A RESEARCH BRIEF AFRICA INSTITUTE FOR ENERGY GOVERNANCE (AFIEGO)



"MURCHISON FALLS NATIONAL PARK IS DYING"

HOW OIL ACTIVITIES, CLIMATE CHANGE & POACHING ARE NEGATIVELY RESHAPING THE PARK



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Executive Summary

Murchison Falls National Park (MFNP), which is locally known as Kabalega National Park, is one of Uganda's oldest, largest, most visited and species rich parks (Plumptre et al, 2015). The park and its associated game reserves was home to 144 mammal, 556 bird, 51 reptile, 51 amphibian and 755 plant species (Plumptre et al, 2015) in 2015.

The park, which is an important biodiversity conservation resource and supports the tourism as well as fisheries sectors, is however facing unprecedented pressure from oil and gas threats.

Uganda made commercial oil discoveries in 2006 (Directorate of Petroleum, 2020) and the discoveries partly cover MFNP (TotalEnergies, 2019). The Ugandan government alongside TotalEnergies E&P (U) B.V. and China National Offshore Oil Corporation (CNOOC) (U) Ltd agreed to commercialise Uganda's oil reserves through the Tilenga, Kingfisher and East African Crude Oil Pipeline (EACOP) projects.

The above raised concerns among oil host communities, environmentalists, biodiversity experts, tourism sector players, and civil society actors among other stakeholders. The Uganda Wildlife Authority (UWA), which manages Uganda's national parks, has also expressed concerns (Musisi, 2022).

The above stakeholders argue that drilling in the park presents biodiversity conservation and other risks (MacKenzie et al, 2017, Netherlands Commission for Environmental Assessment [NCEA], 2019).

Despite the above, drilling for oil in MFNP commenced in June 2023 (Radio France International, 2023). Further, oil sector infrastructure including a drilling rig, wellpads, flowlines, pipelines, roads and others have been or are being developed to enable commercial oil production from MFNP by TotalEnergies under the Tilenga oil project. Commercial oil production is expected to begin in the fourth quarter of 2025 (Oketch, 2024).

The above infrastructure poses risks to biodiversity conservation efforts as articulated in Total's Tilenga oil project's Environmental and Social Impact Assessment (ESIA) report of 2019.

Between February and June 2024 therefore, AFIEGO and our partners conducted research to assess the progress of development of the Tilenga oil project infrastructure, and examine the impact of this infrastructure on biodiversity.

The progress made in developing oil sector infrastructure in MFNP was assessed through satellite images, which were used to develop maps that are provided in this brief. Analysis of May 2024 satellite imagery shows rapid development of the ten well pads and clearing for roads as well the pipeline network inside MFNP. Further, clearing of the access points for the Victoria Nile pipeline crossing are visible.

Key informant interviews (KIIs) were also conducted with oil host communities, tour guides, civil society actors and biodiversity experts to examine the impact of the Tilenga oil project infrastructural developments on biodiversity in MFNP.

The stakeholders that were interviewed for this brief have researched or work in or live near the park, making them knowledgeable about the aforementioned impacts.

The stakeholders indicated that the Tilenga oil project infrastructural developments have had negative impacts on wildlife. For instance, the drilling rig in the park was implicated in negatively affecting elephants.

The respondents observed that the vibrations from the rig were felt by elephants, which were increasingly moving from the park to surrounding communities.

Previous research has indeed shown that during an oil exploitation phase that involved wellpad construction, drilling and testing of wells, wellpad restoration as well as other activities in MFNP between 2013 and 2015, elephants were affected by oil sector activities and for the most part moved away from sites where oil activities were ongoing (Plumptre, Ayebare and Mudumba, 2015).

This pattern is likely being repeated today. Oil host communities that live around the park report that elephants are moving from MFNP and are invading communities. The elephants destroy croplands and as many as five people were killed by the elephants between 2023 and April 2024 (Mwesigwa, 2024).

