



(REVIEW ARTICLE)



## Nigeria's Challenges in Implementing UNEP Recommendations on Niger Delta Oil Spills: An Information-Motivation-Behavioral (IMB) Model Perspective

Michael Maclean Botwe \*

*School of Public Administration, Florida Atlantic University, USA.*

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### Abstract

This paper aims to investigate the factors contributing to the limited implementation of the United Nations Environment Program (UNEP) recommendations on oil spills prevention in the Niger Delta by the Nigerian government. This paper utilizes a qualitative review of published academic papers, government reports, policy documents, news reports, industry reports, relevant legislation, and comprehensive analysis grounded in behavioral and environmental justice to elucidate the factors underlining the challenges in translating UNEP guidelines into actionable policies. This paper utilizes the Information-Motivation-Behavioral Skills (IMB) Model with environmental justice principles to identify and reveal the gaps and the need to implement the UNEP recommendations intentionally. In this paper, I highlight potential innovative recommendations that aim to enhance the Nigerian government's capacity to ensure effective and efficient implementation of the recommendations in dealing with oil spills in the Niger Delta for environmental protection and sustainability.

**Keywords:** United Nations Environmental Program (UNEP); Niger Delta; Oil Spills; Information Motivation Behavioral Skills (IMB) Model; Environmental Justice

### 1. Introduction

The Niger Delta region of Nigeria has been involved oil production since 1956. This oil production in the Niger Delta constitutes a fundamental component of developmental endeavor that evokes concerns about the human motivation for environmental exploration and resource utilization (Deinkuro et al., 2021). However, these activities have led to the degradation of the environment and the misunderstanding between the government of Nigeria, the Shell Petroleum Development Company (SPDC), and the Niger Delta region (Yakubu, 2017). That is, the involvement of oil exploration, exploitation, and production by oil companies, including multinational oil companies, resulted in a multitude of adverse effects on the environment and the well-being of the people living in the region of Niger Delta as a result of oil spills. Oil spillage in the Niger Delta region is blamed on corrosive and burst pipelines and tanks, vandalism or sabotage, inadequate care in the process of oil production, and engineering drills (Nwilo and Badejo, 2004; Elum et al., 2016). For instance, Ruffin (2012) explores how oil production companies operating in the communities of the Niger Delta employ primitive techniques that continuously discharge toxic wastes, extreme gas flaring each day, and no compassion for the people living in and around the Niger Delta.

Also, there exists a long history of human rights abuses by the petroleum companies operating in the Niger Delta, where oil spills cause so many challenges to the environment and the people. For instance, Shell oil company abuses human rights of the people leading to the deaths of those living in and around the Niger Delta through oil extraction that causes environmental pollution as a result of oil spills (Olsen et al., 2021). That is, the operation of the shell oil company violates human rights and subsequently leads to the death of those living in the Niger Delta region. This suggests that both the

\* Corresponding author: Michael Maclean Botwe

multinational oil companies and the Nigerian government lack sustainable management strategies in dealing with oil spills that cause environmental hazards in the Niger Delta region, such as the destruction of farmlands, water pollution, and dispersion of toxic substances (Mähler, 2010).

In 2006, the government of Nigeria officially requested the United Nations Environment Program (UNEP) to conduct a comprehensive investigation into oil spills in and around the Niger Delta region for recommendations to be implemented. In 2011, UNEP published a report about how oil spills or pollution have contaminated farmlands, surface and groundwater with hydrocarbons, and wells for drinking water with benzene (Udoh, 2018). This brought to bear the growing concerns about public health, food scarcity, and destruction of vegetation and aquatic animals in the Niger Delta region of Nigeria. There have been extensive studies on the Niger Delta Region of Nigeria because of its several years of environmental crisis caused by oil spills as a result of oil production. Kadafa (2012) provides an overhaul assessment of the environmental impacts of oil exploration and exploitation, demonstrating the adverse effects on the ecosystems and the public health in the Niger Delta region of Nigeria. Similarly, Okonkwo et al. (2015) examine the extent to which the activities of oil production and oil spills in the Niger Delta region of Nigeria contribute to numerous negative impacts on the environment, underscoring the need to make conscious efforts that will employ effective remediation measures.

In response, the United Nations Environment Program released twenty-seven recommendations, which included eight UNEP emergency measures, such as: all drinking water that comes from the wells where hydrocarbons are found be marked and awareness creation about the dangers associated with it, all households affected should be supplied with adequate safe drinking water, there should be persistent follow up on the health conditions of people who drink water from the wells contaminated with benzene, a survey should be conducted on all drinking water wells around those wells found to be contaminated, post sign boards should be mounted at places where hydrocarbons are found in the surface water, and people be informed to avoid bathing it and fishing from those waters, giving information to families who have their rainwater tested positive of hydrocarbons not to use the water, and mount an awareness campaign on dangers of artisanal refining (Amnesty International, 2014). As part of the report, UNEP proposes a \$1 billion USD initial capital contribution from both the oil industry and the government of Nigeria as a clean-up cost to be injected into the Environmental Restoration Fund for Ogoniland (UNEP, 2011; Nwozor, 2019). This underscores the need for collaborative efforts between the government of Nigeria, oil companies, and other stakeholders in the community to mitigate the menace of oil spills in the Niger Delta.

