

Introducing Campfire Approach in Niger Delta Region: A Remedial Approach to Sustainable National Transformation

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Abstract

This paper aims at examining the introduction of Communal Area Management Programme for Indigenous Resources (CAMPFIRE) approach in Niger Delta region of Nigeria. It emphasizes CAMPFIRE as a remedial approach to resolve the heightening conflict over natural resources ownership between Federal Government and the Niger Delta states, focusing on the oil and gas resources in the region. It derived its lessons from the success of the Zimbabwe CAMFIRE approach in the 1980s as a community-based natural resource management programme which aims to promote sustainable livelihoods, conservation and community development by empowering local communities to manage and benefit from their natural resources. It proposed its CAMPFIRE approach as a strategic solution to combat pipeline vandalism, oil bunkery, illegal refining of crude, militancy, youth restiveness, etc. It recommends that to resolve the longstanding disputes over ownership rights of natural resources and ensure the sustainable management of these resources for the socio-economic benefit of both the nation and indigenous communities, balance the interests of all stakeholders, ensure the responsible exploitation of natural resources, and foster a more equitable and sustainable future for indigenous communities and the nation as a whole, there should be introduction of modular refineries, restoration of degraded environment. The Federal Government of Nigerian should introduce CAMPFIRE into its policy programme: reformation and legalization of policies concerning the natural resources rights of the host communities that have the natural resources in their traditional land and liase with non-governmental organizations and multi-national co-operations to support the evolution of CAMPFIRE for the conversation and management of natural resources for sustainable national transformation.

Keyword: CAMFIRE Approach, Remedial Approach, Sustainable, National Transformation, Modular refinery, Natural resources.

Introduction

The Niger Delta region, located in the southern part of Nigeria, is endowed with vast oil and gas reserves, which have fueled the country's economic growth for decades. Niger Delta region of Nigeria is richly endowed with mineral and biological resources. It is the main petroleum producing states of the nation. Niger Delta comprises of nine state which includes Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers State.

STATES	NATURAL RESOURCES
Abia	Gold, Lead/Zinc, Limestone, Oil/Gas & Salt
Akwa Ibom	Clay, Lead/Zinc, Lignite, Limestone, Oil/Gas, Salt & Uranium.
Bayelsa	Glau, Gypsum, Lead/Zinc, Lignite, Limestone, Manganese, Oil/Gas & Uranium.
Cross River	Barite, Lead/Zinc, Lignite, Limestone, Manganese, Oil/Gas, Salt & Uranium.
Delta	Clay, Glass-sand, Gypsum, Iron-ore, Kaolin, Lignite, Marble & Oil/Gas.
Edo	Bitumen, Clay Dolomite, Phosphate, Glass-sand, Gold, Gypsum, Iron-ore, Lignite, Limestone, Marble & Oil/Gas.
Imo	Gypsum, Lead/Zinc, Lignite, Limestone, Marcasite, Oil/Gas, Phosphate & Salt.
Ondo	Bitumen, Clay, Coal, Dimension Stones, Feldspar, Gemstone, Glass-Sand, Granite, Gypsum, Kaolin, Limestone & Oil/Gas.
Rivers	Clay, Glass-Sand, Lignite, Marble & Oil/Gas.

Source: <https://nigeria.gov.ng/about-nigeria/people-of-nigeria/search>

The management of natural resources is the primary assignment of the government as outlined in the 1999 Constitution of the Federal Republic of Nigeria, leaving the people in their traditional land where the natural resources are located no right to their resources. Specifically, Section 44(3) of the 1999 Constitution grants the federal government ownership and control of natural resources.

The exploitation of the Niger Delta' resources has sparked a long-standing conflict between indigenous communities and external stakeholders, including government agencies, non-governmental organizations, and multinational corporations. This has culminated in a range of social and environmental issues, including: youth restiveness, pipeline vandalism, oil bunkering, illegal refining of crude oil, militancy, etc. These problems have undermined regional stability, exacerbated environmental degradation, and perpetuated socio-economic disparities. The host community where the natural resources are located are not actively involved in the exploration and exploitation of the natural mineral in their traditional land. The resources in their land are relevant to them and has the potential to solve some problems in the rural settlements where majority depends on the resources as their major source of livelihood. Udoidem (2006) stipulates that these resources are the root cause of the crises in Niger Delta region.