The respondents that participated in this research also noted that the Tilenga oil project drilling rig is responsible for increasing light pollution in MFNP and the surrounding communities. The light from the rig can be seen as many as 13.9km away. Concerns were raised by this research's respondents, who observed that the feeding and other patterns of nocturnal and light-sensitive wildlife could be negatively impacted by the rig's light pollution. Such wildlife includes leopards, lions, birds and others. These could migrate from the park, or suffer worse impacts such as death.

Away from the above, this research's participants observed that the paved roads that have been constructed in MFNP to support the Tilenga oil project activities have opened it up to more motorised traffic. This has exposed wildlife to poaching, accidents as well as noise and air pollution. Participants also noted that the paved roads have changed the feel of the park, making it feel less like a nature reserve and more like an industrial area, which is a turn off for some tourists.

Wellpad and other oil sector infrastructural development activities in the park have also raised concerns. This is especially because two wellpads, wellpad Jobiri 10 and Ngiri 1, are located an estimated 950 and 750 metres respectively from the Murchison Falls-Albert Delta Ramsar Site in MFNP. The Ramsar site is an Important Birding Area and important spawning ground for the Lake Albert fisheries (Ramsar Information Services and UWA, 2024).

The development of wellpads near the Ramsar site has been implicated in risking the conservation of aquatic biodiversity such as water birds especially the vulnerable Shoebill, fishes, and mammals like the hippopotami.

The development of wellpads and other oil sector infrastructure were also implicated in increasing the human population in MFNP by this research's respondents. The presence of human beings has been shown to lead to avoidance by wildlife, especially larger mammalian predators, of areas where human beings are (Nickel et al, 2020). However, wildlife such as the Uganda Kob were said to be slowly acclimatising to the human presence and can be found near oil sector workers.

The Victoria Nile Pipeline Crossing, a pipeline that is to be constructed under River Nile in MFNP and is affecting the aforementioned Ramsar site, also raised biodiversity and livelihood (fisheries) concerns.



Overall, this research's participants indicated that the Tilenga oil project infrastructural development activities had negatively impacted wildlife. So has poaching and climate change, whose main driver is the burning of fossil fuels such as coal, oil and gas.

Climate change is reported to have led to ecosystem alterations, loss of feeding and watering grounds during dry weather (Amuge, 2023) and destruction of breeding grounds especially for crocodiles and hippopotami, whose population in MFNP is reported to have drastically reduced (Maron, 2023 and The Elephant, 2023).

The research participants observed that while MFNP was famous for sighting of huge populations of wildlife such as hippos, crocodiles, elephants, giraffes, buffaloes and others before the COVID-19 pandemic, intense flooding of River Nile in the park between 2020 and 2021 and before oil activities picked up in the park, much smaller populations can be sighted today.

"Murchison Falls National Park is dying and a combination of climate change impacts, poaching and oil activities are to blame," one research respondent said.

To protect the park and conserve biodiversity, this research recommends that oil activities in MFNP are stopped, while assessments by UWA are conducted, and recommendations made to address other challenges such as poaching and climate change that are affecting wildlife. To support Ugandans to meet their economic aspirations, development partners should support Ugandans to invest in green economic activities such as clean energy, agroforestry, tourism and organic agriculture among others.



1. Introduction and background

Murchison Falls National Park, (MFNP), which is located in Western Uganda at the northern end of the ecosensitive and biodiverse Albertine Rift Valley (UWA, 2024) is one of Uganda's oldest, largest and species rich national parks (Plumptre et al, 2015).

Gazetted in 1926 as a game reserve (UWA, 2024), the park gained national park status in 1952 (UWA, 2024). The park measures over 3,840 sq. km, but when combined with Bugungu and Karuma Wildlife Reserves, the Murchison Falls Protected Area (MFPA) measures 5,045 km2 (Plumptre et al, 2015). This makes the MFPA Uganda's largest protected area.