More so, Yakubu (2017) highlights that these recommendations entail regulatory frameworks, operational procedures, technical innovations, monitoring, and public health awareness. There were three recommendations partially implemented such as some awareness activities that have been carried out in the form of campaigns to end illegal oil-related activities in Ogoniland, aspects of work have been done in the context of the Hydrocarbon Pollution Remediation Project (HYPREP) in understanding environmental health, and some communities involved in illegal activities are engaged. In other jurisdictions, illegal activities continue (Amnesty International, 2014). However, the implementation of the UNEP recommendations has been limited in mitigating the oil spills in the Niger Delta region. This paper explores why the limited implementation of the UNEP recommendations given to the Nigerian government to prevent oil spills or pollution in Niger Delta region of Nigeria.

This paper utilizes the Information-Motivation-Behavioral Skills Model (IMB), Fisher and Fisher (2000) integrated with environmental justice principles as guides for understanding and assessing the limited implementation of the UNEP recommendations by the Nigerian government. The model has been utilized in health psychology, and its propositions are adaptable to the management of the environment.

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## 2. Literature Review

In 2011, there was a groundbreaking report by the United Nations Environment Program (UNEP) on Ogoniland that marks a tremendous milestone in mitigating the environmental crises in the Niger Delta region of Nigeria (UNEP, 2011). Lindén and Pålsson (2013) examine the key findings of the UNEP's report and recommendations on oil spills in the Niger Delta region of Nigeria, highlighting the exigency of the recommendations' implementation. However, there has been a slow pace regarding the implementation of the recommendations, for instance, the wars in the communities coupled with their inability to provide security for oil facilities has increased the incidents of oil theft and spills (Mmom and Ibukun, 2015). This slow pace in actualizing the UNEP's recommendations suggests institutional and socio-political challenges.

In addition, several research has been conducted to ascertain the challenges in implementing environmental policies in Nigeria. Onwueme (2017) and Laver (2014) explore the legal and institutional obstacles connecting the effective

management of the environment in the Niger Delta region of Nigeria, discussing how the government champions and breaches the international environmental standards. That is the government places the legal and military powers at the disposal of oil production companies without considering the dangers oil production poses to the local communities in a court case involving Shell Oil Company (Onwueme, 2017). Furthermore, the legal corruption of policy decisions to control and maintain compliance with the implementation of the UNEP recommendations is in disarray due to the lack of huge fines and enforcement of the environmental protection law on oil spills in the areas of the Niger Delta specifically (Donna et al., 2015, p. 217). For instance, "a senior staff at the Petroleum and Gas Association of Nigeria said the Chinese won contracts and got around local laws as they bribed the local official" (Taylor, 2014, p.399; Olutobi, 2021). Also, the provision of an act under the Nigerian Content Monitoring Board permits the acceptance of gifts from the members of the public, including oil and gas companies; if such gifts do not infringe on the Board's functions, suggesting conflict of interests that curtails environmental management and protections (Ngapi, 2015, p. 93). The Nigerian Land Use Act of 1990 says that "all lands belong to the state, and a person that acquires land does it for the interest of occupancy. Under Section 28, the state can revoke a right of occupancy for overriding the public interest" (Ngapi, 2015, p.94). The inconsistency and unclear path of how the Board should function has a negative effect that limits the Nigerian government from effective environmental management in the Ogoni land of the Niger Delta, the third largest mangrove ecosystem in the world.

Furthermore, Fintan and Ojikutu (2009) delve into how the issues of politics, economics, and social factors curtail the progress in finding solutions to the environmental pollution in the Niger Delta region. These issues include the militant's hijack of the Niger Delta, over 80% of the Gross Domestic Product coming from the region, and the people's expectations of roads, other infrastructural facilities to be constructed, and the chance to gainful employment by oil companies in the various communities, contribute negative impacts on the environment than positive outcomes (Afinotan and Ojkorotu, 2009). Also, in Nigeria, the transnational oil production companies in the Niger Delta region try to put in measures in addressing the objectives of their social responsibility practices through the practices of a number of Corporate-Community Involvement (CCI) (Idemudia, 2014). However, Idemudia (2014) posits that these transnational oil productions seek for alternative governance structures hence, posing limitations in addressing the environmental needs of the Niger Delta region. Benedict (2011) highlights the relevance of clear community engagement concerning the environmental management but notes that there may be challenges where the federal government's corporation with other stakeholders and partners in achieving meaningful engagement for sustainable development of the Niger Delta.