In response to these challenges, this paper proposes the introduction of the CAMPFIRE approach, a community-led natural resource management model, as a remedial strategy for sustainable national transformation in the Niger Delta. Originating from Zimbabwe, the CAMPFIRE approach empowers local communities to manage and benefit from their natural resources, promoting sustainable development, environmental conservation, and social justice. By exploring the potential of the CAMPFIRE approach in Niger Delta, this will contribute to the development of innovative solutions for Sustainable National transformation.

Niger Delta region is rich in natural resources, being vast oil and gas deposits are the mainstay of the country's economy yet the traditional land owners where these mineral resources are located are languishing in lack and wants both of personal and communal need which has led to poverty. The host communities in the quest to have access and make a living from their resources have forcefully engaged in pipeline vandalization, illegal refining of oil and bunkery activities as a means of livelihood. Environmental pollution has become the order of the day, the land, water and air are highly polluted and degraded resulting from this illegal activities. Most of the indigenous people in these region engages in fishing, farming, hunting, etc to survive but the water body and land are already polluted so they produce little or nothing for survival: plants, seafood, animals, etc. are not gotten as before time. And relocating from their traditional polluted land is financially demanding which they can't afford

Communal Area Management Program for Indigenous Resources (CAMPFIRE) at these stage in Niger Delta is a remedial approach to redeem the people, reclaim resources, restored peace and unity amongst people and Government, restore degraded environment and bring about sustainability in the management of mineral resources for the socio-economic benefit of the people and the nation as a whole. The discourse surrounding the governance and stewardship of Nigeria's natural oil resources is analyzed at three levels: local communities, state governments, and the federal government. (Ibiam, 2021). This paper focuses on introducing the CAMPFIRE Approach, a community-led natural resource management model to the Niger Delta Region. The goal is to address the region's environmental, social, and economic challenges through a remedial approach, ultimately contributing to sustainable national transformation in Nigeria. The Federal Government of Nigeria bears the primary responsibility for implementing the CAMPFIRE approach, which would then be cascaded down to the state and local levels, ensuring a comprehensive and exhaustive execution. CAMPFIRE also

involves Community-Based Natural Resource Management (CBNRM) for sustainable national transformation.

Natural Resources in Niger Delta States

Niger Delta is indeed rich with biological and mineral resources. The sales of oil and gas makes up 95% of the country's foreign exchange earnings. (World Bank Group, 2024). Nigeria has ranked 11th position on a top-20 list of countries with largest proven oil reserves. (Energy Information Administration, 2021). However, the region's oil wealth has not translated into sustainable development, social justice, or environmental conservation for host communities. Instead, the Niger Delta has become synonymous with environmental degradation, social unrest, and economic stagnation.

Management of Natural Resources in Nigeria

The signing of the Nigerian Petroleum Industry Act (PIA) 2021 by President Muhammadu Buhari marked a watershed in the reform of the Nigerian oil and gas sector. The Petroleum Industry Act is a product of the various complains of players in the oil and gas industry and its host communities. According to section (234) of the Act, the aim of the Act includes but is not limited to; fostering sustainable prosperity, provide direct social and economic benefits from petroleum operations to host community, and create a framework to support the development of host communities. Also the 1999 Constitution of the Federal Republic of Nigeria stated that natural resources are owned by the Federal government of Nigeria, giving the indigenous community no sense of involvement to their own natural resources.

Section 44(3) of the 1999 Nigeria Constitution states:

"Notwithstanding the foregoing provisions of this section, the entire property in and control of all minerals, mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon the territorial waters and the Exclusive Economic Zone of Nigeria shall vest in the Government of the Federation and shall be managed in such manner as may be prescribed by the National Assembly."

"The Petroleum Industry Act 2021 mandates that upstream petroleum operators allocate a minimum of 3% of their annual operating expenses for the development of host communities, in accordance with Section 234 of the Act."

Section 234 of the Petroleum Industry Act 2021 states:

- (1) An upstream petroleum company shall contribute a minimum of three per cent of its annual operating expenditure to the development of the host communities.

(2) The contribution referred to in subsection (1) of this section shall be made to the Host Communities Development Trust established under this Act.

This provision aims to ensure that host communities benefit from petroleum operations and receive support for their development.

The involvement of the local community has been passive as they don't have rights to the resources in their traditional land in contrary to CAMPFIRE approach aimed at Community-Based Natural Resources Management: giving the indigenous people rights to their own natural resources as co-manager with the government.

