

DISASTER RISK MANAGEMENT AND OIL PRODUCTION IN UGANDA:

NEED FOR A WIN TO WIN APPROACH

INPUT PAPER

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Abstract

Uganda's development over the recent years gained more impetus after discovery of oil in Albertine Graben in 2006. It has attracted wide attention from multiplayers within and outside Uganda. However, it poses a challenge to Uganda's Disaster Risk Management (DRM) from hazards that may lead to both natural and manmade disaster arising from ongoing oil exploration and prospected production. This paper's information is drawn on excerpts of literature reviewed categorically about disasters and oil resource from UNISDR, UN and Uganda, oil and disaster scholarship, media and other sources. We note that challenges ahead of Uganda's DRM emanating from its dawning oil era are not devoid from other oil producing states. We agitate therefore for measures premised on Uganda's National Policy for Disaster Preparedness and Management (NPDPM), the Petroleum Act 2013 and other existing legalities to ensure that Uganda optimize its oil acreages while minimizing oil liabilities. 2015 World Conference on Disaster Risk Reduction and HFA2 should inform an in-depth analysis on integrating oil or petroleum activities into DRR agenda. Otherwise DRR in oil producing countries will remain constrained and thus hindering building the resilience of nations and communities to disasters unless a clear linkage between DRM and oil sector is elucidated.

Keyword: Disaster, oil, NPDPM, Uganda and HFA

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Introduction

Countries endowed with natural resources like oil and gas, gold, diamonds, limestone, forests and others are exposed to both high level development and risk eventualities. Dismally, unlike in the developed world, in developing world instead some countries are embroiled in persistent conflicts and disasters due to resource possession. Others are racked into absolute poverty emanating from resource mismanagement. This is in conformity with Mbabazi (2013) assertion of resource abundance turning into a '*paradox of plenty*'. To this note, most research synergies and literature revolve on exploring the economic expectations and spinoffs of resources. Others focus on how resources are sources of conflicts. Sub Saharan Africa being a resource rich region, is continuously paid wide scholarly nexus. However, little is deliberated on how resources are triggering disasters, both natural and manmade. Against this backdrop that we set an in-depth insight on how Uganda's ongoing and prospected oil activities impact its Disaster Risk Management (DRM).

Uganda

Uganda is located in East Africa astride the equator and Sub Saharan Africa with a total land of 241,550.7 (Sq. Km); with water and swamp covers 41,743.2 Sq. Km and land area of 199,807 Sq. Km. (UBOS, 2012). Hitherto, its population is estimated at 37.5 million people, GDP \$19.59 billion and with agriculture as the backbone activity. It is rich and endowed with amiable climate and natural resources coupled with ample, fertile land and regular rainfall. Uganda's attractive climatology were labelled as the '*Pearl of Africa*'. Kenya neighbor Uganda in the east, Democratic Republic of Congo to west, Tanzania to south, South Sudan to north and Rwanda to Southwest. Uganda's history on the other hand, has been derailed with episodes of social, political and economic turmoil and turbulence for two decades since 1962 post-independence (Oloka, 1992). Through the tyrannical regime of Idi Amin (1971 - 1979), then the anarchical years of 1980s not until the rise to power of the incumbent National Resistance Movement government (NRM). However, soon after the rise to power of NRM, the country was plangued into another civil strife of the Lord's Resistance Army (LRA) in northern Uganda with detrimental impacts on the country.

Over the recent years, Uganda's economy has been rebounding significantly at 5.1% economic progress (Budget Speech: FY 2013/14). With the impetus of oil discovery, more economic achievements are forecasted. Besides, other economic activities like fishing, industry, trade, tourism, and mining amongst others are thriving. It should however be noted that, Uganda's location, climate, population, political and economic ambitions have been shaping its disaster trend. Consequently, the occurrence of some disasters at times overwhelm it's capacity to respond thus impacting its political, economic, health and socio-cultural domains. As Uganda makes a headway to its oil sector, how adequately is prepared to respond to any disaster risks that can arise from oil extraction and processing notwithstanding that disasters are inexorable?



Figure 1: www.google.com/search?q=Maps+of+Uganda

Objective

Uganda and Madagascar are projected as the next African oil producers (EIA, 2013). Luckily Uganda's oil sector is emerging out in millennia and presumably guided by wide research and lessons drawn from other oil producing countries' experience. With or without any research or lessons *per se*, some of the petroleum or oil related risks inevitably awaits Uganda at or near the top. In some Sub-Saharan African oil states, the resource is mostly at the center stage of conflicts. Thus however, the challenge of this paper is to explore how the ongoing oil exploration and prospected oil production pose threats on and may impact Uganda's DRM.

On that note, how effective is Uganda's National Policy for Disaster Preparedness and Management (NPDPM) or the Petroleum Act 2013 *inter alia* existing disaster and oil frameworks in ensuring effectiveness in the prospected oil sector while not compromising Uganda's DRM? Will Uganda's dawning oil sector break the ostensible perception of 'oil curses or Dutch Disease' held about many Sub-Saharan African oil producers as states? Can Uganda's oil production and DRM usher in a new DRR model for the forthcoming 2015 World Conference on Disaster Risk Reduction and Hugo Framework Action (HFA2) can deliberate on? Answers to these questions is the ultimate aim of the paper premised on concerns raised herein. They delve on excerpts of literature from but not limited to UNISDR, UN, and Uganda government documents, oil and disaster scholarship, media and other sources.

