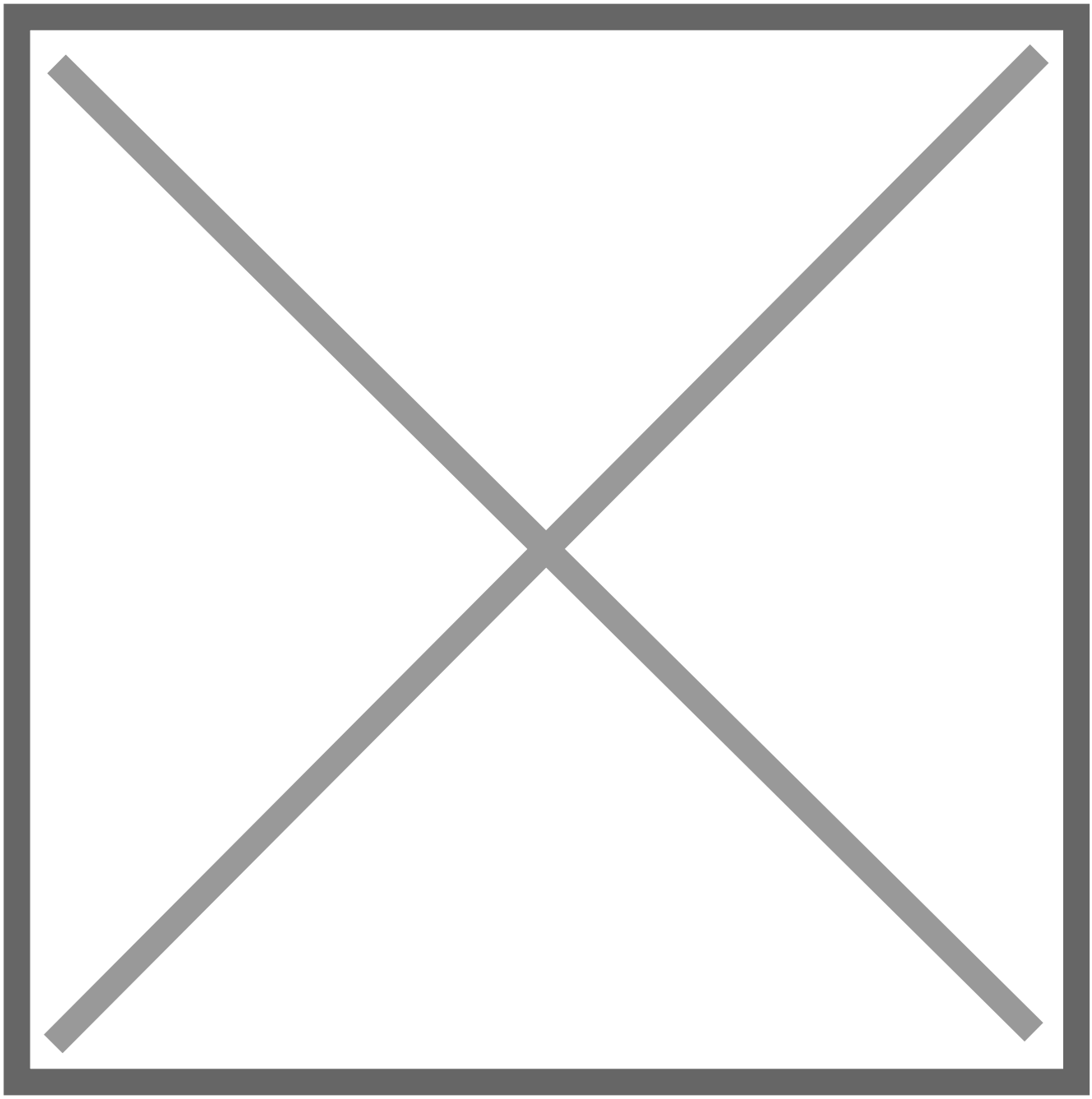
News
EarthBeat



Giraffes walk through the Singita Grumeti Game Reserve in Tanzania. A proposed mega oil pipeline in Tanzania and Uganda is being resisted over concerns that it will harm the people, environment and wildlife. (CNS/Reuters/Baz Ratner)