However, despite the numerous studies regarding the negative impacts of oil spills in the Niger Delta and the challenges in the implementation of the UNEP's recommendations given to the Nigerian government, there is a lack of research on utilizing the IMB model with environmental justice principles to study this circumstance. The application of the IMB model with environmental justice principles to oil spills mitigation policy implementation, specifically in the developing countries, is not much explored, even though it has been used in environmental contexts. This gap in literature suggests the lack of applying the IMB model with environmental justice principles in analyzing and understanding the challenges of implementing the UNEP recommendations in addressing this environmental problem of oil spills in the Niger Delta region of Nigeria.

In exploring the gaps in literature, the issues of environmental justice in the Niger Delta region draws increasing attention in Nigeria. Ejumudo (2014, p. 113) highlights that the concept of environmental justice is built on the principles that increases the significance of policy making that emphasizes equity and fairness toward individuals, groups, nations, communities, institutions, and others that are disadvantaged. In addition, Ejumudo (2014) assesses the environmental justice implications of oil spills in the Niger Delta region of Nigeria, highlighting how communities are marginalized and disproportionate in the face of the principles of fairness and equity that is in support of environmental justice. This implies a limited study regarding how the principles of environmental justice can be integrated into concrete policy actions and efforts particularly about the implementation challenges of the UNEP's recommendations in addressing oil spills in the Niger Delta region of Nigeria.

The lack of integration of environmental justice principles into concrete policy recommendations poses challenges. Historically, there have been environmental justice movements in the United States as Bullard and Wright (2012, p. 178) posit that there exists a huge gap in policy rhetoric and the implementation of environmental justice principles in addressing unequal protection and an end to environmental injustices. So, Bullard and Wright (2012) pointed out that each federal agency must include in their implementation of appropriate programs, policies, and activities; the environmental justice principles in their mission of addressing dangerous waste management effects on the environment. Similarly, Hoover et al. (2021) emphasize that when environmental justice actions are being put in place and directed at the prevention of current and future environmental hazards this will help value and protect the lives of people and their environments to curtail any forms of environmental injustices. Conversely, the gap of integrating the

environmental justice principles, particularly exists in the implementation of the UNEP recommendations in the contexts of addressing oil spills challenges in the Niger Delta region of Nigeria.

The lack of attention to the intersectionality of environmental justice with other forms of social marginalization becomes an area of research. Malin and Ryder (2018) explore how the intersectionality of race, class, and gender in the communities of the United States shapes the experiences of environmental injustices. Furthermore, Malin and Ryder (2018) elaborate that deeply intersectional environmental justice is crucial to addressing the differentiated needs and capabilities of groups that are marginalized. In South Africa, there is an acknowledgement and integration of environmental justice to ensure fair environmental right of every individual in the re-drafting of waste and pollution control laws (Glinski, 2003). In the Niger Delta region of Nigeria, while there is some research to address intersectionality, there exists, still, significant gaps, specifically in relation to the implementation of the UNEP recommendations as part of the remediation efforts on oil spills. Oluduro and Durojaye (2013) delve into gendered dimensions of environmental justice in the Niger Delta region of Nigeria, emphasizing how women are adversely impacted by the activities of oil exploitation and pollution. This is because Oluduro and Durojaye (2013) note the limited environmental justice studies and the failure of policymakers' integration and encouragement of gender mainstreaming in environmental policies and programs choices, including those related to UNEP recommendations in addressing oil spills.

The insufficient longitudinal studies in the area of environmental justice research inhibit the implementation of specific UNEP recommendations as remediations strategies of oil spills in the Niger Delta. In China, a rare longitudinal study is conducted to understand the environmental justice in the urban cities where the findings show that physical and social environment correlate statistically significantly with life satisfaction, emphasizes how the relevance of tracking changes as time goes on (Ma et al., 2018). Also, Mohai and Saha (2015) conduct longitudinal analyses of environmental justice studies in the United States in order to get a nuanced understanding of the persistent racial and socioeconomic disparities regarding the locations and distributions of toxic waste facilities. However, the lack of incorporating long-term study of environmental justice in the area of human and non-human species (Méndez-Barrientos et al., 2024), poses challenges in implementing UNEP specific recommendations on remediating oil spills in the Niger Delta region of Nigeria.