Disaster Management in Uganda

The reverberating and adversely disaster impacts on Uganda's men and women occurred more in the 20th century. According to Uganda's Report at Kobe – Hyogo Conference (2005), disasters have caused a great deal of suffering and property loss and productive capacity for the people of Uganda. Uganda government recognized also that they obstruct its roadmap to economic growth and sustainable development. In response, while considering its constitutional provision (Article 249 [23]), the National Policy of Disaster Preparedness and Management (NPDPM) were enacted in 2008 and launched in 2010 under the custodianship of the Department of Disaster Preparedness and Management (DDPM) in the Office of the Prime Minister (OPM). NPDPM regulates disaster management in Uganda through prevention, preparedness, response and recovery. Its overall goal is to promote national vulnerability assessment, risk mitigation, disaster prevention, preparedness, effective response and recovery in a manner integrating disaster risk management with development planning and programming.

NPDPM further highlights some preventive actions according to disasters such as early warnings, physical planning, legal frameworks, public awareness, sensitization and advocacy campaigns, routine surveillance, education and training. Others measures include though not limited to research and documentation, coordination, monitoring and evaluation, resource mobilization, capacity building and partnerships. It agitates for a holistic disaster preparedness and management approach among different stakeholders in managing disasters within and outside Uganda. It's worth noting that to some extent, NPDPM has guided Uganda's DRM with efforts and support both from Ugandan government and other stakeholders like Uganda Red Cross Society (URCS), United Nations and others. However, another moment to prove NPDPM worthiness is eminent, the eagerly awaited petroleum or oil sector.

Disasters in Uganda

Like any other countries, Uganda is inexorable from both natural and manmade disasters. On one side, a combination of geophysical and hydro metrological natural disasters including drought, earthquakes, famine, floods, landslides, epidemics, volcanic eruptions, pest infestation, hailstorms and lightening among others befall Uganda. On the other side, manmade disasters such as fire outbreaks, road traffic accidents, terrorism, building collapse, civil strife and ethnic conflicts and violence to mention but a few have also vastly happened over time. With the emerging dimensions of climate change however, Uganda is likely to face an increase in weather-related disasters (IDRL Report, 2011). Suffice it to say, some disasters are primary triggers of other disasters (secondary) but with similar impacts. Anticipating the likely disaster risks in relation to the above disasters cleavage on dawning oil era towards Uganda's disaster trend, is another challenge to be explored by this paper. The below chart depicts some disasters which have been occurring in Uganda.

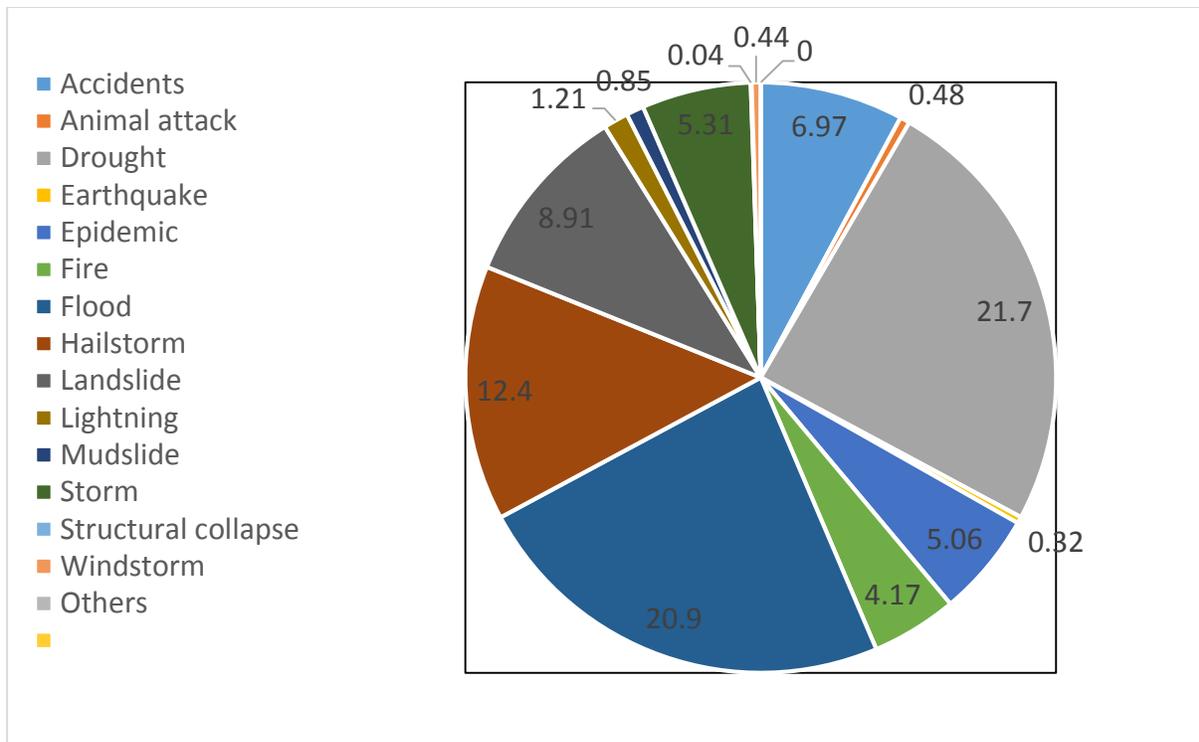


Figure 2: Disaster occurrences in Uganda. Source; Desinventar

Oil Exploration in Uganda

Prospects of Uganda's development were greatly hovered with the confirmation of commercially viable oil deposits in 2006. They were discovered beneath the Albertine Rift Valley Graben, (figure 3) west of Uganda. Uganda joins Ghana, Ethiopia, Kenya, Mozambique and Tanzania as the newest African continent energy frontier – spurred by the discovery of oil onshore (Thunstorm, 2013). The discovery news elicited a mixture of euphoria and hallucination from different stakeholders. Some eagerly look forward to seeing Uganda turning into economic power driven by oil sector with decrease in donor dependence, infrastructural development, and employment alike. On contrary, others foresee Uganda soon joining the league of African troublesome petroleum and/or oil producing states. While for this paper, it cautions on the likely disaster risks.