In terms of biodiversity, the MFPA is home to over 144 mammal, 556 bird, 51 reptile, and 51 amphibian species (UWA, 2024). The park is also home 755 plant species (Plumptre et al, 2015).

Of these species, over 32 are endangered or vulnerable. These include two endangered and four vulnerable mammal species; four endangered and seven vulnerable bird species; as well as eight vulnerable and seven Albertine Rift endemic plant species. Two amphibians are data deficient (Plumptre et al, 2015).

The MFPA is home to teeming biodiversity because it comprises a number of wildlife habitats including grasslands, wetlands, wooded savanna, tropical forests and open water (Plumptre et al, 2015).

Other than its biodiversity, the park is also famous for being home to the world's most powerful falls, Murchison Falls (UWA, 2024), which are locally known as Kabalega Falls.

While MFNP is a critical resource for biodiversity conservation, tourism development, fisheries livelihoods and others, the park is facing unprecedented pressure from oil and gas exploitation.

Uganda made commercial oil discoveries in 2006 (Directorate of Petroleum, 2020) and the Ugandan government alongside TotalEnergies as well as CNOOC are commercialising the discoveries through the Tilenga, Kingfisher and East African Crude Oil Pipeline (EACOP) projects.

The above partners plan on drilling 426 wells for oil under the Tilenga project (Petroleum Authority of Uganda [PAU], 2023) and 31 wells under the Kingfisher oil project (PAU, 2024). Hundreds of the Tilenga oil wells are located in MFNP.

The Tilenga oil project is operated by TotalEnergies (PAU, 2024) while the Kingfisher project is operated by CNOOC (PAU, 2024). The two companies, alongside the Ugandan and Tanzanian governments, own the EACOP.

Oil exploitation activities in MFNP have raised concerns with environmentalists, biodiversity experts and civil society actors who argue that drilling in the park presents biodiversity conservation and other risks (MacKenzie etal, 2017 amd NCEA, 2019).





2. Problem statement

The MFPA is an important biodiversity conservation area and it supports livelihoods in the fisheries, tourism and other sectors. The park's biodiversity, and the Murchison Falls, make it attractive to tourists so much so that between 2019 and 2023, MFNP received the highest number of tourists that visited the country's parks (Ministry of Wildlife, Tourism and Antiquities [MWTA], 2024).

In 2023, the park received 141,335 visitors (MTWA, 2024), which is equivalent to 36.4% of the 387,914 tourists that visited Uganda's ten national parks. Further, in 2022, the park received 146,649 visitors, accounting for 39.8% of the 367,869 tourists (MTWA, 2024) that visited Uganda's national parks.

The park and other tourism activities are responsible for a sizeable amount of foreign exchange that Uganda earns. In 2023, the tourism sector earned Uganda USD 1.28 billion (Ministry of Finance, Planning and Economic Development, 2024). Further, in the 2022/2023 financial year, the tourism sector had earned Uganda US\$ 1.047 billion by February 2023 (Museveni, 2023). This was equivalent to 59% of all the services export receipts (Museveni, 2023).

No doubt, the tourism sector, which accounts for 14.7% of employment (Uganda Bureau of Statistics [UBOS], 2023), is important for Ugandans' economic wellbeing. So is MFNP.

In relation to fisheries, MFNP is home to the Murchison Falls-Albert Delta Ramsar site, a wetland of international importance. The Ramsar site is not only an Important Bird Area (IBA) and Key Biodiversity Area (KBA) that is home to endangered species such as the Shoebill, it is also an important spawning ground for the Lake Albert fisheries (UWA, 2024).

Lake Albert is one of Uganda's biggest fisheries, or sources of fish, accounting for 43% of the country's fish catch in 2018 (UBOS, 2019). The fisheries sector employs over 5 million people in Uganda (Economic Policy Research Centre, 2020) and contributes 3% to Uganda's GDP (Ministry of Agriculture, Animal Industries and Fisheries [MAAIF], 2021).



