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The Turkana Oil Discovery in Kenya: An Unfolding Environmental, Socio-Economic and Political Disaster

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Abstract: ***A disaster is an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community. For a disaster to occur there must be a combination of hazard, vulnerability and insufficient capacity or measures to reduce the potential chances of risk. Such vulnerabilities include amongst others, inadequate access to resources and lack of awareness. In this context, Kenya struck its first crude oil of commercial viability at Ngamia1, South Lokichar basin in Turkana County in 2012. Tullow Oil, the British exploration firm in charge of the project projected that the country could begin to export crude oil by end of 2016. To date (2017), this has not been realized due to the unfolding environmental, social, economic and political dynamics which threaten to attain magnitude of disasters. An understanding of the processes involved in the oil find makes the prevailing challenges better understood. Here, the three phases of oil harnessing comprise exploration, exploitation and discovery. Exploration is the action of searching an area for natural resources, such as oil or any other mineral. It entails extensive prospecting, seismic activities and drilling processes. Successful exploration results into discovery. If the estimated quantity of the crude is of economic value, exploitation ensues. In the case of the Turkana oil, estimated recoverable deposits in Lokichar basin alone is one billion barrels and exploitation commenced in 2012. The exploration in other blocks is still ongoing. It is envisaged that this should translate into economic prosperity for the Turkana people. However, there are indications that this may not be so. This is because all the three aforementioned phases have resulted in varied adversarial impacts on the communities in the catchment. This paper reviews the emerging disaster risks hazards in the context of environmental, socio-economic and political impacts that threaten to spiral into disaster magnitudes. Consequently, it recommends a collection of practical initiatives, by multidisciplinary actors, that should be put in place to mitigate the risks hazards therein.***

Keywords: Oil Discovery, Environmental, Socio-Economic and Political Disaster

1. Introduction

A disaster is an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community (WHO, 2002; GoK, 2009). In 2012, oil of commercial viability was discovered in Kenya at Lokichar, basin, Turkana county600km north of the country's capital, Nairobi. This was after prolonged drilling by *Tullow Oil*, a British exploration company. Then, it was envisaged that by the last quarter of 2016, the country would begin to export the crude first by road and come 2020, by a pipeline to Lamu port at the Kenyan coast. However, this has not been realized. The export timelines have continued to be reviewed. This is mainly attributable to: complexity of the activities involved; lack of a comprehensive regulatory framework; and environmental, socio-economic and political dynamics. This can be understood on the premise that Turkana County is semi-arid and experiences prolonged drought exacerbated by the unfolding climate change scenarios. The Turkana are nomadic pastoralists who mainly keep cattle, donkeys, camels and goats. The animals are their main source of livelihoods (KIG, 2015). Protracted conflict dominates the Turkana terrain, especially livestock rustling and banditry activities with their attendant proliferation of illicit arms. Images of drought, famine, desolation common here have occasioned continuous reliance on relief food supplies from international donations. Consequently, the discovery of oil has elicited extremely high expectations from the local population. Due to the pre-existing tensions alluded to herein, all stake holders should be cognizant of the need to handle the Turkana oil find with a lot of caution as the unfolding scenarios are potential for full blown violent conflicts. This paper reviews the unfolding environmental, socio-economic and political disasters that the discovery portents to foment that may translate into disaster magnitude.

2. Environmental Challenges

Generally, oil exploration, discovery and exploitation projects are expected to be of great economic developments in a nation. However, the operations of the oil or general mining activities generate harmful consequences in the form of environmental degradation, According to Afonughe & Mukoro, (2017), environmental degradation is a very critical challenge because the ability of the environment to support and sustain life depends on the sustainable utilization of resources in a functional ecosystem. That is why Kenya in 1999, put in places the Environment Management Coordination Act, (EMCA, 1999). This Act gives the concerned legislative agencies to put in place laws that govern the utilization of the environment. It is in this vain that the National Environmental Management Authority (NEMA) was put in place to operationalize EMCA, 1999. NEMA has put in place measures to ensure that the biological resources in place are preserved; issued guidelines to promote the conservation of the various terrestrial; and aquatic systems and protect species, ecosystems and habitats threatened with extinction (NEMA). Therefore, the oil

harnessing industry presents environmental imbalances in Kenya which are considered hereunder;