The origin of Uganda's oil finds seems to be puzzling and marred by controversies. Some elites in the incumbent regimen claim to be the initiators, others argue that Uganda's oil is as old as Bunyoro Kitara Kingdom. While others note that it began during Uganda's colonial legacy. Amidst these backups, the oil issue seems to have convoluted to 'Petro-Politics'. However, Modesi (2010) clarifies that, although the first steps of discovery were undertaken in 1925, Uganda's oil exploration only began in earnest of 2003 prompted by the confluence of oil scarcity and rising prices. This is beyond the confine of this paper, but it's crucial to note that Uganda's oil find has been a due process for decades with a hand of all the past Ugandan ruling regimes. What's important to consider is, lest the oil sector be properly planned and managed so that Uganda does not sink into either the bil curse or Dutch disease'.

Since 1986, the NRM embarked on pursue of several economic and governance reforms with its economic philosophy of rescuing Uganda from economic and development stagnancy (Museveni, 1997). Among the measures that were undertaken, was the re-initiating of the oil discovery process. Foreign Multi Corporations (MNCs) like Heritage, Tullow Oil, Total and CNOOC were contracted to ascertain the availability and quality of Uganda’s oil in the Albertine Graben. After series of exploration, different sizeable oil deposits were discovered and announced. The first oil confirmation was made in October 2006 preceding with the national-wide jubilations which were occasioned with a national thanks-giving prayer at Kololo airstrip. In February 2007, 200 million barrels were confirmed in Kingfisher well, which is currently the largest Uganda’s oil reserve.

After efforts and zeal of discovering more oil, Heritage Company in August 2008 announced more discoveries in Kasamene well with high flow rates. It is considered to be the biggest onshore oil discovery in Sub-Saharan Africa. In December 2009, another discovery of 9,000 square km at Buffalo- Giraffe exploration field was made (Bategeka et.al, 2011). In 2010, still 2.5 billion barrels were also discovered and confirmed. By 2012, additional one billion barrels of oil were discovered and announced, pushing the figures of commercially viable deposits to the current 3.5 billion barrels (Daily Monitor, 2012). This is slightly less than Nigeria’s 31.5 billion barrels. It’s imperative to note that, other oil discoveries are coming on stream, stretching beyond the Albertine Graben to as far as DRC in west and South Sudan in north as can be viewed on the map below.

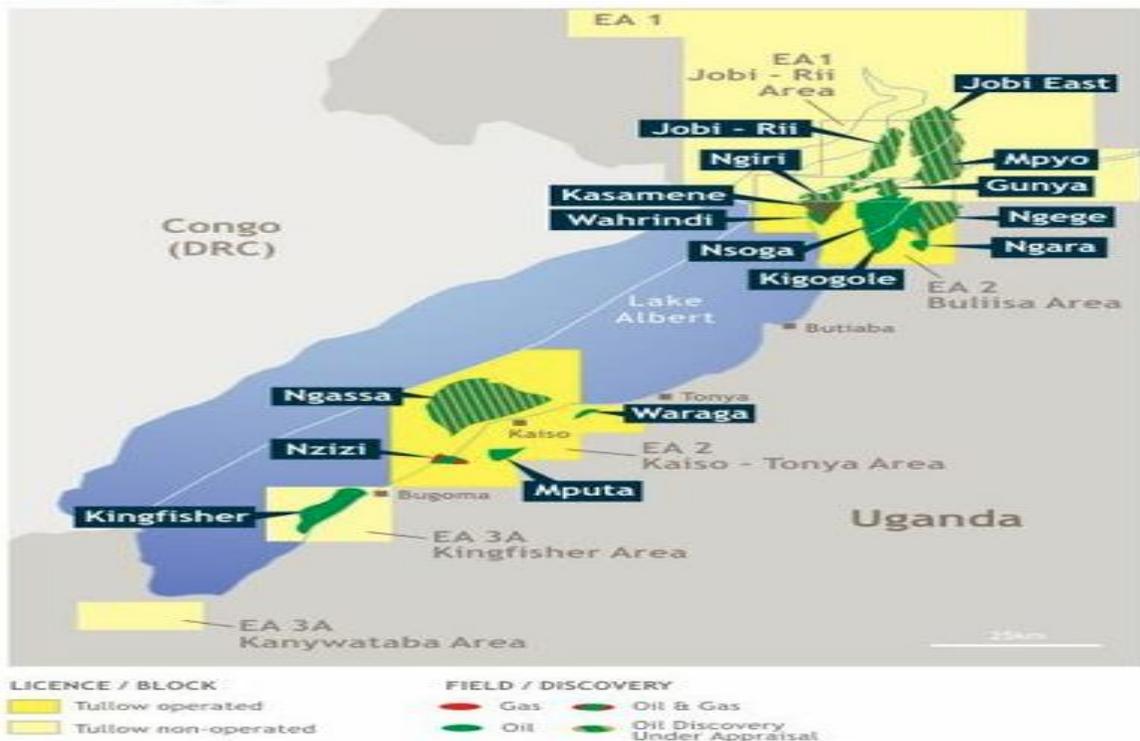


Figure 3: Oil exploration areas in Albertine Graben. Source; Tullow oil

As Uganda draws towards its petroleum or oil production, the government is devoting enormous mechanisms towards its Energy and Mineral Development Sector which is projected to be the

next heart of its development in the foreseeable future (GAPR: FY 2010/11). One can arguably assert that, Uganda is posited to become one of the next leading African oil producers. But this maybe opaque and questionable, unless some threats Uganda is bearing brunt due to ongoing oil exploration and prospected production are dis-risked. They include among others, destruction of biodiversity and ecosystems, crop fields, displacements and landlessness, interstate and ethnic tension as are reported in recently published Uganda Human Rights Commission Report, 2014 (Daily Monitor: March 20th, 2014). They are not only derailing Uganda's human rights record and economic livelihood of the local people but also hinder the country's DRM. It's apparent that both development and DRM compliment the other, each maybe deemed to fail without the other. However, Uganda ought to enhance proactive actions to tame any oil hazards and threats which may trigger off disasters within the Albertine region in particular and in Uganda at large. We therefore mention some issues of great concern to this affect.