The IMB Model offers an established approach that aids in understanding how information dissemination, motivation alignment, and behavioral skills significantly influence AIDS-preventive behaviors as part of health behavior change (Fisher and Fisher, 1992). In a like manner, Fisher and Fisher (2023) employ Information-Motivation-Behavioral Skills of pandemic risk and preventive behavior to comprehend framework design, implementation, and assessment of interventions to promote behavioral change. Also, Hodges et al. (2020) explore the IMB as a guide for producing and examining interventions geared toward behavioral changes aimed at water conversations. So, the introduction to the IMB Model aims to contribute to theory and empirical-based efforts on the limited implementation process of the UNEP recommendations by the Nigerian government in the mitigation of oil spills in the Niger Delta region.

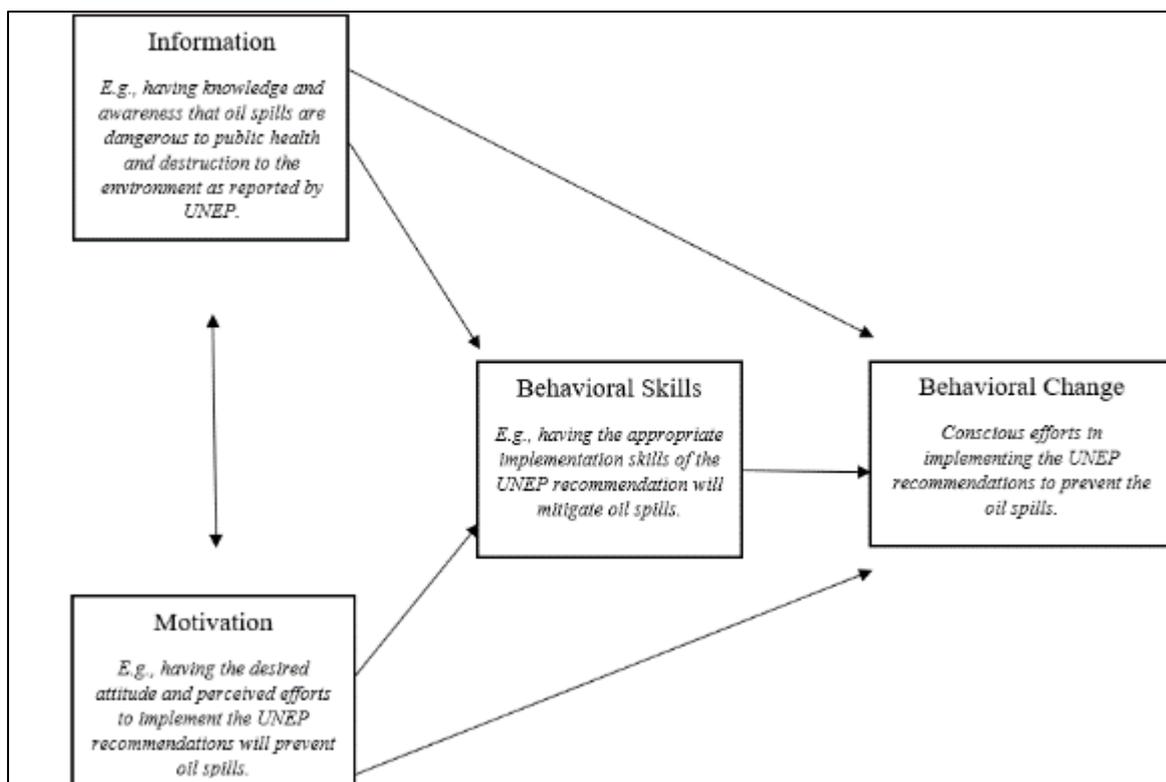
### **2.1. Theoretical Framework: Combination of the IMB Model with Environmental Justice Principles**

This paper combines the theoretical framework: the IMB Model with environmental justice principles. The integration of IMB Model with environmental justice principles will enable a comprehensive lens to rigorously assess the factors impacting the remediation efforts of implementing UNEP recommendations on oil spills in the Niger Delta region of Nigeria.

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## **3. Information-Motivation Behavioral Skills (IMB) Model**

The IMB model is originally developed as constructs of specific forms of information, motivational issues, and behavioral skills as basic determinants of behavioral changes (Fisher and Fisher, 1992). Similarly, the development of the IMB model is to promote behavior changes for the prevention of HIV (Fisher and Fisher, 2000, p. 38). The Information-Motivation-Behavioral Skills Model can be adapted in the context of environmental management to determine, for example, recycling behaviors as (Seacat and Northrup, 2010) posit. Consequently, this model can be applied to analyze and understand the factors impacting the implementation of UNEP recommendations on oil spill prevention in the Niger Delta region of Nigeria.