2.1. Increased Green House Gases

Kenya can only benefit from oil exports if fossil fuels remain the most desirable source of energy. In the emerging climate change scenarios, fossil fuels have been cited as source of large quantities carbon emissions responsible for greenhouse effects and the attendant climate change (IPPC, 2007). Since the projected quantity of the crude in the Turkana blocks is high, (one billion barrels in the Lokichar basin alone) the potential to generate large quantities of green house gases is real *(https://www.kenyatalk.com).* Another air polluting activity associated with all the phases of oil harnessing activities is gas flaring. This is entails burning of waste gas from crude oil at an elevated vertical chimney. In the Niger Delta, some of these flares have burned non-stop for over 40 years (Selina, N., 2015). Gas flaring contributes significantly to greenhouse gases in the atmosphere. Methane, the main component in the gas flare, is up to 84 times more harmful to the atmosphere than carbon dioxide, trapping heat more effectively and intensifying global warming (IPCC, 2007). Apart from the greenhouse gases, there is also pollution attributable to suspended particulate matter emitted in the air such as dust and heavy metals like arsenic and cadmium.

The implications of gas flaring on human health are as a result of the exposure of the hazardous air pollutants emitted during incomplete combustion of gas flare (Seline, 2015; Afonughe & Mukoro, 2017). Studies show that these pollutants are associated with a variety of adverse health impacts, including various types of cancers, respiratory problems, changes in blood constitution and functions, neurological, reproductive and developmental defects (Nwankwo & Dule, 2001). Deformities in children, lung damage, infantile leukemia and skin problems have also been reported (Seline, 2015; WHO, 2002). In many oil mining destinations, gas flares are responsible for continous heat and light production from the flames, resulting in sleep deprivation and insomnia amongst the local people (Nwankwo & Dule, 2001; Selina, 2015). In the case of Turkana, records at the local medical facilities point to a general increase in respiratory and skin diseases (KIG, 2015). There is also evidence of increased occupational health hazards amongst miners who also present increased incidences of respiratory and skin ailments in Turkana mines. Most of the aforementioned health risks take relatively long to manifest, but the impacts are long term. For example in the Niger Delta, the average life expectancy is under 50 years, a long term impact attributable to the aforementioned health hazards. So the likely hood of their increasing in Turkana in future, is high hence the need to put in place appropriate mitigations or interventions.

2.2. Physical and Chemical Degradation of Ecosystems

Physical and chemical degradation of the environment attributable to oil harnessing are documented in existing literature as considered hereunder;

One of the most serious challenges is as a result of oil spills. Oil spills include any spill of crude oil or oil distilled products that can pollute the surface of the land, air, and water environments *(https://www.environmentalpollutioncenters.org/oil-spill/).*

Essentially, oil pollution from an oil spill may entail small quantities to millions barrels spilled. Oil spills contaminate aquatic, terrestrial and aerial habitats with dire consequences to the fauna and flora. According to Afonughe & Akpomuvire, (2017) 9,107 oil spill incidences occurred in Nigeria between 1976 and 2005 resulting in about 3,121,909.8 barrels of oil spilled into the environment. Oil spills contain amongst others, carcinogens that end up in the food chains where there is bio-accumulation with far reaching long term impacts in the biological systems For instance, such spills contain heavy metal such as lead and arsenic, which have been traced in herbivores like goats sheep ad cattle. The Turkana people keep the aforementioned livestock hence the likely hood of these toxic chemicals being consumed through food chains via bio- accumulation is highly probable. Further, according to Selina, (2015**)**, the heavy pollution of water sources has led to a loss of the biodiversity in the Niger Delta, as well as contaminating water with carcinogens up to 900 times above World Health Organization standards. According to UNEP, (2011), Niger Delta is one of the oil harnessing destinations in the world where there is extensive environmental degradation.