Challenges ahead of Uganda's Disaster Risk Management in Era of Oil Sector

Noticing some early indicators in pre-oil production phase, Uganda seems to limps into oil risks. It perplexes and arouse some sense of fear what is to happen then after 2016, when the full production will commence? Unless early and viable measures are interwoven between oil production and DRM, Uganda may wallow towards an 'era of disasters'. However, Uganda stands at a crossroads. Reaps from its eagerly awaited oil sector must be optimized whereas the resultant hazards be mitigated and minimized. In light of this, one cannot fail to anticipate the great challenge ahead of Uganda. However, it is still early enough for all the concerned stakeholders to raise up and deliberate on formidable remedies to any crises posed. Nonetheless, we signal out the following threats to be deserving early attention from all the concerned stakeholders;

According to the NPDPM (2008), western region where the Albertine Graben is located is mapped as a seismically prone area of Uganda. This is due to the active earthquake epicenters in Lake Albert forming the Great East African Rift valley. The Albertine Graben being proximate to it, it is thus vulnerable to earthquake. Since the 1966 and 1994 earthquakes with magnitude of 6.8 and 6.2 on Richter scale respectively, Uganda has never had any other devastating earthquake. But in July, 2013, some parts experienced tremors for three days measuring between 5.4 – 5.7 on Richter scale. It was said to have originated from Lake Albert (New Vision: July 4th 2013). It elicited a mixed bag of reactions, some attributing it to ongoing oil explorations. It is noteworthy that, forces exerted underneath in any fluid extraction result in major and minor earthquakes as contended in Frohlich (2013) study on oil production wells in Eagle Ford Shale, Texas. Therefore people's perceptions about the July 2013 tremors maybe justifiable. However, with appropriate and rapid preparedness and response measures in place, some affected areas suffer no or less impacts. Though the Petroleum 2013 Act spells out clearly the need for seismic surveys by oil licensees, but can it guarantee that Uganda will be prepared to respond to any seismic incidents?

So far some of Uganda's existing environmental audits are laudable. Quite a lot research synergies are pronounced on the environment protection in the course of oil production. To some extent,

they try to ameliorate the likely environmental degradation in the Albertine Graben and elsewhere in Uganda. But it's quite clear that oil mining at times leaves the environmental and human inhalation at risk in many underdeveloped oil producing states due to desecration from aerosol pollutants of oil wastes and gas flares effluents. One reason is that, it's quite hard to regulate some magnificent foreign multinational corporations' oil production activities (UNEP, 2011). Nigeria's Ogoniland is a typical example. Will Uganda therefore dissimilar from the Ogoni ordeal by bringing foreign oil companies to comply with regulatory environmental laws? Besides, the oil sector will boost further Uganda's industrialization, one of its pillars to development. However, some industrial endeavors are already undertaken at detriment of different places environs in Albertine. Hence a worrisome of what is still to happen in the forthcoming era of petroleum sector.

Similarly, Lake Albert is a major source of drinkable water to local people across the Albertine Graben region. Ugandan Ministry of Water and Environment (MWE) has been instrumental in monitoring oil and gas activities in the Albertine Graben to assess the level of compliance to environmental requirements (MWE, 2013). However, considering Uganda's negligible patterns of protecting water catchment areas, will such mechanisms effectively regulate incineration of oil seepages to be generated from the projected 200,000 – 350,000 barrels processed per day in the Greenfield oil refinery? It's doubtful whether water contamination will be fully prevented or contained in the course of oil production. Albertine being one of Uganda's regions with frequent rains, its underground water table and aquifers are at risk of infiltration by oil spills carried by gaseous and liquid creeks oxidized in space and water. Resultantly, both local people and animal's health will be exposed to water borne and oral focal comorbidities such as cholera, diarrhea and typhoid. Some early environmental degradation indicators cited in ongoing oil exploration bisecting the ecosystem arouse future worries of obstructing the affected areas' hydrology system and besides creeping more and above 21.7% (figure 2) Uganda's perennial problem of drought.

Ideally, oil production is the moment of strengthening good neighborliness and corporation. As aforementioned, Uganda's oil straddles to DRC via Lake Albert. Uganda - DRC relations for quite long have been souring. The oil issue seems to have brewed more the animosity between the two when DRC at one point accused Uganda of conducting oil drilling up to its territory. It peaked up with a diplomatic row when a Canadian national employed by Heritage Oil was killed by Congolese soldiers (New Vision: 7th August, 2007). Although the issue was diplomatically settled, the two states continue to be tensed. At the end of it all, an interstate conflict may break out and riddle trade and oil production between the two countries and yet both are potential oil market for the other. But what is the driving force behind their tension? Any conflict outbreak thus is a propensity to refugee influxes and Internally Displaced Persons situation. Some districts in Albertine region have already been affected and the oil resource may continue adding pepper into the crisis wound.