**Figure 1** The Information-Motivation-Behavioral Skills (IMB) Model with UNEP recommendations implementation on oil spills prevention examples in italics is below

### 3.1. Information

This component of the model encompasses basic knowledge and awareness (Fisher and Fisher, 1992) and the relevant information for desired behavior that will aid consistent performance of the said behavior (Seacat and Northrup, 2010) toward the issues of the environment, remediation strategies, and policy recommendations. The understanding of the UNEP's report and recommendations, negative effects of oil spills, and remediation techniques in the context of the Niger Delta region; there can be specific strategies for effective remediation (Zabbey et al., 2017). For instance, Zabbey et al. (2017) highlight that the UNEP's report indicates that remediation by Enhanced Natural Attenuation (RENA) is inappropriate for contaminated land clean-up, suggesting how the understanding of information is key to knowledge and awareness for behavioral changes to cater for proper implementation of specific policies recommendations to promote environmental management and sustainability. Within the domain of the Niger Delta regions of Nigeria, the information component of the model will help examine and understand the challenges of implementing the UNEP recommendations on oil spills remediation in Nigeria.

### 3.2. Motivation

This component refers to personal attitudes directed at preventive behaviors and the perceived efforts toward such behaviors (Fisher and Fisher, 1992), and both personal and social motivations suggest where high levels of positive attitudes to perform certain behaviors for personal benefits that outweighs the cost associated with it, and the motivation to engage in behaviors according to social norms and support (Seacat and Northrup, 2010) to act on environmental issues. The factors such as the perception about how oil producing companies will address legitimacy crisis they encounter in the Niger Delta, the voices of the poor and the marginalized that are related to environmental remediation (Idemudia, 2011). Additionally, the perception of how business Corporate Social Responsibility (CSR) activities are beneficial to environmental needs (Kulkarni and Aggarwal, 2022).

### 3.3. Behavioral Skills

This encapsulates how the presence of information and motivation aid in utilizing behavioral skills for reducing risks behaviors (Fisher and Fisher, 1992), the presence and acquisition of appropriate behavioral skills to enable appropriate behaviors for a successful performance by individuals (Seacat and Northrup, 2010) are essential abilities to undertake specific environmental remediation strategies and actions. Whenever there is comprehensive and clear information

available to people who are aware about negative impacts concerning a phenomenon, positive attitudes may be formulated for preventive behaviors, and strong perceptions in support toward such preventive behaviors (Fisher and Fisher, 1992). In the efforts to chart the path for environmental remediation actions, the integration of regular training into land management policy framework for technical skills acquisitions, and regulatory coordination (Sam et al., 2017) are needed to perform the implementation of specific UNEP recommendations on oil spills in the Niger Delta region.

### **3.4. Environmental Justice Principles**

Mohair et al. (2009) describe the environmental justice principle as a focus on fair treatment and meaningful engagement with all manner of people irrespective of their race, color, nationality, or the level of incomes regarding the development, execution, and enforcement of laws, regulations, and policies concerning the environment. The key principles consist of distributive justice that elaborates an impartial distribution of environmental harms (Pedersen, 2010; Schlosberg, 2013), procedural justice lays emphasis on the issues of participation, approaches to gaining information and justice for the minorities in neighborhoods, and the process of decision-making must be in compliance with free informed consent (Pedersen, 2010, p. 27; Walker, 2012), recognition justice explores the need to recognize the population of minorities and the underlying social factors alongside the approaches for distribution (Pedersen, 2010; Schlosberg, 2013), emphasis on a substantive right for all individuals to be protected from environmental degradation, and productive justice (Pedersen, 2010). These key environmental justice principles will help identify and analyze the challenges and an effective incorporation of them into the implementing of the UNEP specific policy recommendations on oil spills in the Niger Delta will be helpful as part of the remediation strategies. This is to say that through the concept environmental justice, there can be a good foundation being laid to understand environmental issues (Patsies, 2022), and the quest to prevent any environmental injustice. Furthermore, Méndez-Barrientos et al. (2024) emphasize the relevance of principles of equity, justice, and sustainability to guide and hold policymakers for accountability in the face of issues related to environmental justice.

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## **4. Research Question**

Why has the Nigerian government been limited in the implementation of the UNEP recommendations on oil spills in the Niger Delta and how can the IMB model with environmental justice principles, clarify the challenges and potential solutions?

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## **5. Methodology**

### **5.1. Data sources and collection methods**

This study is based on a comprehensive review of academic papers that include reports, and policy documents related to oil spills, UNEP recommendations, Amnesty International, the Nigerian government, and their implementation as secondary data sources. I conducted a comprehensive search using academic databases and search engines, focusing on studies published within the past decades for data collection. The IMB Model, integrated with environmental justice principles, is employed for coding the documents for analyses and discussions regarding the challenges in the implementation of the UNEP recommendations on oil spills in the Niger Delta region of Nigeria.