Oil infrastructural development activities pose risks to the Ramsar site and other ecosensitive areas in MFNP, thereby putting biodiversity conservation as well as tourism, fisheries and other livelihoods at risk.

While the above may be the case, there is low stakeholder awareness of the status of oil infrastructural development activities in MFNP, and the risks these pose to biodiversity and Ugandans. This research brief seeks to remedy the challenge of low stakeholder awareness to promote biodiversity conservation and protect tourism as well as fisheries livelihoods among others.



Tourists in MFNP; some tourists, tour guides and biodiversity experts say that oil activities, poaching and climate change have negatively impacted wildlife. Areas such as the Pakuba corridor that had abundant elephant populations no longer do.

Objectives Main objective

The main objective of this brief is to raise stakeholder awareness of the status of oil infrastructural development activities in MFNP, and the risks or impacts these pose to or are having on biodiversity.

The specific objectives of the research brief are:

- (i) To document the status of development of oil project infrastructure in MFNP;
- (ii) To examine the impacts and risks of oil project infrastructure in MFNP; and
- (iii) To make recommendations to address the impacts and risks of oil project infrastructure in MFNP.

It is hoped that this brief will be used by various stakeholders including oil host communities, civil society actors, private sector players in the tourism and fisheries businesses, the media, relevant government entities and development partners among others to promote biodiversity conservation amidst oil activities in MFNP.

It is hoped that biodiversity conservation in MFNP will support Uganda to meet national and international biodiversity as well as economic growth targets that are articulated in the country's National Biodiversity Strategy and Action Plan, Vision 2040, the National Development Plan (NDP) III, Convention on Biological Diversity (CBD) and the Sustainable Development Goals (SDGs) among others.



4. Methodology

This brief provides maps that have been developed from satellite images in a bid to raise public awareness on the ongoing oil sector infrastructural developments in MFNP. The maps in this brief were provided by Earth Insight, a research group that maps threats before they become reality.

The following is the methodology that was used to develop the maps and analyses contained in this brief. All analyses and mapping were conducted in QGIS. Wellpad construction and clearing of roads were identified using Planet Labs NICFI satellite imagery from May 2024. Satellite images were inspected manually and points and lines were digitised based on clearing patterns consistent with wellpad construction and road clearing. Using the digitised wellpad points from publicly available sources, Earth Insight was able to calculate the approximate distance of wellpads from Ramsar wetlands. Similarly, we estimated the length of new roads constructed for the Tilenga project within MFNP.

The brief also discusses the risks and impacts that the infrastructural developments could have or are having on critical biodiversity in MFNP. The risks presented by the infrastructural developments were assessed through document review.

In addition, KIIs were conducted with participants that were purposively sampled to examine the impacts of the oil infrastructural developments in MFNP. The KIIs were conducted with oil host communities, tour guides, civil society actors and biodiversity experts between April and June 2024. The participants that were selected to participate in the research were sampled because of their knowledge of MFNP.



Oil host community members during and after the communities. meetings with AFIEGO in April 2024.

The meetings discussed the challenges faced by the communities including elephant invasions.



5. Findings

5.1 Main oil infrastructure in Murchison Falls NP

To extract oil under the Tilenga oil project, TotalEnergies plans on drilling various fields including Jobiri, Ngiri and Gunya (PAU, 2023). The Jobiri (JBR) oil field is located within MFNP (Kiraye, 2016) and infrastructure such as roads, wellpads, pipelines, flowlines, drilling rigs and others is being developed or has been completed to support drilling in the park. This brief discusses the biodiversity and livelihood implications of the drilling rig, wellpads, Victoria Nile Pipeline Crossing and roads in MFNP.

5.2 Drilling rig

MFNP is divided by River Nile into two sectors or sections (Ellington Safaris, 2024). These include the Northern and Southern sectors.