Agriculture is the major economic sector employing 66% of Uganda's labour force (Budget Speech: FY 2013/14). It similarly applies to the Albertine region where communities engage much in subsistence agriculture. Unfortunately, the activity is losing attention to the oil sector. One, oil exploration has destructed the farming activities within the Albertine Graben especially during the

seismic surveys with inconveniences limiting cultivation and destructing crop fields. Two, with the anxiety of reaping from ongoing oil exploration, agricultural activities are slowly declining. It is due to laxity of some Albertine inhabitants now targeting future oil expectations. Many energetic youth have abandoned their villages to oil drilling sites to tap and skim for oil menial jobs. Third, oil settles on soil leads to soil infertility thus decreasing the productivity of crop fields. The concern is whether job skimmers have necessary requirements for recruitment owing to complexity and technical expertise required in the oil sector? Besides, since the agriculture sector contributes significantly to Uganda's exports, a great threat to the economy is posed and an hazard of the looming food insecurity decimating to chronic famine which may befall the region soon or later.

In the same vein, fishery is another sector and sustainable economic activity employing many Albertine dwellers. According to Uganda's National Export Strategy (2007), fishery contributes USD 10.2 billion to Uganda's exports between 2002 and 2006. Unfortunately, due to multiple threats the sector is declining. One of the threats is attributed to water contamination. This retards fish hatcheries and depletes species due to poisoning with dreadful affects to both fish species and fish consumers' health. Lake Albert has not been spared from it. Fishermen decry restrictions imposed on fishing from areas across Lake Albert on top of oil omissions into the lake. Still, the tension between Uganda and DRC seems to have spilled over to the grassroots thus impacting the fishery. Although conflicts between fishing communities of the two countries have been rare, but ever since oil exploration activities commenced across the Albert Lake, fishermen from the two are embroiled in sporadic tensions. Each accuses the other of trespassing the other's territory in the course of fishing. But is it that the problem emanates from territorial misunderstanding? Kim (2013) points out that, the crisis is exacerbated by the discovery of hydrocarbons across Lake Albert. Unless concerted and early conflict resolution mechanisms between the two countries are bolstered, the problem is likely to escalate into unemployment and protracted interstate ethnic conflicts.

It is inevitable that oil exploration and exploitation warrant displacement. Some population have been affected in Albertine. For instance, residents estimated at 7,118 from 13 villages in Buseruka Sub County in Hoima district are to be evacuated in order to create space for the construction of the proposed oil refinery (The Observer: November 12th, 2013). Measures undertaken in the government Resettlement Policy Framework 2013 (RPF) programme are lauded. However, according to International Alert Report (2013), some discrepancies like displacement without adequate compensation, disregard of women in decision making and others remain inadequately addressed in RPF. Won't this spark off risks associated with displacement? Any resultant situation necessitates appropriate and holistic resettlement mechanisms to tame any disaster risks that may arise. If not handled appropriately, displacement is a breeding ground for communicable diseases transfer, ethnic tension and any other dire situation ruinous to the livelihood of the affected people.

In addition, unfair compensation mechanisms in course of displacement are decried. Indigenous people in villages to be affected by displacement joined by some concerned Civil Society Organizations (CSOs) have occasionally questioned and protested the RPF compensation

modalities. They attribute the measures as 'unjust' with deceitful rates undervaluing victims' land, crops, and property. Some have called for more adjustments in the compensation packages while others have dismissed the entire process. If not well handled, the affected victims may be subjected to economic meandering relating to Nangendo et.al (n.d.) temporary economic displacement caused by intensive oil exploration 3D seismic project. The compensation processes have been hitting the snag between the government, oil operators and oil host local communities. For example, residents of Nebbi and Hoima districts complained of the little compensation paid to them after destroying their crop fields during the oil surveys, building accesses to roads and oil well pads (Oil in Uganda, 2013). The concern is, won't this standoff culminate into sour relations which can groom saboteurs, vandals and civil protesters similar to Movement for the Survival of Ogoni People in Niger Delta?

Still, displacement won't affect human beings only but also Uganda's rich flora and fauna. On one side, the Albertine region hosts Uganda's magnificent tourist sites like the Murchison Falls National Park. On the other hand, most of the Albertine Graben oil is onshore and nearby tourist zones. This creates a 'paradox of benefiting' between the two sectors. It's worthy noting that, many oil operations are taking place in the highly valued Uganda's Murchison Falls National Park (Rwakakamba, 2014). As already hinted, it is relatively clear that oil exploration and exploitation detriment the ecosystem thus impairing the settlement patterns of animal species by forcing them to migrate from one place to other places. A similar situation is attributed to the sporadic wild animal attacks at 0.48% (figure 2) especially marauding elephant in Nwoya district – West Nile region of Uganda causing crop fields destruction, killing and injuring people, sometimes unwarranted displacements and transferring zoonotic diseases. Oil exploration is said to be one of the contributory factor, forcing away animals from their habitats due to noise associated with heavy vehicles and machinery, as well as vibration (The Observer: July 11th, 2013). Aside that, different tree species have also been uprooted during several oil construction activities. Apart from impairing Uganda's tourism which has been thriving well, aren't these some of factors hazards of climate change with debilitating impacts like drought and rainfall dropping?