Another aspect of environmental pollution is attributable to large volumes of saline water extracted from the plant during the oil harnessing process. In the case of the Turkana oil wells, this waste water is disposed into aquatic and terrestrial ecosystems in the catchment with the attendant detrimental impacts on the biodiversity and human life.

Furthermore, oil extraction demands that the terrain of the location change to suit the purpose. Therefore, typical activities in the development of such a site include: ground clearing and removal of vegetation; grading, blasting to source construction materials; excavation; laying of access road and construction of; storage facilities, pipelines and pumping sites. There is also a general increase in human and motorized traffic. All these developments cause disturbance in the hitherto quiet ecosystem. The consequences of this include; a decline in biological diversity due to destruction of the habitats; and disappearance or changes in the species of both fauna and flora in an ecological zone. The clearance of vegetation has furthest resulted in the loss of soils and habitats for wildlife. According to KIG, (2015), this may explain why some plant and animal species crucial to Turkana peoples' livelihoods like pasture for livestock and medicinal plants are disappearing in the proximity of the oil mining catchment. For example, honey harvesting which is amongst the other preoccupations of the Turkana people may be interfered with because the honey bee requires special plants that provide nectar. In naddition, the contamination of the soils by the salty water alluded to in this article result in the death of soil bacteria, fungi and protozoa, essential for biodegradation. It is also prudent to be cognizant of the fact that the contamination of ground water result in changes in PH of water bodies in the catchment, impacting negatively on aquatic life.

Closely related to the aforementioned is that all these activities have occasioned a change in the kind of use the

land is put to. Culturally, in Turkana, land is used by the indigenous people for grazing their livestock. In the contemporary development, a lot of commercial buildings at various market centers have come up, further delineating certain ecological habitats.

In addition, the other dangerous pollution comes from noise. Impacts of noise on the health of animals are documented. Here noise is defined any sound that alters the behaviour of animals or interferes with their functioning (FHA, 2017). According to WHO/EHA, (2002), sounds exceeding 80 decibels (dB), can cause a number of health conditions in human beings. These include: hearing loss; tinnitus; sleep disturbances; cardiovascular problems; pain and fatigue; poor work and school performance; speech problems; hormonal stress affecting metabolism and immune system problems (*https://www.healthyhearing.com*). According to Federal Highway Administration, (FHA, 2017) animals rely on meaningful sounds for communication, navigation, avoiding danger and finding food. In this regard, the noise may interferes with; health, reproduction, habitat use, distribution, abundance or genetic distribution or just cause detectable change in behavior of the plants or animals (FHA, 2017; Shira & George, 2012).Turkana County, the highest noise levels occur from drilling and flaring of gas, which occurs continuously for a long time. There is a significant behaviuor change amongst some animal species that have relocated from the disturbing noise (KIG, 2015). There are also increased vehicular movements with the attendant increase in noise which also affect animal behavoiur. For example literature indicate that some mammals like mountain goats *Oreamos americanus* would hesitate to cross a road if they heard a truck changing gears over 1 km away (FHA, 2017). Further, the Turkana have been known to rely on natural resources such as honey harvesting and fishing especially in Lake Turkana. Obviously, the acoustic noise indicated will not augur well for the two. The impact of this is still to be established amongst the livestock bred in the community.

It is imperative to note that the health hazards created by oil exploration are not obvious to the observer being slow setting (Darsa & Sarah, 2003). The immediate manifestations of the impacts are mild and short lived, but ultimately result in fatalities. Literature indicates that environmental deterioration is responsible for the disease burden in oil-producing communities (Selina, 2015). The disease burden is likely to exacerbate the prevailing preexisting hardships in Turkana community as observed under section 3.0.