The Northern sector hosts more wildlife because it is covered by savanna and woodlands (Ellington Safaris, 2024), which are the preferred habitats for herbivorous or wildlife such as various antelopes, the Rothschild's giraffes, buffaloes, elephants and others. This is because savanna grasslands enable access to food (Burkepile et al, 2013). The grasslands also enhance herbivores' safety from predators (Burkepile et al, 2013) by enabling the herbivores to easily view oncoming predators.

Predators such as lions, hyenas, leopards and others also prefer to live in the Northern sector in MFNP where they can easily access prey among others.

Assembling of the rig that will drill the Jobiri wells in MFNP was completed and drilling in the park commenced in June 2023 (Radio France International, 2023). The drilling rig is located in the Northern sector, which hosts a large variety of wildlife.

While efforts were made to blend the walking rig which moves from well to well into the park by use of colours that were supposed to blend in, this research found that the rig has had impacts.

One of the respondents that participated in this research highlighted the impact of the rig on wildlife during an interview in June 2024. He said, "When these people [TotalEnergies] started drilling last year, they started seeing the impacts that we had told them would arise from their activities. The elephants in the park were affected badly. They could feel the vibrations from the drilling rig in their feet. The elephants moved away from the areas where the drilling was ongoing".

Oil host communities, especially those in Buliisa district that neighbor the park, reported increasing attacks from elephants beginning in 2023. At least five people including children and women from Buliisa have been killed by elephants between 2023 and April 2024 (Mwesigwa, 2024).

During a community meeting in Buliisa district in April 2024, one community member recounted the death of one woman that occurred in 2024. He noted as follows,

"Three elephants visited our village in Kabolwa. They came at night and started destroying our banana and other plants. When Bridget Katurinde heard the elephants destroying her small garden, she got out of the house to chase them. She saw only two of the three elephants and she began chasing them. The elephant which she hadn't seen –it was behind her- charged and knocked her to the ground. She passed away. She was 22 and she left behind a partner and child."



The elephants also destroy farmlands and have made communities, especially women's access to water difficult.

One woman observed the following during a community meeting in Buliisa district in April 2024, "We had a very hard time last week. An elephant came to our village in Kigoya and spent the whole day at the borehole. Women could not fetch water. They were scared. This had never happened before."

Communities also reported that UWA was finding it difficult to compensate them for the crops and lives lost following invasions by elephants.

One man noted as follows during an interview in April 2024, "People from my village, including myself, have been asking UWA to compensate us for the crops we lost in 2023 after elephants destroyed them. We are yet to be compensated. The processes of asking for compensation are also too difficult for communities. We are also expected to pay some fees while chasing for our compensation, yet we are poor. Communities will get very angry one day and will retaliate by killing the elephants."

Concerns were also raised about the light from the drilling rig, with one community member noting the following in June 2024,

"The light from the rig in the national park is very bright. We can see it from as far as Mubaku, [a village in Buliisa district that is about 13.9km from MFNP]. The light is affecting fish, which hides from light, and animals."

A biodiversity expert observed the following during a June 2024 interview,

"A variety of animals in the park are sensitive to light. These animals such as leopards hunt at night when the light from the drilling rig is on. This could affect the leopards and other nocturnal wildlife's hunting patterns. If they cannot hunt well, the wildlife could move away from the park or die."



Elephants are called the landlords of MFNP. The elephants are reported to have responded negatively to drilling activities in the park, leading to human-wildlife conflicts.

5.3. Wellpads

Besides a drilling rig, well pads are the other key infrastructure being developed in MFNP to support oil extraction from the park. Information provided by TotalEnergies in the 2019 Tilenga ESIA report indicates that 10 well pads, Jobiri (JBR) 1 to 10, will be developed in

MFNP.

In a June 2023 update, PAU noted that development of various Jobiri wellpads was ongoing with works such as construction of a temporary fence at JBR pad 2, site preparation at JBR pad 3 and installation of precast walls among others ongoing at JBR pad 4.