The anxiety of reaping the prospected oil rents exacerbate land grabbing in some Albertine districts. Different land speculators, rich and influential elites have up surged some oil districts. It starts with land purchase from areas proximate to oil zones with anticipation of profiting from the future lucrative oil boom and mops prices. Subsequently, in the process other unscrupulous acts limited not only to corruption, fraud and bribery unfold. This is in agreement with Rugadya (2009) assertion of how Bullisa had turned to be another land grabbing trouble spot due to oil prospects. For example, NAPE Report (2012) is a clear testament on how 700 hectares of land were ended up grabbed in Bullisa district by some bourgeoisies. In such scenarios, the poor, and socially disadvantaged groups as well as the indigenous people are not only displaced but also left in dire and squalid livelihood situation. Doesn't this lead to the destitute conditions which sow seeds of hatred and retaliation among the affected henceforth a backbone spearheading unlawfulness acts induced by human violence? Cases of arson and displacement and their consequences happening already in some districts of Albertine attribute to this situation deserve a special mention.

More still, the oil issue is under invasions from politicians with an aim of reaching their latent political goals. Some politicians have resorted to using the oil as a 'weaponry' to fight both political and ethnic wars. This is in tandem with Adelman (2004) assertion of how the oil can become a weaponry of danger. In Buliisa district for example, indigenous Bagungu people accused the Balaalo herdsmen, backed up militarily of forcefully occupying their fertile land endowed with huge oil reserves. HURINET-U report (2010) titled 'Operation Restore Justice' underpinned some eminent and local politicians in the Albertine Graben for fueling the fracas between the two ethnicities with the intensions of extending their political jurisdiction and hidden oil-related endeavours to the oil abundant areas like Buliisa. Aside that, more worries are ahead, what to happen then before and in aftermath of the approaching Uganda's 2016 general elections and won't the oil issue become more and more politicized? This paper notes that, without prior mitigation measures, the worst in forms ethnic clashes is likely to unfold given that the Albertine area is a multi-ethnic composition region.

Related to the above, enormous expectations are eagerly awaited to be accrued from the petroleum and/or oil sector. Political elites have gone farther to make mendacious 'Heaven and Earth' promises to the local people. This is coupled with zeal of the oil sector nurturing Uganda's economic transformation of graduating from underdeveloped economy to either low or upper middle economy as per Vision 2040 (NPA: 2010/11 – 2014/15). The challenge is whether all the expectations promised after the oil industry will be met and fulfilled in time and equitably, whether to the Albertine inhabitants or to the rest of Uganda. On the other side, is there any similar vision and promises averaging to DRM/DRR? A case of Niger Delta in this regard sets an overarching lesson and early warning signal for Uganda since mistrust, grievances, discontentedness, violence and armed resistance especially from the youth were fueled when countless and anomalous promises went unfulfilled (Hoben, 2012). Lest clear and feasible objectives be set and mechanisms of achieving them so that Uganda does not in the future face similar fortunes which can culminate into other disastrous risks.

Uganda's anti-terrorism mechanisms within and across the East African region are laudable. On top of NRM regime's throes of restoring peace and security in the country after decades of anarchy and turbulence. However, another moment to test its security and counterterrorism is imminent. As Uganda enters the midstream of its oil industry, will its security remain viable and impervious amidst the growing global security threats? Noticing from figures 1 & 3, Uganda shares borders with DRC. However, its borders are porous and evidence shows how they are inadequately policed and patrolled thus spurring illicit immigration, trade among other threats (OSAC, 2013). For some time, the Allied Democratic Forces (ADF) group debuted with links to notorious Al-Qaeda has been imposing incursions in western Uganda against the Kampala regime basing in DRC. Also the M23 Congolese rebels are cited to have been operating freely near the Albertine region. The sanctuary of the two movements being proxy to the oil Graben, may trigger violence and sabotage which may thus destabilize the extractive oil systems or cut off the distribution network (Kathman, 2011). Besides, won't this recipe to incidents of bioterrorism disasters in Uganda?

Further, Uganda is constantly under terror attacks especially from the Al Shaabab Somali based militants. On one side, their aim is to retaliate against Uganda's contribution to AMISOM troops backing Mogadishu ruling government which they are against. On the other side, it is due to lack of a clear spelled out political agenda other than the one loosely articulated vision of a society that abides by religious tenets (Kisiangani, 2011). Considering their nefarious nature, how effective is Uganda's sentinel security measures to guarantee that its oil industry will be safe and free from any terrorists' incursions and other related activities similar to north eastern Nigeria's based Bokko Haram? The fact that Uganda has not yet wiped out completely the ADF insurgents coupled with contunious Al Shabab threats, the country's dawning oil sector faces eventualities the likes of sabotage, pipeline vandalism, bomb explosion, hijacking, hostage, assassination, kidnapping among other endangers from those terror movements.

Oil producing countries experience rapid wheels of urbanization especially in vicinities proxy to oil extraction activities. This drives both opportunities and challenges. However, in the developing world, urbanization plights overwhelm opportunities. Oil production paves way for enormous economic activities in relatively underdeveloped areas thus enhancing economic and social amenities, comprising of migration, unstructured settlements, and infrastructural development. The SEA Report (2013) observes that, due to oil development activities in the Albertine Graben, a spiral of urbanization processes is taking place along the roads in the region. For example, the 2009 population density in Buliisa was estimated at 738.8 people per square kilometre, higher than the national average of 137.1 people per square kilometer. In the midst of this, how prepared is Uganda to check on any urban challenges whammed by the oil sector while considering its 5.1% per annum urban population growth as estimated by UN Habitat (2008)? It's apparent that without effective urban planning, hazards associated with poor physical planning like poor settlements, sanitation and hygiene, outbreak of epidemics, inflation and others maybe botched.