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***Editor's note:*** *This story originally appeared on climatetracker.org and is republished here as part of Covering Climate Now, a global journalism collaboration strengthening coverage of the climate story.*

A flurry of oil and gas discoveries along Uganda's western border has lured dozens of investors seeking to develop sub-Saharan Africa's largest oil discovery in decades. However, renewed interest in the once-neglected Lake Albertine rift basin is also creating new problems — tilting the region's energy needs towards fossil fuels, channelled through the world's longest heated pipeline: the East African Crude Oil Pipeline (EACOP), which campaigners say is a big threat to the environment.

On a hilly slope in central Uganda, farmer Vicky Najjemba looks over her sprawling coffee plantation and house. She won't be there much longer, though. She says she is being forced to vacate her land to pave way for the 900-mile pipeline project. After getting a solar power connection to her 3 bedroom house two years ago, Ms Najjemba, a single mother, planned to raise her four children here. She now fears she may be forced to relocate with her family, even though her long-promised compensation of $7,000 is yet to arrive.

"It's very disappointing," said the 37-year-old mother, fighting back tears. "This is my ancestral land, why should I be pushed? The future looks so uncertain."




Ms. Najemba is among the 12,000 families being forced off their land to develop the project. She expressed frustration at being told not to undertake any further activities on the land.  Ms. Najjemba, who already struggles to feed her family, will also likely lose her coffee farm, a situation she says risks pushing her to the brink.

## The great disputed oil highway

Multinational companies led by French oil giant Total SA are continuing with plans to build a $3.5 billion pipeline, drawing the ire of environmentalists. A group of at least 30 international and local campaign groups say that the pipeline, which will cross vast marshland and rivers, poses unacceptable risks to water and biodiversity.

The pipeline, which is expected to carry some 200,000 barrels a day of crude oil to the Tanzanian port of Tanga will require heating to 50 degrees Celsius because the oil is low in sulphur and would otherwise solidify in the pipe.

It will cross Lake Victoria, one of the world’s largest freshwater lakes, where an oil spill could prove disastrous for over 30 million people that rely on the lake’s watershed for drinking water and food production.

"Although Uganda has relatively low historical greenhouse gas emissions, for many reasons, no new fossil fuel project is justifiable," said Deborah Ramalope, Head of climate policy at Climate Analytics, a non-profit science and policy institute based in Germany. "Investments in fossil fuel have a high risk of locking in emissions for many years."

Uganda has attracted some of the largest investments in its oil industry over the past decade, with companies including France’s Total, Britain's Tullow Oil and China's Cnooc Ltd investing more than $4 billion in exploration activities that have resulted in the discovery of around 6 billion barrels of crude.

However, local authorities are struggling to contain mounting anger among local campaign groups, who accuse the government of favouring international investors at the expense of residents, who have for generations inhabited the region. Local campaigners have launched an online petition with 350.org and another through Bank Track, calling on international financial institutions to avoid financing the project.

Despite promises of compensation and employment, local communities have also expressed their concerns regarding the impact the project will have on their lives as detailed in the recently published Environmental and Social Impact Assessment for Ugandan side of the EACOP. Communities raised numerous concerns over land acquisition and compensation for loss of land, livelihoods and properties.

Communities affected by the pipeline are already suffering. As the project developers placed a cut-off date on their property in 2019, they stopped people from utilising their land for new developments such as growing of perennial crops, setting up of houses and others. The developers’ actions resulted in the abuse of communities’ economic, cultural and social rights. Developers denied the accusations.