3. Socio-Economic Challenges

The Turkana people inhabit a semi-arid region of Kenya where the local weather conditions comprise of dry and hot conditions. For their livelihoods, Turkana is a home of the second largest pastoralist community in Kenya after the Masais (Gatuka, 2017). They meet their livelihood through pastoralism. According to Ekai, (2017), there exist protracted militarized inter-ethnic and cross-border conflicts with their neighbouring communities like the Pokots and the Samburus due to competition for scarce pasture and water resources for their livestock. The discovery of the oil in Turkana is largely perceived as a blessing to the County due to its potential to trigger development in all dimension; thus social, economic and political. This is because the oil industry: attracts different types of investments ranging from small to medium businesses and triggers infrastructure development as alluded to under section 2.0. It also expected to avail employment opportunities, both skilled and unskilled. Some of the major socio-economic challenges comprise;

3.1. Land Leasing/Dispossession from the Turkana People

First, to create space for the oil exploration, there is a wave of land leasing in Turkana County. Many prospectors have bought and continue to buy land in the county the hope that they sell it back at inflated prices. Ancestral and grazing land is being sold by people who don't comprehend the long term impacts. Those dispossessed of their land end up with compensation not commensurate with the value of the land. Further, the development of wells and attendant facilities has affected the natural characteristics of a hitherto undisturbed pastoralists' terrain transforming the landscape into a more industrialized/urban setting. The loss of ancestral and grazing land is a risk hazard that should and must be tackled. According to the United Nations Economic Commission for Africa (UNECA, 2017), encroachment on grazing lands in whatever form, whether for mining or ranching is a cause of violent conflict amongst pastoralists in Kenya. This is evident in Laikipia County, a home to the largest pastoralist community in Kenya, the Masai. Here, most of the hitherto grazing lands by pastoralist have been fenced off by ranchers. This has occasioned very serious conflict between the ranchers and the pastoralist resulting in a lot of fatalities in the county. The pastoralist observes that the fencing of their ancestral lands denies them of the rites of grazing their livestock. UNECA, (2017) report further observes that the alienation of land has spawned a '*neo-pastoralist'* existence where the herders are turning to crime, exacerbated by the proliferation of small arms. Consequently, in the first half of 2017, the escalation of violent conflict in the pastoralist land occasioned very serious fatalities and economic losses. It is in this vain that scholars have predicted that the discovery of oil In Turkana will exacerbate pre-existing tensions and likely result in full-blown violent conflicts among the already marginalized communities (Dara & Sara, 2003; Ekai, 2017; KIG, 2015). This is more so if community expectations are not considered especially regarding their land.

3.2. Economic Exclusion

Hand in hand with the massive wave from land dispossession from the Turkana people. There is also economic exclusion such as inaccessibility of jobs by locals and prevalence of insecurity in the community. Further, it is important to note from others oil drilling expeditions in Africa that the multinationals often don't offer employment opportunities to locals in the highly specialized industry (WHO/EHA, 2002). For example in Saudi Arabia, 35% of the population is composed of immigrant workers from outside the country (Dara& Sarah, 2003). Often, this is because indigenous people lack requisite competences. In the Turkana case, most of the people who provide technical labor come from outside the county which has occasioned a lot of resistance from the

locals. For example in 2016, members of the Turkana community barricaded Lodwar- Kitale road attributable to this discrimination in employment.

The indigenous are employed in mainly menial low paying assignments that translate into little economic value. Consequently, strategies should be put in place to enhance skills of the Turkana people so that they can take up some of these job opportunities. Tullow Oil can achieve this through: development of infrastructure that avails education and training; and carry out advocacy to encourage the Turkana people to take up learning and training. In this way, the community will achieve the appropriate competences for the prevailing job market. Economic inclusion can further be achieved if revenue and oil royalties collected by Tullow Oil find finance welfare activities cognizant of the needs of the local people. Such need include investing in health and irrigation infrastructure amongst others. In this way, the community will meet their livelihoods in a more sustainable way. Only then would they feel not left out hence serve to find solution as opposed to being fomenters of disasters.