Incidents of motorized accidents and fire outbreak are not devoid from oil production. Currently, Uganda has been for long a victim of both motorized and non-motorized accidents. It's quite common that oil exploration and exploitation notoriously lead to road traffic, air and water accidents in cases of truck collusions, tanks explosion, bombing hijacking and storms which can ignite easily fire outbreak and other bioindustrial accidents. The trend of road accidents in Uganda of recent have been rampant with 28.9 per 100,000 population inundate the overall global road traffic fatality rate of 18 per 100,000 population (WHO, 2013). It's noteworthy that, Uganda's road networks are still in appalling state despite of the remarkable economic progress made. Whereas, enforcement and compliance to both Uganda's traffic laws and safety measures remain a daunting challenge. With the forthcoming oil industry, will the accident rate be inestimable below or above 6.97%? Quite far distances will be en routed between oil production sites or refinery and to the last exportation destines. However, with the poor roads and weak vehicle inspection laws one gets deeply concerned of what will be the rate of road accidents in the oil era. Besides, Uganda has been facing incidents of torch fire killing and injuring people trying to siphon oil from colluded or overturned oil tanks. Lake Albert on the other hand, has been a common scene of deadliest capsizing boat accidents and with the prospected oil activities, water transport activities are likely to increase thus increasing also water related risks to water travelers.

Well skilled human and technical workforce is needed for both the oil sector and DRM summarizes the challenges. As mentioned above, Uganda has devoted quite commendable efforts in the vigil of its oil sector. We are certain that needs pertaining to competent human capacities and appropriate technology are also charted in the oil roadmap. But is similar attention being paid to DRM? Whichever measures are embarked on to pool either human or technical capacities for approaching oil sector, similar capacities are also required for DRM. They should encompass DRR hightech mechanisms, competent information analysts, searchers and rescuers, chemical and hydrologic engineers, fire extinguishers among many others. Unfortunately, Uganda is still constrained both with DRM workforce and appropriate technology thus warranting prompt actions before the full commencement of oil flow. ILO (2010), notes that Uganda needs reliable and well trained workforce especially in the chemical engineering to avoid any environmental challenges that may arise from oil drilling and refinery.

In the midst of all the above concerns, government elites always assure the nation and the world that Uganda is determined to ensure effectiveness of its oil sector (Museveni's Speech, 2012). However, more attention is still needed to address the above concerns and bridge the identified gaps. On this note, we wish to re-emphasis that, our aim is neither to inquire into any crises that have engulfed Uganda's oil sector nor spell doom to it but rather indicate challenges ahead which may jeopardize DRM in Uganda and requiring a prompt action from DRR fraternity and academia.

Oil Sector Blessings towards Uganda's Disaster Risk Management

Agreeably, the oil sector presents both opportunities and challenges to Uganda. Nonetheless if well managed, its treasures will have positive strides not only towards Uganda's Vision 2040 but also to Uganda's DRM as enshrined in the NPDPM. Uganda's oil is projected to generate \$ 2 billion (Vision 2025) windfall revenue annually to the economy. This amount will also thrive other vital national sectors and departments and no doubt, Uganda's DDPM will be among the beneficiaries, a prospect to facilitate DRM mechanisms in Uganda.

By assenting to Petroleum (Exploration, Development and Production) Act 2013, Uganda demonstrated its commitment towards DRM. This is proved by the pertinent provisions of conserving and preservation of waste and natural resources (Part XVI: 183 regulations) such as Environmental Impact Assessment and others enclosed in the Act thus fulfilling HFA priority one.

The oil sector is projected to enhance peoples' basic needs and services through employment, infrastructure, education, transport, health and other key developments. This is not far from what some political elites speculate for Uganda from the oil sector. So far efforts in constructing and upgrading some infrastructural networks across the Albertine region are commendable. Some roads are under construction and upgrading, the Uganda Petroleum Institute at Kigumba was established in 2010 and the 600MW Karuma power dam commissioned in August 2013 (GAPR FY, 2012/13). Construction of Uganda's domestic oil refinery at Hoima district is heightening, with prospects of creating enormous jobs to Ugandan. As stated above, development is a touchstone

of DRM whereby its achievements compliments DRM. The challenge will be to ensure that oil leverages are proportionately distributed and improve on the equity structure of Uganda.

Banfield (2009) observes that Uganda's approaching oil industry is reported to be one of the latest Africa's hottest inland exploration frontier. If therefore well managed, more multidisciplinary stakeholders within and outside Uganda will be attracted to invest, advise and donate to the sector other related sectors. No doubt DRR will be one of the key fields to capture such opportunities, for example in terms of more research funding. Thus juxtapose Uganda's capacity to join other successfully oil producers such as Norway, Botswana and Ghana alike.

Education, advocacy and sensitization programmes relating to DRR are ongoing. Efforts shored up by some oil companies like Total Oil and Tullow in offering study studentships in some areas where the oil exploitation will take place are commended. On the other hand, they sensitize people on risk and safety and no doubt it inculcates local people's disaster preparedness and response as well as ensuring healthy environments (New Vision: March 25th, 2014).

The list of oil acreages can be lengthy and surpassing what the oil sector can support. However, the beginning determines the future. It will hinge on how Uganda foster a balance between development and DRM. It is therefore not yet too late for any loopholes and threats depicting in Uganda's dawning oil sector to be corrected or averted before the full oil production.