Sande Amanya, a resident of Mubende district in central Uganda is one of the affected people. He vows not to abandon his home and banana plantation unless he is fully compensated and relocated. Mr.Amanya, whose house is not connected to electricity or running water, relies on a nearby well for water.

"We were stopped from cultivating our fields within the pipeline path. It’s now two years and we have not received any payment, yet we are not using our properties," he says. "This whole thing is so destabilizing."

Relocation and loss of land from the pipeline threaten the employment and livelihoods of tens of thousands of people.

A local natural resources officer of Mubende district, Vincent Kinene, fears that the project will interrupt access across villages because crisscrossing the pipeline route is not possible. "Outside the long-promised jobs and hyped local transformation, there will likely be a spike in land and access related conflicts," he says.

According to Kinene, the quoted mitigations in the Environmental and Social Impact report are generic and not locality specific. The lack of thoroughness at that stage is an indicator of spills to come.

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## Global impact

While the government claims that oil developments will increase energy supply and lower the overall cost of power generation in Uganda, environmentalists are concerned about the colossal impact of oil developments on the environment. They say that since Uganda has a huge capacity of potential renewable energy that can be readily tapped into. So why turn to non-renewable fossil fuels?

"Government's insistence on developing oil resources is coming at the expense of providing clean, affordable and reliable energy options such as off-grid solar," says Dickens Kamugisha, executive director at the Africa Institute for Energy Governance, a local non-governmental organisation spearheading the campaign to stop the project.

Uganda, which has one of the highest population growth rates in the world according to the World Bank, already cannot keep pace with its energy demands.

## Current Energy Situation

Uganda meets more than 93% of its energy demand with biomass in form of charcoal and firewood, 6% with fossil fuel combustion and only 1% with electricity from hydro and fossil-fuelled thermal power plants, according to statistics from the Ministry of Energy. The country currently imports all its petroleum-product requirements.

Only about 15% of the population has access to electricity, and in rural areas, it's only 7%. The majority of the population continues to rely on wood fuel and charcoal. This has resulted in the depletion of the country’s forests and woodlands, and related health hazards. In the past 25 years, Uganda has lost 63% of its forest cover due to tree-cutting for firewood, timber and charcoal, according to the National Forest Authority. The loss of these fragile ecosystems not only has serious implications on Uganda's biodiversity, but also compromises the ability of the country to cope with the climate change.

Some activists believe that the pipeline project is not the best option for the country given its current development status. "Uganda should rather look for opportunities to diversify its economy by investing in clean energy projects which have the potential to generate multiple sustainable development benefits," says Ramalope.

Uganda’s energy sector has experienced an over-emphasis on hydropower and petroleum as the most important energy assets overlooking other potential sources. This development path, experts say, is being driven by an appetite for large portfolio infrastructure projects that offer political mileage.

Over-reliance on hydropower dams most of which are located along the Nile River has plunged Uganda into years of chronic electricity shortages, load shedding, high tariffs and low levels of electricity penetration, especially in the rural areas. Effects of climate change, as well as environmental degradation, have continuously undermined the hydrology on the Nile, decimating the power generation capacity of the hydropower plants along the river, a situation that has brought about power supply shortages in the country.

It's thus clear that an expanded and diversified range of renewable power sources is critical in solving the country's energy needs.

Energy development in Uganda and environmental damage are intricately related. The energy sector has bigger environmental impacts than any other economic sector. Hence, energy investments in Uganda are subject to greater environmental

scrutiny.

## Struck oil

In 2006, Uganda confirmed the existence of commercially viable quantities of oil in the Albertine basin. According to the Petroleum Authority of Uganda, oil reserve estimates remain at 6 billion barrels. The international oil companies finalized the exploration phase and are now preparing to undertake the development phase, which will subsequently lead to production in 2023. The output is expected to peak at 220,000 barrels a day of crude, Uganda consumes around 15,000 barrels a day of crude, the remainder will be exported.

