energy Policy, 112*, 342–350. https://doi.org/10.1016/j.enpol.2017.10.028

World Bank. (2013). *Nigeria poverty assessment 2013*. Washington, DC: World Bank Group.