Recommendations

Despite the concerns echoed, Uganda still has time on its side before the last peak of its oil industry to prepare and respond to them appropriately. The ball is first on Uganda's side. Then to other multi players both in DRR spectra and other fields to join hands in assisting Uganda to effectively make best use of its oil resource. I ably note the following recommendations worthy considering for Uganda and the regional and international DRR community and they address some of the concerns raised above;

- a) Despite of Uganda's economic status quo which maybe inseparable from risks due to some developmental steps undertaken, Uganda ought to always remain committed to its national, sub-regional or international DRR mechanisms. The political will and financial support devoted to its forthcoming oil sector deserves also be rendered to expeditiously implement its NPDPM. Worthy to note, politics should be insulated from DRM but hallmarks of good governance be maintained and adhered to as Kufour (2013) advised.
- b) As earlier noted, Uganda is lucky that its oil sector is emerging out in millennia. It should therefore long to draw appropriate lessons from the robust achievements of successful oil producing countries that preceded her while avoiding and desisting from failures of those dubbed 'oil cursed states or Dutch Disease patients'. Botswana's impressive political and socioeconomic development and DRM trend serves a model for Uganda. Ghana's example which is not yet long ever since began oil production but is demonstrating remarkable oil utilization vis-à-vis DRM record should also be benchmarked in Uganda's dawning oil sector.

- c) Similarly, Uganda's past disaster experiences is another baseline to always guide its DRM mechanisms especially in the midst of its approaching oil industry. Successes should be defended while weaknesses and failures avoided, mitigated and lasting solutions sought.
- d) A holistic approach converging multi-stakeholders onto the consultative and inclusive board, within and outside Uganda should always be encouraged in all matters pertaining the oil sector and DRM. On a special note, gender sensitive matters should be part and parcel of all the efforts undertaken. Past UNISDR deliberations like the Fourth Session of the Global Platform for Disaster Risk Reduction May, 2013 and UN Secretary General's message on International Day for Disaster Reduction:- October, 2013 (UNISDR, 2014) are worthy imitative.
- e) Little or nothing is focused to elucidate a linkage between disaster and petroleum or oil sector. It's high time therefore HFA2 deliberations should prioritize it, proffering Uganda's case. Almost all the challenges epitomized above affect other oil or petroleum producing states and DRR compliance thus dampening building resilient countries and communities.
- f) Petroleum or oil sector is a pertinent economic field affecting widely DRR. It deserves thus to be clearly incorporated and strategized in regional and international DRR initiatives and the forthcoming HFA2 deliberations should spearhead it appropriately but not in piecemeal manner.
- g) It's a pity that since the launch of HFA, majority of lay people and some DRR stakeholders have remained ignorant about it. HFA2 should hence consider establishing a permanent DRR center/Institute in partnership with some celebrated academic and development institutions engaged in DRR research to foster orientation, endowing and sensitizing DRR stakeholders and lay people about HFA priorities. Where possible, HFA indicators should be developed into a fully pledged educational curriculum to be taught at different levels of learning. If implemented, a priority should be given to countries in underdeveloped world like Uganda.
- h) Government of Uganda should mandate all business and non-business entities to have a well-documented and feasible Emergency Action Planning (EAP). It should infer to stringent prevention, preparedness, response and recovery measures for any hazards and disaster risks they are vulnerable to. HFA priorities and indicators should guide on this.
- i) Domestic and international legalities promulgated in aftermath of HFA should be matched with HFA priorities and indicators and re-enforced in ways that may deem possible other than remaining a fantasy on paper
- j) Establishment of updated and accessible inventorying information system is vital in achieving Uganda's DRM and HFA. We hypothesize that, it is still a challenge in Uganda and one of the constraints we encountered in compiling this write-up. Therefore HFA2 should consider availing its information freely both retrospectively and prospectively via appropriate media and communication channels as Yokohama Strategy for Safer World agitated, while helping in ways possible the developing countries embroiled in 'information poverty'.
- k) It quite clear that economic opportunities emerge with both transient and complex challenges such as terrorism, corruption, sabotage, protests, unemployment and many

others. No doubt, they can aggravate disaster risks as noted above. Concerned multidisciplinary stakeholders and HFA2 ought to deliberate on them as the new millennium challenges to DRR taking the case of Uganda as an example.

- l) After starting the oil flow, Uganda government should consider allocating a considerable amount generated from the oil rents to its proposed National Disaster Preparedness and Management Fund budget of 1.5 % as advocated for in the NPDPM. It applies also to other oil producing countries.
- m) Uganda and DRM stakeholders should consider integrating and mainstreaming more clearly approaches of peace building, conflict resolution and reconciliation into DRR.
- n) HFA2 hand in hand with international legal instruments such as Organization of Economic Corporation and Development framework (OECD) for Multinational Enterprises and International Labour Organization (ILO) Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy should deliberate on mechanisms of bringing non-state actors like MNCs to DRR compliance and how they should be borne responsible for any disaster risks. Partnership and collaboration of regional and international oil blocs such as Organization of the Petroleum Exporting Countries (OPEC) should be considered.
- o) Due to the multifaceted nature of disasters and associated controversies engulfing DRR, research remains endless and a paramount challenge. Therefore HFA2 and other concerned stakeholders ought to support, fund and invest more in all DRR research endeavors.

Conclusion

Both natural and manmade disaster risks are compounded in the petroleum or oil sector. The above analysis shows that Uganda is at crossroads. While its preparations are underway to join the league of oil producing powers, some indicators warrant mechanisms of early mitigation of any threats posing disaster risks. With the challenges noted above, one definitely gets concerned of what is to happen then in the forthcoming oil era towards Uganda's disaster epidemiology and NPDPM. Unless prompt and explicitly concrete measures are deliberated on, Uganda risks remaining a rich oil state but one of the most improvised and always victim of acute disasters since will always divert her oil rents into disaster reconstruction processes. Apart from Uganda, other countries and new African oil frontiers are also not immune from the similar fear. Most of the threats revolve on reaping from oil or petroleum benefits and politics. It's quite clear that the two aspects are unavoidable but the future of Uganda is infinite whereas oil proceeds are finite. Therefore a balance between development and DRM is needed and should always be ensured first by Uganda itself, and all DRR concerned stakeholders.

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