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## **6. Methods**

I used Qualitative Content Analysis approach for data collection and analysis of texts, archival, historical works, and others to understand a specific topic or issue (Hurst, 2023, p. 210). This method is helpful for understanding communication about certain studies of interest where it enables data collection, turning data into codes for rigorous analysis and presentation of the findings based on the analysis (Hurst, 2023). Kuckartz (2019) posits that the focus of qualitative content analysis is to enable the understanding of linguistic expressions, importantly when dealing with meaning and concepts. This approach of analysis offers a nuanced understanding of why the limited implementation of UNEP recommendations on oil spills in the Niger Delta region by combining the IMB Model with environmental justice principles.

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## **7. Procedure for Coding**

I wrote code for each article using NVivo version 14 software to ascertain challenges contained in information, motivation, behavioral skills, and environmental justice principles on the implementation of the UNEP recommendations on oil spill prevention in the Niger Delta region of Nigeria. The fundamental goal for me to use the

qualitative content coding is to explore which parts of the IMB and environmental justice principles that constitute the challenges in implementing UNEP specific policy recommendations on spills remediation strategies in the Niger Delta region. Interpretation-focused coding is employed as part of the coding strategies to extract statements that are relevant to this study to address the research questions from the data collected.

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## **8. Discussions**

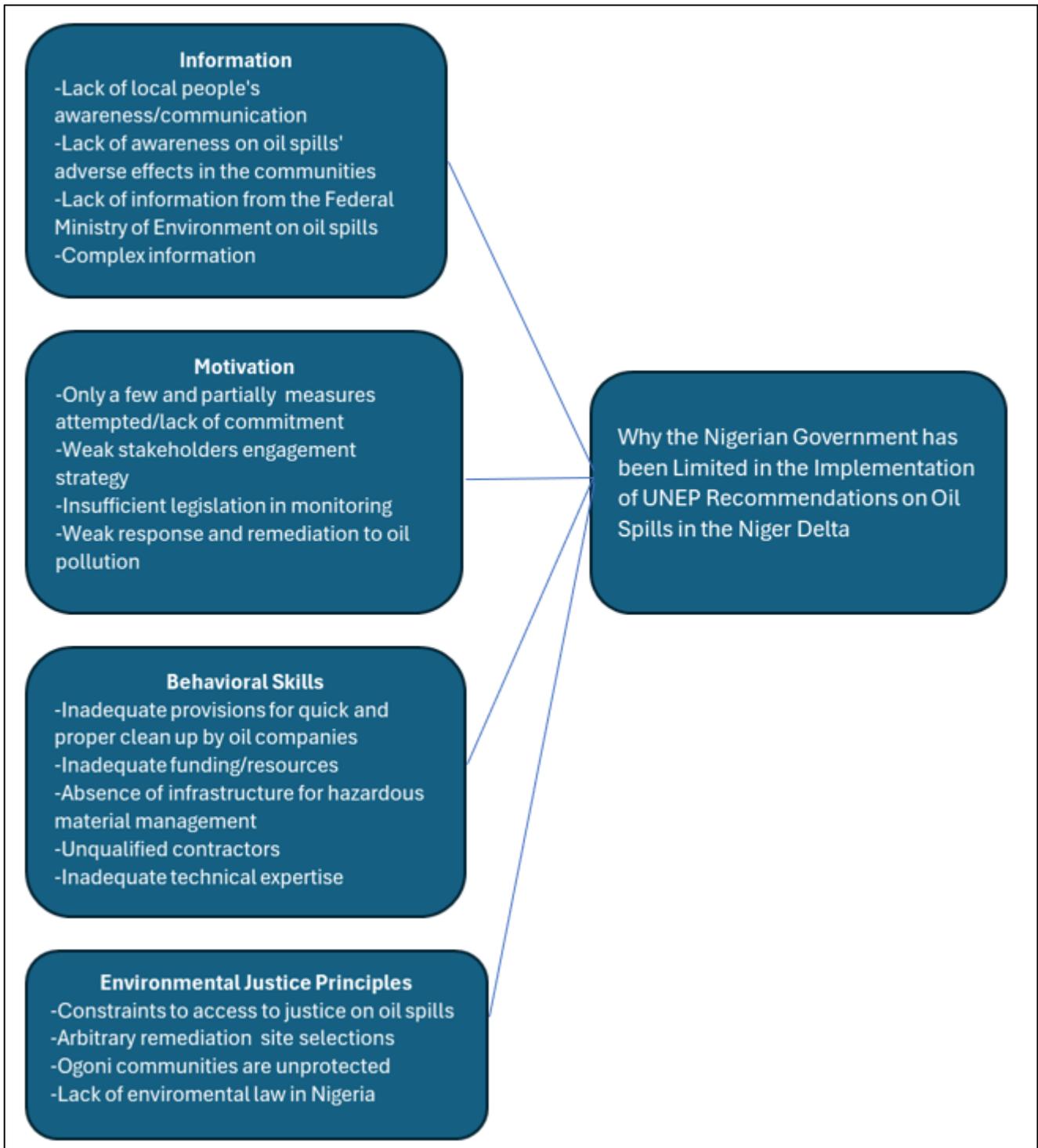
The discussions aspect addresses the research question, “Why has the Nigerian government been limited in the implementation of the UNEP recommendations on oil spills in the Niger Delta and how can the IMB model with environmental justice principles, clarify the challenges and potential solutions?”