Worth noting however is that at the time of the report by PAU in June 2023, drilling was ongoing at JBR pad 5 with the objective of collecting additional data to improve understanding of the field (PAU, 2023).

Satellite images from February and May 2024 confirm the above, showing that seven out of the ten (10) wellpads are in advanced stages of development. Below, are maps that demonstrate the status of development of the wellpads, after which this brief discusses their implications.



This map provides an overview of the locations of wellpads that are under development in MFNP. The wellpads are ten, and seven were in advanced stages of completion by May 2024.





Map 2: Wellpads that are too close to Ramsar wetland in MFNP This map shows wellpads Jobiri 10 and Ngiri 1 that are approximately 950 and 750 metres respectively from the Murchison Falls-Albert Delta Ramsar Site.

The development of well pads has necessitated the movement of materials via trucks to and from the park. This has a bearing on wildlife conservation. A tour guide in the park noted as follows in June 2024,

"The movement of trucks in the park during the day causes noise pollution and disturbances. Wildlife such as lions don't like noise, especially during daytime when they are sleeping. The big trucks carrying materials for the oil sector make noise for the lions."

Yet another guide noted the following in June 2024,

"A lot more people than would be in the park are here these days because they are constructing wellpads and other oil project infrastructure. Wildlife generally prefers to live away from people. Animals like the reedbuck, bushback and dik-dik don't like people. If there are more people in the park, then these animals are disturbed."



A biodiversity expert observed the following in June 2024,

"The disturbances in the park are concerning. Wildlife could move further and further into enclaves where there are no human beings or where there is limited presence of human beings. They could also migrate to other areas, which could hurt conservation and tourism."

The development of wellpads in MFNP also presents the following risks to wildlife and vegetation: increasing pressure on vulnerable species such as savanna grasslands which will be cleared for wellpad construction and buffer zones where the grass will not be permitted to grow again being created (Environmental Law Alliance [ELAW]-USA, 2024).

Other risks include habitat loss, reduction in food availability for small and large herbivores that rely on the savanna grassland that will be cleared for food, increase in sediment run-off into water bodies especially during wellpad construction activities near the Ramsar site, and spread of invasive species such as Giant salvinia, which could have a detrimental impact on food availability within the Ramsar site, especially for fish and macroinvertebrate among others.

In addition, where well pads are located close together, such as well pads JBR-07 and JBR-08 which lie within 500m of each other, wildlife may be deterred from moving between the wellpads during site clearance activities (ELAW, 2024). Individuals may be deterred from using certain routes between preferred habitats during periods when there is more intense activity and more humans are present in the landscape (ELAW, 2024).



A waterbuck (L) and bushbuck on the right (Engabi in Runyoro and Luganda); bushbucks and waterbucks are shy and nervous; they do not like disturbances. The increased human population in the park that is constructing wellpads amongst other oil sector infrastructure is a threat to the bushbucks and waterbucks.

5.4. Victoria Nile pipeline crossing

To transport the oil extracted from MFNP to a Central Processing Facility (CPF) in Buliisa district where the oil will be cleaned of impurities, TotalEnergies is developing a pipeline called the Victoria Nile Crossing. The pipeline has a length of approximately 1,760m that will be constructed through wetlands associated with the Victoria Nile.

The Victoria Nile Crossing, which will include three horizontal directional drilling (HDD) pipelines including production, water injection and electrical pipelines among others, is expected to have a footprint of 28 hectares (TotalEnergies, 2019).



By March 2024, satellite images showed that the following works on the pipeline had been done: clearing of access roads and the approach to the crossing. Below is a map showing development of the pipeline crossing.



