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Developing a Chemical Database for Resolving Environmental Issues in the Petrochemical Industry in Nigeria

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Abstract

Petrochemical exploration in Nigeria poses a significant threat to the environment, health and livelihoods of local people. The inability to find a holistic solution to address amicably the issues associated with oil and gas exploration and production has resulted in an unending wave of tension, crises and countless legal battles between communities and oil operators. This development is further complicated by the lack of adequate capacity on the part of regulators in the sector. The situation has forced some oil operators to move their operations from land and shallow waters into the deep sea with the hope to reduce hostilities within operational facilities and conflict with local people. Despite efforts to have a better understanding among the stakeholders, particularly oil operators and local communities, environmental issues persist creating mistrust between parties. Developing a chemical database with a comprehensive contaminants profile in the petrochemical industry would improve the management of chemical spills and associated issues and bring some level of fairness to conflict resolution in the sector.

Keywords: pollution, environmental justice, Niger Delta, chemical screening, contaminants fingerprinting

Introduction

Petrochemical exploration in Nigeria poses a significant threat to the environment, health and livelihoods of community members due to the lack of global best practices in petrochemical spill management in the region. The inability to find a holistic solution to address amicably the environmental issues associated with oil and gas exploration and production has resulted in an unending wave of tension, crises and countless legal battles between communities and oil operators (Ekperusi et al. 2020; Ekperusi and Ekperusi 2021).

In a bid to avoid direct conflict with local communities and reduce hostilities within operational facilities, several multinational companies divest their interest in their onshore and shallow assets to indigenous players and move their operations to offshore or deep waters. Many stakeholders view this geographical