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Oil Exploration in South Sudan and Environmental Sustainability

By: **Bona Bol Madut Ayii***

Abstract

Environmental sustainability is the human development without compromising the natural resources. Simply, it is the use of the available resources while leaving enough for future generations. For proper adoption of the principle, certain changes in the environment must be analyzed and a direct correlation drawn between existing activities and the adverse environmental impacts.

To meet this standard, the paper takes into account the economic activities related to environmental degradation in South Sudan. Current developments suggest that the degradation is substantially associated with oil exploration activities in the country. Their invasive extraction methods employed during oil extraction and reckless abandonment of oil fields expose the country to serious sustainability challenges mainly compounded by lax laws and regulations. However, due to the current wave of the green economy, the country has no option but to conform to the expected international standards.

It is formidable that South Sudan has made steps towards conserving the environment by enacting laws such as the Petroleum Act of 2012 and the Draft National Environmental Bill of 2013. It is also a party to international agreements aimed at conserving the environment. Therefore, it is expected that it conforms to the desired standards. Oversight bodies, local communities, civil society organizations and Environmental Human

** Bona Bol Madut Ayii holds LL.M in Environmental & Natural Resources Law from University of Nairobi and General LL.M from University of Juba Bol Madut is a researcher on environmental justice, sustainability and climate change, BoLayii93@gmail.com, WhatsApp +211916663246*

Rights Defenders are expected to champion the universal right to sustainable development.

The paper aims to offer insight into the measures taken by the country in realizing its duties in conserving the environment while also promoting economic growth.

Keywords: environmental sustainability, environmental degradation, oil exploration companies, oil exploration activities, pollution, laws, and regulations.

Introduction

Oil exploration involves the processes and methods needed to locate potential oil wells for extraction.¹ It is a lucrative venture.² The industry has enjoyed and continues to enjoy immeasurable profits due to our contemporary society that abundantly relies on oil for its operations. It is common knowledge that the increased use of oil and its by-products pose a great risk to ourselves and the environment.³

Initially, search views were considered to be morally motivated, an ethical stance to nudge the companies into a more morally accepted direction.⁴ Such opinions persisted until scientists proved a direct correlation between oil exploration activities and their negative impact on the environment.⁵

¹ Michael D. Tusiani and Gordon Shearer, *LNG: A Nontechnical Guide* (Tulsa, OK: PennWell Corp, 2007), 70.

² *Ibid*

³ *Ibid*

⁴ Andreas T. Bart E. "The ethics of nudging: An overview"

⁵ Tutilo M. Benjamin S. Sophia J. "The implications of global oil exploration for the conservation of terrestrial wildlife"

On the other hand, Environmental sustainability is a principle concerned with the interdependence of all human activities.⁶ It requires that the environment be considered as part of all policies and activities, including those intended to promote socio-economic development.⁷ The most widely used definition is that of the Bruntland Commission of 1987: "Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs".⁸

In a bid to curb degradation various international instruments such as the 1997 Kyoto Protocol, the Rio Declaration, and the United Nations Framework Convention on Climate Change, govern the sustainable use of the environment.⁹ Some of the principles in these international regulations include the polluter pays principle, transparency, public participation, and emission standards to limit the extent of pollution by corporations.¹⁰ The same principles have been reflected in South Sudan's domestic laws. Some of these include:

1. The Transitional Constitution of South Sudan 2011 as amended under the Bill of Rights whose purpose is to ensure the proper management of the environment and natural resources to achieve sustainable development;

⁶ Justice Mensah Sandra Ricant "Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review"

⁷ The four pillars of sustainability: Introducing the four pillars of sustainability; Human, Social, Economic and Environmental.

⁸ *Multilateral Environmental Agreements*, International Environmental Law, Ministry of Natural Resources and Environment Department of Legal Affairs May, 2017

⁹ "The Kyoto Protocol was adopted on 11 December 1997" United Nations Framework Convention on Climate Change.

¹⁰ Ibid

2. The Petroleum Act of 2012; and
3. The Draft National Environmental Bill of 2013.

The underpinning principles of these legislations are to monitor and sustain the quality of natural resources such as water, air, vegetation and the protection of wildlife.¹¹ These principles encourage the responsible use of natural resources without depleting the environment.¹² Therefore, people are expected to meet their needs through environmentally friendly methods. For instance, adopting the use of solar and hydropower instead of petroleum-generated electricity.¹³ A majority of these measures are achievable if strictly adhered to.