Map 3: Victoria Nile pipeline crossing

The Victoria Nile Pipeline Crossing is set to affect the Murchison Falls-Albert Delta Ramsar site, a wetland of international importance. The pipeline is affecting the Murchison Falls-Albert Delta Ramsar site as the horizontal directional drilling (HDD) and stringing activities to enable development of the Victoria Nile Pipeline Crossing require access to the Ramsar site. This puts the biodiversity conservation, economic, cultural and other roles played by the Ramsar site at risk.

Designated a Ramsar site in 2006 due to the role that the site plays in supporting rare, vulnerable and endangered species including the shoebill and grey-crowned crane, the site has one of the largest known population of Nile Crocodiles (Ramsar Information System, 2005 and ELAW, 2004).

The Ramsar site is also important as it provides a spawning ground for several indigenous fish species (Ramsar Information System, 2005). Byaruhanga (2005) notes that most of the fish species in Lake Albert migrate from the deeper waters of the lake to spawn in the Murchison Falls wetland system.

Needless to say, the Ramsar site supports the Lake Albert fisheries. Lake Albert is home to over 55 fish species, about ten of which are endemic (Wandera and Balirwa, 2010).

The Victoria Nile Pipeline Crossing poses the following risks: destruction of spawning grounds and fish nursery areas, contamination of water with chemicals, oil and other pollutants, noise pollution (vibrations from the pipeline and other human activities), worsening water quality due to poor management of waste water, increasing species' mortality due to contamination and others.

Fisherfolk have already reported negative impacts on their livelihoods due to oil activities on Lake Albert (AFIEGO, 2024).

Further, biodiversity such as hippopotamus that call the delta home are also facing immense pressure from poaching (Maron 2023). Oil activities and climate change impacts stand to worsen the risks faced by hippopotami in the park.

A biodiversity expert say *Aerial surveys have confirmed that the population of hip*pos, and other biodiversity in Murchison Falls National Park, has reduced. Hippos are vicariously poached by communities, many of whom lost their livelihoods due *to the economic impact of COVID-19. The flooding of River Nile between 2020 and* 2021 also caused hippos, which prefer shallow to deep waters, to lose their habitats."

Crocodiles have also not been spared, with publications such as The Elephant indicating that climate change has lowered the breeding rate of Nile crocodiles in MFNP. Further, climate change induced-flooding led to the loss of habitat for crocodiles "– the sand, where they used to lay their eggs was washed away and replaced by mud, affecting their reproduction life cycles."

Climate change has also led to MFNP experiencing changes in the vegetation temperature, and moisture levels, which is driving habitat change.

A biodiversity expert said in June 2024 combination of poaching, climate change and oil activities will make it hard for biodiversity to recover. The habitat loss, disruption of access to feeding and watering areas, as well as opening up of the park by oil roads could have a longstanding negative impact on biodiversity."



Poaching, climate change and oil activities in the Murchison Falls-Albert Delta Ramsar site are some of the stressors to hippopotami and crocodiles in MFNP. The hippo population in the park has reportedly reduced. Photo credit on L: Daily Monitor



How Oil activities, Climate change and poaching are negatively reshaping Murchison Falls National Park

5.5. Roads in MFNP

To enable access to wellpads and other Tilenga project infrastructure in MFNP, 41.4km of new roads have been constructed through the park.

Built within a critical wildlife habitat, the new roads within MFNP could have negative effects on biodiversity conservation including: Increase of motor vehicles in a protected area increasing the likelihood of feeder-road kills. In addition, linear developments such as roads can affect wildlife by creating travel corridors for predators. Roads also block animal movements during feeding, breeding and migration.

Furthermore, the harmful effects of oil road construction on biodiversity conservation include dust, light and noise pollution, loss of habitats in areas where roads have been constructed, as well as the risk of animals getting injured by fast-moving vehicles (Kamara, Mbuya, and Awino, 2019).



Map 4: Oil roads in Murchison falls National Park

Oil roads and infrastructure such as bridges are said to have changed the aesthetics of MFNP. The park went from feeling like a nature reserve to an industrial area. The ferry crossing on the right was replaced by a bridge.