Situation of Niger Delta

The Niger Delta region, comprising nine states, serves as the nation's financial backbone. However, the host communities in this region face stark realities, including pervasive poverty, unemployment, and a lack of basic social amenities such as good roads, healthcare facilities, functional schools, markets, electricity, and potable water.

The life expectancy rate in the region has alarmingly declined due to a surge in mortality rates, particularly among young people. The devastating consequences of unregulated crude oil refining activities are multifaceted. They include catastrophic explosions caused by unskilled and unprofessional refining processes, as well as severe health impacts resulting from the pollution of environmental media such as water, soil, and air.

Furthermore, the government's seizure of communal, familial, and ancestral lands, often without adequate compensation, has exacerbated the crisis. This land expropriation is justified by the Federal Government of Nigeria's assertion of ownership over territories rich in natural resources, disregarding the rights of indigenous communities.

Environmental degradation has become a persistent issue in the region. The ecosystem is threatened by pipeline vandalism, discharges from petroleum industrial processes, bunkering, and illegal refineries. These activities endanger the lives and properties of local residents in the host communities, exacerbating their already precarious living conditions. The implications of the degraded environment is seriously affecting the indigenous peoples adversely as their atmosphere is constantly polluted by hydrocarbons from burning of fossil fuels and illegal refining processes, loss of mangroves forest because of deforestation and construction of illegal refineries and explosion from the process, surface and underground water pollution as a result of oil spillage, depletion of fish population as a result of polluted water body from oil spillage, loss of lives and properties as a result of illegal crude refining process, etc. Niger Delta region is the most polluted region in Nigeria yet the country 95% of revenue is gotten from

these states. The indigenous peoples are feeling more of the degraded environment than the wealth in it: the host communities are not beneficiary of these wealth but for a few selected individuals.

The health and wellbeing of local residents are severely compromised by the presence of these illegal refineries and their hazardous products, which pose significant risks to the indigenous population. Onwuna et al,(2003) stated that the predominant health complaints by people were cough, sneezing, nose irritation, eye irritation and breathing difficulties. The soot from illegal refineries exposes individuals to severe health hazards, including skin and eye irritation, respiratory disorders, and persistent coughing.

The immediate consequences of unregulated crude oil refining are alarming, but the long-term effects are equally devastating. Prolonged exposure to these activities can lead to a significant increase in regional temperatures, exacerbating environmental degradation. If left unchecked or improperly managed, these conditions can culminate in severe, life-threatening disorders. Moreover, the byproducts of kerosene refining have sparked numerous explosions in residential areas, resulting in loss of life and property. The illegal refining of crude oil has dire implications for the health and wellbeing of communities in these regions, ultimately threatening to shorten their lifespan.

D'Andrea (2013) and Ordinioha and Brisibe (2013) conducted studies on the health impacts of oil spills and crude oil refining in the Niger Delta region of Nigeria. Their research found high prevalence rates for symptoms associated with oil spills, including headache, watery eyes, and respiratory problems.

One study published in the Nigerian Medical Journal in 2013 examined the human health implications of crude oil spills in the Niger Delta region. The study found that oil spills contaminated surface water, groundwater, ambient air, and crops with hydrocarbons, including known carcinogens.

Another study published in the Journal of Agriculture and Social Research in 2013 investigated the environmental impact of illegal refineries on vegetation in the Niger Delta region. The study found that illegal refineries severely impacted biodiversity, aesthetic scenery, and regeneration of plant species.

Ensuring the health and safety of the residents, the protection and promotion of the environment must be a paramount consideration in the exploration and exploitation of natural resources.

Adoption of Campfire Approach in Niger Delta

Implementing CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) in Nigeria's oil-producing Niger Delta region offers a remedial solution to the longstanding challenges faced by host communities.

Decades of adverse environmental and socio-economic impacts have eroded trust in the government, leading to tensions and conflicts. In response, some community members have resorted to destructive activities to assert control over their resources.

CAMPFIRE adoption provides an alternative, empowering communities to manage and benefit from their natural resources sustainably. This collaborative approach can rebuild trust, promote environmental stewardship, and support socio-economic development, ultimately contributing to a more harmonious and prosperous region."

The process of adoption will only be effective if the Federal Government checkmate and review its actions over the years and consider handing over the lands in their possession to the indigenous peoples by doing the following:

Reformation and legalization of policy for natural resources management of host communities.