The implementation of the UNEP recommendations is limited due to a lack of information, awareness, or communication regarding the adverse effects of oil pollution on the people and stakeholders in the communities. The Federal Ministry of Environment in Nigeria on oil spills could not disseminate effective information on oil spills’ effects, and difficulties in accessing some of the oil spill sites have contributed to the limited implementation strategies.

The motivation to implement UNEP recommendations has received some backlash. The restoration strategies proposed by the UNEP are entrapped in a bureaucracy where the responses to oil spill pollution have become insufficient. That is, conflicting responsibilities and approaches between regulators have been compromised, contributing to inadequate commitments. For instance, weak stakeholders’ engagement strategies and insufficient legislation monitoring the implementation of mining-related pollution.

The skills needed to implement UNEP’s recommendations effectively and efficiently have been limited by a lack of technical expertise and resources. The remediation processes have been inadequate due to funding, unqualified contractors, and the absence of infrastructure for hazardous material management. Inadequate provisions for quick and proper clean-up by oil companies limited the implementation of the remediation strategies, demonstrating the Nigerian remediation strategies do not meet international best practices.

Finally, the implementation of the UNEP’s recommendations has been limited due to issues of inadequate environmental justice principles. Most regions within the Niger Delta remain oil polluted, lack of compensation payment by polluters, and inadequate compliance with the law to prevent oil pollution limited the restoration strategies, demonstrating environmental injustices. Also, it could be found that the government and oil companies leave the communities of the Niger Delta to suffer oil spills because Ogoni communities are unprotected, demonstrating environmental injustices meted out to the people.



**Figure 2** Discussions of the limited implementation of UNEP recommendations

## 9. Potential Recommendations to Integrate into the UNEP Policy Recommendations Implementation

To find antidotes to the challenges in the implementation of the UNEP recommendations on oil spills in the Niger Delta region of Nigeria as part of its remediation strategies; the following recommendations are proposed

Develop and ensure access to equitable information campaigns to address specific community needs. Kellogg and Mathur (2003) delve into the importance of generating, accessibility and use of information in addressing environmental issues. Also, Altinay et al. (2023) examine how community information needs are crucial to stakeholders

through seminars, demonstrations, publications, workshops, and others for mitigating hazards. For instance, from the Louisiana Sea Grant Program's lens, scientific and expertise information concerning the marine and coastal problems offer various stakeholders the understanding of mitigation information (Altinay et al., 2023), highlighting that the access to equitable information about UNEP recommendations will contribute tremendously to the oil spills remediation strategies. In order to execute UNEP recommendations on oil spills in the Niger Delta region of Nigeria successfully, it is imperative to chart the route to develop effective equitable information accessibility campaigns geared toward particular needs of the communities.

Integrate environmental justice principles into policy design and implementation strategies. This involves the acknowledgement of the environmental justice principles such as distributive justice, recognition, capacity, and participation as applied to the environment and ecology used by the environmental justice movement in the USA and globally more than decades (Schlosberg, 2007). This is because environmental justice offers all manners of people equal rights to live and enjoy healthy environment and equal protection from toxic management of the environment (Hoover et al., 2021). That is, environmental justice can emphasize unfair treatment meted out to healthy lifestyle of people and to the good outcomes of public policies on the environment (Patsias, 2022). The inclusivity and equitable acknowledgement of environmental justice principles into policy design and implementation in the marginalized communities in the Niger Delta will help to address the disproportionate effects of oil spills on the environment and the social and economic injustices the communities' encounter. Schlosberg (2007) elaborated that the principles of environmental and ecological justice can be utilized in public policies to transform institutions in the implementation of broad and massive environmental justice. Also, Nwaomah (2013) delves into how the integration and implementation of environmental and ecological justice will guide in dealing with the oil spill problems in the Niger Delta region of Nigeria. When environmental justice principles are well integrated into policy design and prioritized in the implementation strategies, the rights of the affected communities can be protected.