Oil exploration in South Sudan

Since the discovery of oil in 1978 in South Sudan, it has been the country's main source of revenue.¹⁴ Most of its crude oil is generated from the Muglad and Melut Basins near Bentiu.¹⁵ These wells act as giant magnets to oil exploration companies which then set up industries after entering into concession agreements with the government.¹⁶ Consequently, the discovered oil becomes the producer's property or on other occasions, depending on the terms of the agreement, the government remains with the ownership and participation rights.¹⁷

¹¹ Ibid

¹² Kariuki Muigua "Fostering the Principles of Natural Resources Management in Kenya"

¹³ *Oil and Gas Exploration*, United Nations Environment Programme (UNEP) 27th November, 2012

¹⁴ Dr. Rita Abrahamsen "The Role of Oil in South Sudan"

¹⁵ *Sudan, Oil, and Human Rights*, Human Rights Watch.

¹⁶ Ibid

¹⁷ Ibid

It is evident that oil exploration is a lucrative business; its driving force being a ready market.¹⁸ The only disadvantage of investing in this industry is that oil is non-renewable, and with the current overzealous exploration, it is bound to deplete.¹⁹ Additionally, the explorations may lead to the demise of the oil industry.²⁰ The root cause would lie not in the extraction of the commodity but in the methods employed in its extraction. Experts have proven these methods to be invasive and dangerous to the surroundings.²¹ As a result, alternative sources of energy are being explored.

It has also been reported that the oil wells in the country are almost depleted. Relocation of the companies to other jurisdictions or other areas within the country is inevitable.²² The state having been dependent on oil for economic growth will undoubtedly be left stranded. Moreover, it will also be grappling with the deterioration of its environment.²³ To avoid this desperate state of affairs the government should consider actively advocating for strict conservation measures.²⁴ It may borrow from the best practices such as those employed by Norway. Achieving this goal would be a daunting process considering the duration these oil companies have been in operation.²⁵ Nonetheless, the active participation of all stakeholders is warranted.

¹⁸ Ibid

¹⁹ "Sector Licensing Studies: Mining Sector"

²⁰ Ibid

²¹ Ibid

²² Mark Olalde "The Rising Cost of the Oil Industry's Slow Death"

²³ Ibid

²⁴ David R. "Human rights-based approaches to conserving biodiversity: equitable, effective and imperative"

²⁵ Roberto Nava, Triziano Rivolta "Large project management in oil and gas"

The main cause of the depletion of natural resources is greatly attributed to the companies. Fingers can also be pointed at the government because it holds public land in trust for its people.²⁶ It is mandated to put the land to best use and ensure that the rights of its citizens are also protected.²⁷

However, the oversight bodies tasked with the regulation of the exploration companies have failed in their duties. They rarely implement laws or listen to the grievances of the citizens. Time and again they have been responsible for unsustainable management of resources, poor decision-making, and stifling the long-term growth of the country.²⁸

It is expected that with the right approach, natural resources should catalyze a country's growth and development. Consequently, it is becoming common knowledge that economic development should not come at the expense of environmental protection.²⁹ These two aspects should not be incompatible, but rather complementary. The co-existence can only be realized by balancing competing interests and assertively weighing the associated risks against the expected benefits.³⁰

Experts are of the view that better institutions reduce environmental degradation. Thus, oil exploration can be sustainable. With strict

²⁶ "Depletion of Natural Resources"

²⁷ Ibid

²⁸ *The Environmental Resource Curse Hypothesis: The Forest Case*, Oliver Damette, Philippe Delacote September, 2009.

²⁹ David M. "Environmental protection or economic growth? The effects of preferences for individual freedoms"

³⁰ *The Environmental Resource Curse Hypothesis: The Forest Case*, Oliver Damette, Philippe Delacote September, 2009.

supervision, oil-related activities such as drilling and extraction should have minimal to no impact on the environment. The nuance lies in the approach. If done correctly, oil exploration should be manageable.³¹

Risks associated with oil exploration

Extensive oil exploration, depending on the site and method of extraction, may pose certain risks to the environment. These include:

Pollution: affects the air, water, soil, plants and animals. People or animals who consume or come into contact with contaminated air, water, soil, or plants tend to exhibit health complications. Some experts have linked certain deformities and cancer to this type of pollution.³²

Displacement: the local communities are usually the victims of the harsh climatic conditions created by extensive oil exploration.³³ Because they rely on land for livelihood, they often relocate to other places when the land is polluted.

Animals alike are affected by these changes in the environment. The noise, air, and water pollution force them out of their natural habitats in search of better places.

Regions such as Unity and Upper Nile State with unique ecosystems

³¹ *The Environmental Resource Curse Hypothesis: The Forest Case*, Oliver Damette, Philippe Delacote September, 2009.