The Federal Government of Nigerian should reform and legalize policies concerning the resource rights of the host communities that have the natural resources in their traditional land and liase with non-governmental organizations and multi-national co-operations to support the evolution of CAMPFIRE for the conversation and management natural resources aimed at sustainable development in the rural community, the state and the nation at large.

Effective participation of the community in managing natural resources will ensure the sustainability of natural resources, beneficisl to all stakeholders, improve livelihood, reduce poverty in the host communities and combat communal conflict: bringing about peaceful coexistence among the people, the governmental and non-governmental organizations and multi-national co-operations.

The indigenous peoples should be stake holders in the project, it will foster a sense of ownership in return increase mutual relationship between the exploiters, government and the community leading to growth and development, the people will see it as their own and guide it. The Petroleum Industrial Act 2021 requires revision to ensure equitable benefits for host communities. Allocating 3% of generated revenue is insufficient; instead, communities should be recognized as sole owners and shareholders of natural resources within their traditional lands. This new approach will

promote sustainable resource management, foster socio-economic benefits for all stakeholders, eliminate youth restiveness, pipeline vandalism, and illegal crude refining, generate employment opportunities, cultivate a more harmonious and prosperous relationship between host communities and the oil industry.

Restoration of Degraded Environment

The Environment comprises of the land, water, air, life forms and non-life forms. The people in the Niger Delta region have experienced highly polluted water inhibiting aquatic lives making it difficult and almost impossible to conduct fishing activities and have good numbers of fishes as the aquatic lives are dead due to oil spills in the river body either from bunkery, discharge from petroleum industrial activities, pipe vandalization, etc, it in turn affects their lands as the microbial components responsible for plant growth have been killed. The air also is not left out as a result of burning of hydrocarbons and polluting the atmosphere leading to acid rain. It also affects human life :causing skin irritation, eye irritation, respiratory problems. Even properties are also damaged: corrosion of vehicles, stains on surfaces and clothes as a result of soot emission, life expectancy is also threatened because of the adverse effects of Environmental pollution to health, etc. The ecosystem is generally not safe in this region. There is therefore urgent need to restore the degraded Environment through oil spill cleanup, afforestation, dredging/Sand filling, control of gas flaring, stopping indiscriminate burning, waste management, etc This will restore the aesthetic beauty of the environment, increase productivity in the eco system and increase life expectancy.

Creation of Modular Refineries

A modular refinery is a processing plant composed entirely of skid-mounted structures, each of which comprises a part of the entire processing plant. Various components are connected through interstitial pipes to create a highly manageable process. They are smaller than conventional refineries, with processing capacities ranging from 1,000 to 30,000 B/D. (Akeinde et al, 2023). This is actually mini refinery.

Jim-Rex (2011) defines a modular refinery as the name implies, a refinery whose parts or equipment are constructed in modules designed to be transported quickly and easily anywhere in the world and comes in a variety of sizes with capacities that range from 500 to 20,000 barrels per day. Mini Refineries are ideally suited for:

- Remote locations.
- Rapid production of primary fuels (for consumption) and raw materials or feed (for the petrochemical industries).

- Limited refinery project land space.
- Low or minimal installation cost (using skid-mounted during construction).
- Quicker investment recovery.
- Construction in modules designed to transport quickly.
- Minimal capital to establish and easy and fast to construct.

The creation of this will combat pipeline vandalization, bunkery, fuel scarcity, youth restiveness, etc. Training of staffs should be done, allocation of land for construction, construction and supervision of modular refinery should meet Department of Petroleum Resources (DPR) required standard, license should be given to owners renewable on a well defined safety terms, health and safety measures should be put in place, supervision of processes should be done to ensure compliance with laid down procedures. License should be given to the indigenous peoples in the community and not any high handed individuals outside the community.

Proshare (2019), explains the concept of modular refinery as an ideal for stranded production fields and remote locations could be sited in the riverine areas where accessibility to the petroleum products at present seems to be very difficult due to logistics. This will allow the residents in such areas purchase the products at cheaper price than what is obtainable there at present. Modular refinery can be put together within a short time span of about 15 to 20 months for modular refinery of 20,000bpsd and can be established within a short period of time at different locations. This ultimately does away with the need for expensive transportation of crude oil through pipeline covering long distance, which more often than not, are susceptible to vandalization as has been the case in several parts of the oil producing States in Nigeria. Mini refinery requires minimum input compared to conventional refineries making it easier to distribute petroleum to consumers, it requires lower investment costs; flexible to meet demand (easy to add modules), lower capital requirements/ Short payback period, minimal Space/Land requirements quick and easy installation, greater control over the environment and work process during construction, minimal land, less man power, possibility for future relocation, etc

Modular refineries is simply mini refining: smaller refinery in local communities.