Establish mechanisms that will aid meaningful community engagement in policy design and implementation processes. Kellogg and Mathur (2003) identify how Sustainable Cleveland Partnerships (SCP) evolved and became effective community-based service as a result of partnerships with local, state and national environmental organizations, and others for policy design and implementation. More so, Johnston (2010) emphasizes how individuals' trust, knowledge, and a feeling of community belongingness constitute strategies that aid the development of community knowledge, skills, norms, and motivation to create partnership in dealing with a shared community problem. In addition, Sam and Zibima (2024) identify civic engagement as a key factor relevant in the decision-making processes and participation in policy implementation. Again, in shaping the goals, priorities, and implementation of programs and policies, the incorporation of communities' voices for community participation are essential when dealing with procedures for environmental justice governance (Prado, 2019). For instance, the mobilization and connection of local skills and scientific experts, and attention drawn global knowledge evaluations by the environmental justice movements (Pickering et al., 2020) can benefit the realization of particular remediation strategies. In doing so, a meaningful community engagement as recommendation is essential for developing formal structures in Nigeria that will aid the voices of the communities to be heard and welcomed in the implementation of processes of the policy designs, involving feedback from the communities.

Provision of capacity-building and resources for developing the necessary behavioral skills, specifically in the marginalized communities of the Niger Delta. Altinay et al. (2023) emphasize that by engaging in collaborative efforts where individuals are provided with the prerequisite knowledge, skills, and resources, their sense of engagement and citizenry will be boosted for effective investment regarding the environmental sustainability of their communities. Furthermore, DeCorby-Watson et al. (2018) make a remarkably interesting point regarding capacity as a catalyst that can improve upon knowledge, skills, and changes in policies and behaviors. The capacity-building may involve motivation that will help effectively in adopting and implementing (Leeman et al., 2015), specific UNEP recommendations for mitigating oil spills pollution in the co Integrating these recommendations may have chance that will enable the empowerment of the individuals in the communities of the Niger Delta with the skills, expertise knowledge, and resources needed to intentionally involve themselves into advocacy and proper environmental management.

Creation of incentive packages to align with stakeholders' motivations with environmental justice goals and aspirations. The creation of incentive packages such as livelihood incentives will encourage individuals and others to move away from involving themselves in illegal activities that will pose threats to the environment (Joab-Peterside, 2019). Again, Duncan-Horner et al. (2021) ponder on how the integration of rewards and incentives into change processes are vital, highlighting how stakeholders will be motivated for cooperation that will ensure enhanced environmental goals and sustainable environmental management. The inclusion of financial rewards and programs that will recognize

environmental justice goals as incentives will entice and instill stakeholders' motivation to effectively support the engagement in the implementation strategies.

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## 10. Conclusion

In conclusion, this study has comprehensively assessed the limited implementation of the UNEP recommendations on oil spills in the Niger Delta region of Nigeria as it has been involved in oil production in the Niger Delta for over fifty years as a way of engaging in economic activities to earn income or generate revenues. This due to the fact that the oil production by oil companies, including multinational companies has caused tremendous challenges to public health, ecosystems, and the environment at large as result of oil spillage in the Niger Delta region. The oil spills in the Niger Delta region are as a result of corrosive pipes, and tanks, vandalism, lack of care regarding the oil production process and others.

The Nigerian government contracted the UNEP to conduct a comprehensive assessment of oil production in the Niger Delta for recommendations to be made to address the menace of oil spills in the Niger Delta region. The UNEP offered the Nigerian government twenty-seven recommendations to implement in addressing the oil spills. However, the government could only implement three of the recommendations partially. This suggests why the limited implementation of the UNEP recommendations given to the Nigerian government in addressing the oil spills in the Niger Delta region. In this paper, I utilize the IMB Model integrated with environmental justice principles as has been used in health, water conservation, and other policies, and how their propositions are adaptable to the management of the environment to get a nuanced understanding of the Nigerian government's challenges in implementation of the UNEP recommendations in addressing the oil spills in the Niger Delta region.

In a response to the why the limited implementation of UNEP recommendations by the Nigerian government on oil spills in the Niger Delta region, I used NVivo software version 14 to code the documents for analysis and discussions. The IMB model with environmental justice principles are used to identify the challenges. Among the challenges of implementing UNEP recommendations include the lack of access to information and awareness of the adverse effects of oil spills, inadequate commitment and weak stakeholders' engagement, inadequate resources and technical expertise, and constraints to access to justice on oil spills and insufficient environmental law in Nigeria of the remediation strategies.

The potential policy recommendations include enhanced dissemination of information to all stakeholders that are in government agencies, local communities, and companies involved in oil production. Additionally, educational campaigns as a form of motivational enhancement programs should be intensified, including the involvement of leaders in the communities to galvanize their base as a sense of ownership, responsibility, and accountability. Furthermore, offering capacity building and skill development training programs for technical and managerial skills geared toward effective management of the environment. This must come hand-in-hand with international organizations and educational institutions partnership to support the comprehensive implementation of the UNEP recommendations in addressing the oil spills in the Niger Delta region of Nigeria.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

I sincerely declare no potential conflicts of interest with respect to the research, authorship, and, or publication of this article.

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