³² *Environmental Impacts of the Oil Industry*, Jacqueline Barboza Mariano, Emiliano Lebre La Rovere

³³ Janpeter S. "Facing old and new risks in arid environments: The case of pastoral communities in Northern Kenya"

e.g. the world's largest wetlands are polluted by flooded oil fields.³⁴

Damage to the ecosystems: the pollution from these companies renders the environment inhabitable to most living organisms.³⁵ Some species die while others migrate to safer places.

Small earthquakes: the earthquakes are caused by the seismic slips that bring about abrupt fault movements at a later stage of the exploration.³⁶ Further, already existing faults may result in landslides.³⁷

The exclusion of local communities/affected people: the communities who live near the oil fields are systematically excluded from participating in the decision-making processes that lead to the setup of these companies.³⁸ They are rarely engaged in public participation despite its provision by the law.

The historically marginalized communities are almost helpless in these situations as they are unseen and they fear that their needs may never be met.³⁹

Lack of access to information: the right to a clean and healthy environment is intrinsically tied to the right to information. The local communities are rarely kept in the loop about the exploration

³⁴ *Toxic Floods? Climate, Natural Hazards and Risks to South Sudan's Oil Infrastructure*, PAX, 23rd May, 2023

³⁵ Howell B. "What Are the 6 Most Common Sources of Ocean Pollution?"

³⁶ British Geological Survey "What causes earthquakes?"

³⁷ *Earthquakes from oil field wastewater*, Josie Garthwaite, 19th May, 2022

³⁸ Augusta C. "The impact of oil industry-related social exclusion on community wellbeing and health in African countries"

³⁹ Moree D. "Qualitative Approaches to Studying Marginalized Communities"

companies and the aftermath of their activities.⁴⁰

A perceived lack of benefit by local communities/affected parties: the oil exploration companies and the government reap benefits from oil extraction. Sadly, the local people do not share in the benefits. Not only are they victims of environmental degradation caused by these arrangements but they never receive any form of compensation for the utilization of their land.

Oil spills: oil spills have a long-lasting impact on the environment. Prolonged exposure to the soil, water, or wildlife causes loss of vegetation and wildlife. Sometimes, oil spills result in fire outbreaks which endanger the lives of people.⁴¹

Abandoned oil wells: these pose a great risk to everyone. It is expected that once the wells are no longer productive, they will be sealed to restore the land to its former state. On the contrary, most of these wells are left open and unattended threatening the lives of unsuspecting people and animals as they risk falling or injuring themselves at these sites.⁴²

Flooding oil wells: lax oversight and poor environmental regulations have led to the flooding of these wells which pose a great danger to the neighboring communities especially during heavy rainy seasons. People risk grievous injuries if not drown.⁴³

⁴⁰ Muigua K. "Realizing the Right to a Clean, Healthy and Sustainable Environment"

⁴¹ *The Negative Impacts of Oil Exploration and Discovery on the Turkana Community*, The Horn Policy Brief 30th August, 2018

⁴² Prof. Mohamoud Khraishi "Legal Medicine & Medical Ethics"

⁴³ *Toxic Floods? Climate, Natural Hazards and Risks to South Sudan's Oil Infrastructure*, PAX, 23rd May, 2023

Conclusion

In consideration of the above discussion, South Sudan must adopt strict measures to curb the environmental degradation that is drastically afflicting it. As a country, it derives its revenue from oil exploration while its citizens derive their source of living from the environment. It is only commendable that the two interests should mutually exist, and not to the exclusion of the other. With proper insight into how to balance these interests and adopt the best practices, the country can make meaningful steps toward environmental sustainability.

Civil Society Organisations, individuals, and communities should also contribute towards the preservation and sustainability of the environment.

As all living things depend on the environment, the environment also depends on us. Without collaboration from respective stakeholders, the environment will certainly be depleted.

Recommendations

1. Strict implementation of the existing laws and regulations such as the Transitional Constitution of South Sudan of 2011 and the Petroleum Act of 2012 whose purpose is to ensure the proper management of the environment and natural resources to achieve sustainable development;
2. Oil exploration companies relocate to other viable sites after drilling a site for a certain duration. This is to reduce the risk of repeated drilling in one place that may destabilize the ground.

3. The creation of dispute resolution mechanisms to solve the emerging conflicts or misunderstandings between the government, the companies, and the local communities.
4. Creation of functional oversight institutions.
5. Creation of realistic policies that reflect the emerging issues in the environmental sector.
6. Impose hefty penalties on those who cause pollution.
7. Encourage recycling and reuse of certain waste materials.
8. Treatment of wastewater from the exploration companies.
9. Enact regulations that limit noise pollution. The companies should meet certain standards before starting operations.
10. Incorporate the views of the local communities to realize sustainable development.
11. Foster strong partnerships with all stakeholders and encourage active participation in decision-making.
12. Promote transparency and accountability in the operations of the companies.
13. Sensitize the people, especially the historically marginalized on their right to a clean and healthy environment, right to information, and right to justice.