The indigenous peoples are already exposed to refining of crude and are making a lot of money from it, this will be the best way of rehabilitation because compensations may not be enough as they may still return do their detrimental activities. Modular refineries offer numerous benefits, including: affordable petroleum products for local communities,

elimination of scarcity and shortages of petroleum products nationwide, eradication of illegal crude refining, pipeline vandalism, bunkering, and fire explosions, etc.

By granting communities access to natural resources on their traditional lands, modular refineries promote: job creation and economic empowerment, overall economic growth and increased GDP, conservation of foreign exchange, etc. The revenue generated from modular refineries should be allocated towards:

Provision of Social Amenities

Social amenities are the basic necessities of healthy living, it includes good road network, portable and safe-drinking water, recreational facilities for wellness activities, functional electricity, efficacious and sustainable healthcare, functional and affordable educational systems, etc. The provisions of these will enhance socio-economic activities in the host communities and foster sustainable development combating youth restiveness and increase employment rate in the local communities.

Empowerment Opportunities

Trainings and skill acquisition programs should be done for people in these region to build human capacity in various skill. Skilled men/women should be employed in sectors befitting them and suitable enumeration should be paid to them. There should be equity in selecting individuals for empowerment and employment should be done from individual families/districts/ regions, etc to ensure equity in the distribution of resources. Care of the aged should also be considered by giving them monthly stipends so they can also benefit directly from the natural resources on their indigenous lands since they can no longer be gainfully employed. Empowering the youths is a means of job creation, building human capacity and restoration of peace in their traditional land, the Niger Delta region and bringing about socio-economic and environmental stability thereby transforming the Nation.

Supporting Small and medium -sized Enterprises (SMEs)

Empowering Small and Medium-sized Enterprises (SMEs) through strategic support and resources enables these businesses to thrive and succeed, and contribute to the economy growth and contribute positively to the nation. This fosters entrepreneurship and job creation, promotes economic growth and development, encourages innovation and competitiveness, improves living standards and community well-being, etc. Ultimately, empowering SMEs addresses pressing regional challenges, such as poverty, unemployment, and environmental degradation, while promoting sustainable development, economic diversification, and transformative national growth.

Scholarship for Indigenes

Scholarship program should be put in place: both local and international scholarship for education at all levels: primary, secondary and tertiary institution. The scholarship selection process should be transparent, with clear criteria and a well-defined process. Distribution should prioritize equity, ensuring fair allocation among host community members. By investing in education, host communities will experience transformative growth, marked by: near-zero illiteracy rates, achievement of sustainable development goals, empowered individuals capable of driving positive change. This, in turn, will foster a brighter future for generations to come.

Conclusion

The introduction of Communal Area Management Programme for Indegenous Resources (CAMPFIRE) Approach is a community-led natural resource management model that empowers local communities to manage and benefit from their natural resources. The Niger Delta Region is a geographic area in southern Nigeria rich in oil and gas reserves, but facing environmental degradation, social unrest, and economic stagnation needs CAMPFIRE as a remedial approach to address the existing challenges and problems in this region as a long-term goal of achieving economic, social, and environmental sustainability at the national level.

Empowering traditional landowners with rights and access to natural resources fosters a sense of ownership, responsibility, and belonging. This, in turn, drives socio-economic development in rural communities, states, and the nation as a whole, ultimately ushering in an era of peace and stability socially, economically and environmentally.

Furthermore, ending oil theft is expected to turbocharge Nigeria's economy, propelling it towards rapid growth and a brighter future by enhancing job creation and employment opportunities, improving literacy rates, enhancing human capacity building, accelerating development and transformation of host communities.

This multifaceted approach will not only stimulate economic growth but also foster sustainable development in the Niger Delta region thereby transforming the nation.

Recommendation

The Federal Government of Nigeria should adopt CAMPFIRE in its policy programmes for the management of natural resources in Nigeria. This approach will foster peace, sustainability, and prosperity by resolving conflicts, preserving the environment, and driving economic growth, bring about biodiversity, create room for environmental friendly approach of exploration and exploitation of natural resources and attract more foreign investors leading to

sustainable national transformation.

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