3.3. Distortion of Communal/ Family Structure

Literature indicates that most mining contracts are negotiated by the multinationals and the national governments (Valérie M., 2016). Here, state agencies and the oil company put their interests first as they can influence the legislators. In Turkana, the likelihood of this resulting in domination of communal and or ancestral land by the national government and their functionaries is real. Families have been relocated from their grazing/communal lands and ancestral shrines to create room for oil production infrastructure. This has the potential to distort the community's' pastoral lifestyle and the land tenure system which is basically communally owned. Closely related to the foresaid is that Tullow Oil has not adopted the traditional decision-making structures and prefer to negotiate with people on individual basis. The latter do not have the trust or support of their community, hence undermines the social cohesion of their community. In a nut shell, oil production in the marginalized territory of Turkana where people hitherto moved freely with their animals as nomadic pastoralists has changed as they have to operate within designated delimitations. For the nomadic Turkana, some of the cultural changes in the communal fabric entail displacement, fencing off of pastoral lands, disruption of grazing and migration routes. Finally, the pressure on the land has also a consequence of impoverishing local population as they deny them access to resources such as water, farmlands and fishing sites.

3.4. Marginalization and Insecurity

Marginalization is the process of pushing a particular group or groups of people to the edge of *society* by not allowing them an active voice, identity, or place in it (Edgerton, 1992). Dating back from the colonial era, the Turkana community has to a large extent been excluded, ignored, and locked out of the formal economy by the national government. This has been through failure to provide security, access to education, infrastructure and other public services in the highly centralized Kenyan governance system (KIG, 2017). In addition to the aforementioned, the community has over time experienced selective development policies and under-development (KIG. (2015). According to Edgerton, (1992), communities are dynamic and, in adverse and challenging circumstances, they evolve and adapt traits, values, and beliefs to facilitate their survival. So attempts by the Turkana people to fend for they has resulted into cross border conflict that often presents in form livestock rustling. This has directly occasioned the proliferation of illicit arms used by bandits and rustlers. In addition, the county is constantly plagued with disasters such as drought and famine. Cases of Turkana people dying due to the two aforementioned are very common occurrence in the media. Consequently, dependence on relief food is norm in this community. It is due to the foresaid that both the county and national governments and Tullow Oil should endeavor to address the cited environmental socio-economic and political rights for the Turkana people in the context of the oil find.

Regarding insecurity, the Turkana County is a semi-arid where the local depend pastoralism for livelihoods and marginal peasant farming. Historically, conflicts are a common occurrence between the Turkana communities and their neighbours, the Pokot over pasture and water. This insecurity has interfered with the development of the oil infrastructure by the Tullow Oil. Affected infrastructure include amongst others: the network of roads and pipeline to move the crude to the port of Lamu, to the Kenyan coast; and the Lodwar–Kapenguria road that was to have been completed by 2017. This has also put in abeyance the envisaged early export of the crude that was to commence by mid 2017. This means the eagerly awaited proceeds from the sells may take long to be realized, further exacerbating the already volatile situation.

3.5. Sharing of Oil Sells Revenue

As the land leasing frenzy takes its toll on the Turkana people, it is crucial to mention that those directly dispossessed end up with little compensation. Therefore, there must be concerted efforts to assist the Turkana people organize themselves into strategic bargaining assemblies to enable them protest their exclusion and communicate their stakes in the oil revenue. This will ensure their voices are heard which will make them defend their rights to gain access to oil sells resources critical to their survival. Indeed if the aforesaid are not put in consideration, the Turkana people will continue to experience poverty, famine, unemployment and pollution amongst others. This is a recipe for social unrest with the attendant adversarial impact. It is therefore imperative that social actors play collective role to ensure the Turkana people's interest are put first. Otherwise, the Turkana people may be rendered worse than before oil production commenced.

Some of the concerns of the Turkana community that the national government and Tullow Oil must address include: how benefits reach individual members of the population and the community at large; Further, the mining company should infuse the principles of sustainable as espoused in the Brundtland commission report (1987). Thus, the discovery of oil in Turkana demands an equitable sharing of benefits and inequity will not augur well for the stability and security of the region. Otherwise, there is potential for protracted

conflict that can spiral to disasters levels similar to what occurred amongst the Ogoni sub-tribes in Nigeria (Selina, 2015).