14. Fair distribution of the economic benefits derived from oil exploration and conservation of the environment. This is (The Rio Declaration, 1992) to prevent unfair exploitation of the communities' resources and also instill a sense of belonging in the locals.

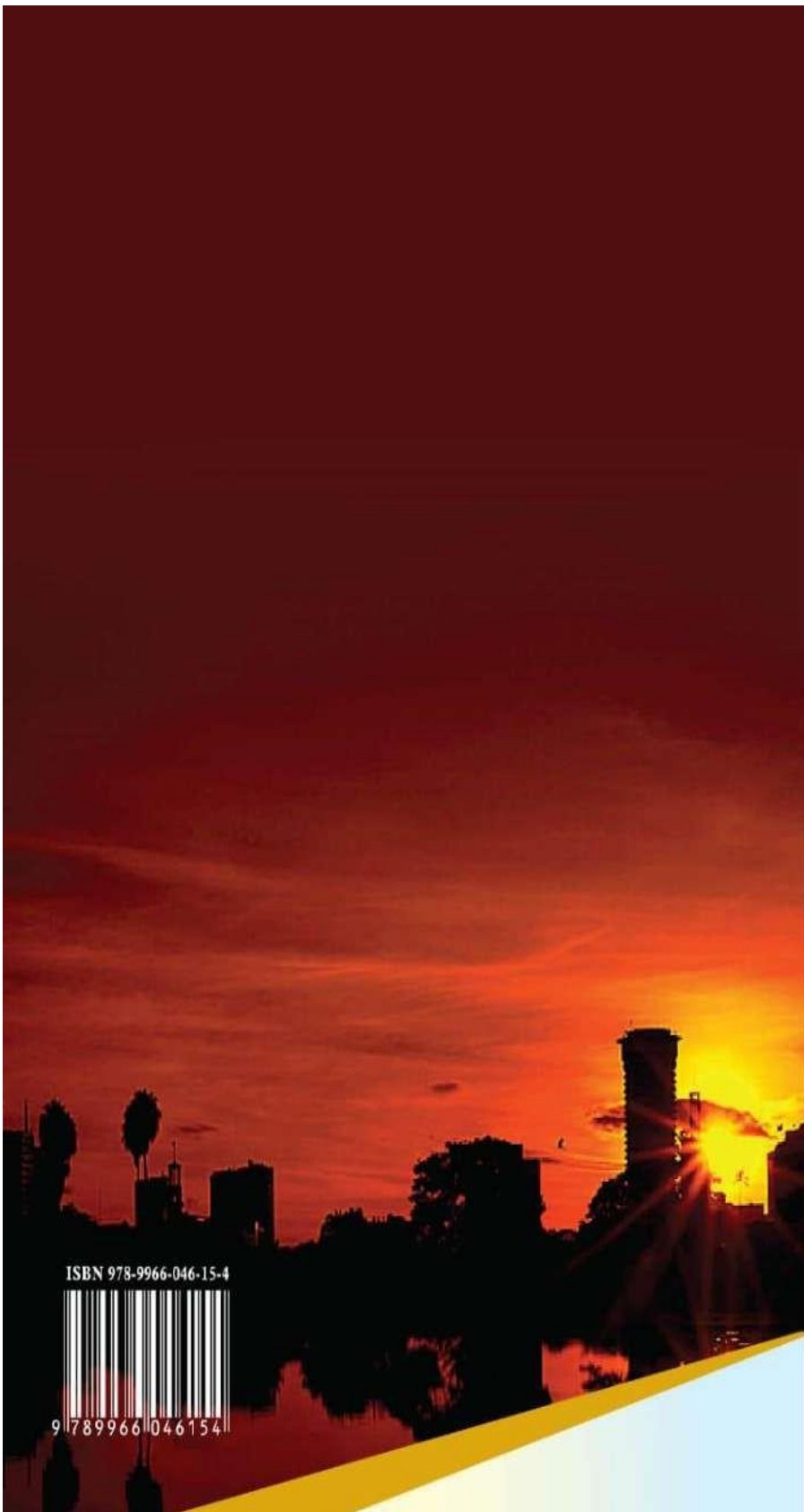
15. Proactively address issues affecting the environment. The government should not necessarily wait for an issue to emerge for it to come up with solutions. It can take the necessary steps to avert unforeseen problems which may in turn hinder or undermine sustainable development.

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