The government expects that the development of the oil and gas industry will accelerate economic growth, job creation, contribute to poverty eradication, and improve the general prosperity of Uganda.

Once produced, part of the crude oil will be refined in Uganda to supply the local market while the rest will be exported to the international market through the pipeline. The Uganda National Oil Company and the Tanzania Petroleum Development Corporation will be shareholders in the pipeline which will be developed, constructed and operated by Total E&P Uganda B.V.,Tullow Uganda Operations Pty Limited and CNOOC Uganda Limited. In Uganda, the pipeline covers 296 km and traverses 10 districts, 22 sub-counties, four town councils, 41 parishes and an estimated 172 villages.

Robert Magori, Africa Communications Manager at 350.org, says environmentalists consider the pipeline a "disastrous project" because of the threat it poses to the environment, society and the associated economic risks. "The international scientific community is telling us that the world cannot absorb any new fossil fuel developments if we are to tackle the climate crisis," he says.

The emissions from burning the oil transported through the pipeline alone are estimated at 33 million tonnes of $CO_2$ per year, according to 350.org.

According to a 2017 report by World Wildlife Fund the pipeline project overlaps several wildlife habitats including 510 km of African elephant habitat, important biodiversity and natural habitats, water resources and marine coastal ecosystems. The pipeline will deliver oil to a port located in an area rich in mangroves and coral

reef, as well as adjacent to two ecologically or biologically significant marine areas. .

In August, an oil spill off the coast of Mauritius caused extensive ecological damage when Japanese-owned cargo ship MV Wakashio ran aground on a coral reef, leaking 1,000 tons of oil onto pristine coasts. The spill left a 15-kilometre stretch of the coastline — an internationally recognized biodiversity hotspot — smeared with oil causing an ecological emergency.

Proscovia Nabbanja, the chief executive officer of the state oil company, Uganda National Oil Company says that the government plans several initiatives to lessen the impact of the project on the environment. "Sector players are really working hard to ensure they limit the impact on the environment," she said, adding that "Total, for example, introduced the cable less technology in the acquisition of seismic data because we are working in a National Park."

## Immense clean energy potential

Uganda is richly endowed with renewable energy resources for clean energy production and the provision of energy services which are fairly distributed throughout the country.

According to Uganda's renewable energy policy, the overall renewable energy power generation potential is estimated to be 5,300 MW. Hydro and biomass are considered to have the largest potential for electricity generation, enough to power the entire east African regions' five nations, experts say.

Geothermal energy resources remain unexploited. So far, three potential areas, all situated in Western Uganda, in the western branch of the East African Rift Valley have been identified for detailed exploration.  The three potential areas are Katwe-Kikorongo, Buranga and Kibiro. Based on recent assessments, they have all been ranked as potential targets for geothermal development with temperature levels that vary between 150 degrees Celcius and 200 degrees Celcius, which is sufficient for electricity generation and for direct use in industry and agriculture.

The average solar radiation is 5.1 kWh/m 2/day and it is the renewable energy resource on the market with the highest adoption rate in Uganda.  Existing solar data clearly indicates that Uganda's position near the equator grants the country high solar energy resources throughout the year.

All this renewable energy potential therefore can be harnessed for diversification of Uganda's energy sector which can contribute greatly to decarbonising the sector.

Uganda is a signatory to the Paris agreement and according to Uganda's Nationally Determined Contributions, the country has committed to a 22% emission cut on a business as usual basis by 2030 in a bid to mitigate and adapt to climate change and transit to a low-carbon climate-resilient economy. The government hopes to do this by increasing renewable energy deployment and achieving a total of at least 3,200 MW renewable electricity generation capacities by 2030.

"Government should seek to promote investment in more sustainable energy options as opposed to rushing to commence oil projects which endanger our environment and people," says Kamugisha. "Uganda has plenty of low-carbon energy options."