4. Political

The commercial production of crude in Turkana has pitted Kenya's national government against Turkana's County and local leadership over a number of concerns. The Turkana people suffer the impact of political powerlessness and the domination of their land by the partnership of the national government and Tullow Oil. This has excluded them from reaping the benefits of the oil revenue, yet they bear the adversarial impacts as a result of the indecisiveness of the national government as considered hereunder.

4.1. Lack of Regulatory Framework

Historically, Kenya unlike other African nations does not have deposits of minerals as natural resources. Basically the nation relies on agricultural production for its economy. However, recent discovery of mineral Titanium in Kwale County in 2013 and oil in Turkana in 2012 has occasioned a challenge due to nonexistence of a comprehensive regulatory framework to governing the mining sector. *Base Titanium*, the company responsible for mining the mineral in Kwale County has invested in the tune of Kenya shillings 26 billion in this project (KIG, 2015).This is Kenya's first large scale mining operation that accounts for about 60% of Kenya's mineral output. In the unfolding discovery of the two, oil and titanium, there has been an attempt to put in place the requisite legislation by the legislature. However, the duration it takes to enact laws in the Kenya has undermined the speed of envisaged activities, exacerbating the suspicion by the Turkana people. For instance the prospects of exporting crude oil from Turkana envisaged from mid-2017 did not materialize because of failure by the national assembly to pass the petroleum bill which would stipulate modalities of revenue sharing. The president declined to assent to the initial bill that proposed a sharing formula of: local community 10%; county government 20%; and the national government 70%. The president recommended to the national assembly to the scale down the sharing formula of the community to 5%, which the county government and Turkana people out-rightly rejected, demanding the 10% share. This bill has taken more than 2 years to be approved impacting negatively on the envisaged export timelines

In Kenya, a raft of legislation exists to actualize the mining industry, where oil mining is categorized. Accordingly, the Kenyan law provides that the owner of a parcel of land owns everything up to the sky and down to the center of the earth. Whatever is thereon becomes part of the property of the landowner *(https://softkenya.com/kenya/land-in-kenya-2/).* Therefore any mineral deposits should belong to the land owner. However, the same law also provides that the right of occupancy can be revoked to serve public interest such as for mining purposes or any purpose connected therewith. The Kenya Petroleum Exploration and Production Act 2012, was put in place to regulate among other things the ownership of petroleum even when it is found on private land. This Act gives the minister in charge powers to divide the land into numbered sites called *blocks* which open ways into a petroleum production and sharing agreement with a qualified contractor. In Turkana, the *blocks* have been subdivided by the Ministry of Energy under the auspices of the national government. There is also the mining Act 2016 which gives powers to promulgate by-laws to realize the formation of community management teams to oversee how minerals in the community are managed.

In all this confusion, there is no clear regulatory guidelines on how the proceeds accrued from the oil sales should be shared. That is why in the Turkana case, there is uncertainty which law is applicable and hence the suspicion of the local community. It is this suspicion that fuels the potential for a disaster in the region. The way forward is to put in place harmonized and comprehensive statutory and regulatory framework to govern the mining sector cognizant of all stake holders. The stability in Turkana can be created if the Kenyan government and Tullow Oil are cognizant of the fact that these people have rights that must be considered in planning. In this regard, the government must enact regulations to address various facets of the oil mining industry. For example, Tullow Oil should be obligated to pay local taxes in exploitation of oil; establish modalities of sharing the royalties derived from oil wealth with owners of community land; pay local people profits generated by their oil sells, put in place modalities of acquiring land for exploration; environmental sustainability; and consider other pertinent concerns of the community. Ultimately, all the aforementioned should be enshrined in the comprehensive institutional and legislative framework to be developed by involving all stakeholders. The existence of many disharmonized laws has occasioned confusion for the implementers which doesn't augur well for the mining industry in the country.