6. Conclusion and Recommendations

Murchison Falls National Park (MFNP) is a legally protected, species rich Key Biodiversity Area (KBA) and Important Bird Area (IBA) supporting endangered, rare and Albertine Rift endemic biodiversity in Uganda.

It comprises a number of wildlife habitats including savanna grasslands, wooded savanna, wetlands, tropical forests and open water. The park was home to 144 mammal, 556 bird, 51 reptile, 51 amphibian and 755 plant species in 2015.

MFNP is a critical resource for biodiversity conservation as well as tourism and fisheries livelihoods. However, the park is experiencing unprecedented pressure from oil and gas exploitation activities that combined with poaching, climate change and other factors could ruin/degrade the almost century old natural ecosystem.

Poaching and climate change impacts have been reported to have caused a reduction in species such as hippopotami as well as affecting the breeding of species such as crocodiles. The development of oil and gas exploitation infrastructure such as oil roads has affected the aesthetics of the park, with some tourists complaining that the park feels more like an industrial area instead of a nature reserve. The roads are also a concern as they could open up the park to more poachers.

Further, drilling in the park, which commenced in June 2023, has been reported to have negatively affected wildlife such as elephants, worsening human-wildlife conflicts. Light and noise pollution from the drilling rig have also been pinpointed as a risk to conservation of nocturnal predators such as lions, leopards, birds and others.

As regards well pads, this research showed that the ten wellpads within MFNP were within various stages of development by May 2024. Concerns remain over the closeness of two wellpads, Jobiri 10 and Ngiri 1, to the Murchison Falls Albert Delta Ramsar Wetland. The wellpads are approximately 950 and 750 metres respectively from the Ramsar Site, putting the Ramsar site and its biodiversity at risk of contamination.

Notably, the development of wellpads near the Ramsar site has been implicated in risking the conservation of aquatic biodiversity such as water birds especially the vulnerable Shoebill, fishes, and mammals like the hippopotami.

The above are at risk of impacts such as an increase in sediment run-off into the water, depletion of dissolved oxygen, impairment of fish's visibility to easily locate food and ingestion of chemicals, oil or dust-contaminated food.

The Victoria Nile Pipeline Crossing is another infrastructure that is of concern as it is set to affect the Murchison Falls-Albert Delta Ramsar site, a wetland of international importance. This research showed that by March 2024, the following works on the pipeline had been done: clearing of access roads and the approach to the crossing.

The Victoria Nile Pipeline crossing within the Ramsar site could disrupt the Lake Albert fisheries. Moreover, the crossing further risks the conservation of hippopotami and crocodile whose population and breeding have been negatively impacted by climate change and poaching.



Recommendations

To strengthen conservation in the park, this research makes the following recommendations:

- (i) TotalEnergies and the Ugandan government should stop oil exploitation activities in MFNP to reduce the pressures faced by biodiversty in the park so as to promote conservation.
- (ii) The United Nations (UN) Ramsar Secretariat and UNESCO World Heritage Committee should engage the Ugandan government to stop the oil activities in MFNP. This is because the activities are affecting the Murchison Falls-Albert Delta Ramsar Wetland, which has also been proposed for World Heritage status.
- (iii) Oil host communities whose livelihoods have been disrupted due to oil-induced human-wildlife conflicts should be compensated by TotalEnergies in collaboration with UWA.
- (iv) In addition, the Ugandan government and development partners should support UWA to implement solutions to address the poaching and climate change challenges seen in MFNP.
- (v) Civil society members that are involved in engaging fossil fuel companies, financiers, governments and other stakeholders to end the burning of fossil fuels to address climate change impacts should amplify their efforts to reduce the risks of climate change to biodiversity conservation.
- (vi) Finally, development partners should support Uganda to invest in green and inclusive economic activities such as organic agriculture, sustainable fishing, agro-forestry, tourism and clean energy to enable Uganda to attain its economic aspirations.



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