4.2. Institutionalized Corruption and Preparation of Agreements

Kenya's corruption thrives in secrecy. All agreements between Tullow Oil Company and the central government have been worked on in a secretive manner which fuels mistrust from the Turkana people. The borne of contention is the inability of the national government to come out clearly with obvious facts such as a sharing formula for the oil proceeds. The public altercations between President Uhuru Kenyatta and the governor Turkana, Josphat Nanok over revenue sharing in mid-2017, was a pointer to the existing disagreements at the two levels of governance, national and county. For instance, in the Turkana the power to grant oil concessions rests with the central government. This means that community land leasing in Turkana County is dominated by the national state structures. In the meantime, the Turkana people lack political authority as their land is dominated by the collaborators of the national government and the Tullow Oil. This excludes them from key decision making in regard to the investment yet on the converse, experience adversarial environmental, socio-economic and political impact as alluded to in this article.

4.3. Global Political Dynamics

The global community reliance on crude powered technology is quickly waning because fossil fuels contribute

of green house gases and attendant climate change. Many countries now focus on renewable or less polluting sources of energy such a wind, bio and solar. Consequently, the oil discovery in Turkana at this point in time does not augur well for the geopolitical region. This is because climate change policies have occasioned new uncertainties on the supply and demand chain which is likely to lower incomes in oil producing countries. According to Goldman Sachs (2016), by 2016, the oil producing countries had oversupplied the commodity. Consequently, there is general glut on the global market. It is therefore prudent to invest in renewable sources of fuel than waste resources exploring new and expensive fossil fuels in low demand on the world market. According to the Environmental Management and Co-ordination Act (EMCA), 1999, Kenya is party to international conventions, treats and agreements on the management of the environment such as the Kyoto protocol and the Paris agreement. Therefore, any investment that is in contravention with the national and international provisions will not augur well for the nation. Indeed if nations have to control the planet's temperature to less than 2 degrees Celsius, in accordance to the Paris resolution, the Turkana oil find will not translate into economic value that can stand the test of time.

5. Recommendations

The discovery of the oil in Turkana is largely perceived as a blessing to the County due to its promise and potential to trigger socio-economic development. However, many obstacles that have plagued the venture as discussed in this article should be addressed by;

Ensuring the necessary legislation that considers all players as discussed in this article is enacted. Comprehensive legislation should be encompassing, include all relevant sectors and achieve environmental sustainability. This calls for well thought out strategies such as empowering local people to protect their rights and access socio-economic and environmental justice; building strong partnerships and encouraging collaborative initiatives. It is in this vain that in mid-2017, the UNDP came up with devolution project dubbed; Integrated Area Based Development Programme (IABDP) that targets Turkana County. This project is committed to ensuring that devolution system of governance works by providing strategic support to effective service delivery cognizant of sustainable development. The project will include mentorship by multiple UN agencies such as WFP, FAO, UNICEF, and UN Women. Such a comprehensive plan will enable all stakeholders to gainfully co-exist.

According to Oxfam Kenya, there must be concerted effort to influence positive policy and practice for socio-economic transformation in Turkana County. Here, it should entail seeking the opinion of indigenous people before projects commencement of projects in their area. In line with the aforementioned, Tullow Oil commenced a Free Prior Informed Consent (FPIC) programme in 2015, which stipulates guidelines on how to seek consent from the Turkana community in decision making. The FPIC proposes are raft of by-laws which include amongst others: to document consultation processes and agreements in appropriated languages understood by all; and enforcement of contracts disclosure so that communities access adequate information regarding agreements reached at all levels of governance. In essence, the Turkana people must be seen and heard.

Supreme recommendation is however, for the Kenyan government to focus all efforts in investing in renewable energy. The burning of fossil fuels will result in the earths' temperature rising beyond the 2^{o} Celsius above pre-industrial levels, which according to the Paris climate convention, (COP 23, 2015), is the tipping point for the destruction of the planet. Humanity and planet Earth can only be safe by shunning the use of fossil fuels. This will reduce global greenhouse gas emissions and forestall the threat of climate change.

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