

A.P.E. Project

(Assess. Protect. Evaluate.)

**Building Outside the Box: An Unconventional Way to Protect
Biodiversity and Communities in and Around Virunga National Park**

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Life on White



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Introduction

Virunga National Park in the Democratic Republic of Congo, established in 1925, is Africa's oldest Park. This iconic park is considered Africa's most biodiverse protected area and home to a third of the world's mountain gorillas. Gorilla tourism is a tremendous draw for the three countries bordering the Virunga region where transboundary politics are volatile. In this densely populated region, approximately 5 million people live on the park's edges and 80,000 within park boundaries, most without electricity.

Human pressures on the park's natural resources are constant and overwhelming, and fish, food, and trees (for both lumber and charcoal) are consistently illegally harvested. The Congolese government funds only 1% of Virunga's operating costs, so the park has struggled to find adequate support for all its expenses, including ranger salaries. Recent years have been tough on park finances, as tourism used to provide 40% of its operating revenues. In 2018, kidnappings by rebels resulted in a park closure; the following year, Ebola shut down the park, then Covid - 19 hit in 2020. While the park struggles to pay for its protection, poachers deplete the park of its resources by cutting trees and killing wildlife. Emmanuel de Merode, the Park Director, estimates that the park may be losing trees and ivory valued at \$170 million annually to poachers.

Armed insurgents and religious groups perpetrate and financially benefit from the majority of the poaching. Unfortunately for wildlife, the Park is continuously overtaken by military and armed rebel groups. From 2004 – 2009, insurgents occupied the park; when they left, tourism re-opened and thrived from 2010 – 2011, but kidnappings and rebels threatened sustained income from tourism again in 2012. Currently, the largest rebel group, M23, is a well-armed Tutsi coalition with roots in the genocide of Rwanda in 1994. In the past two decades, war and insurgent attacks have killed 5.6 million people in and around the park.

Guarding the park and its wildlife is a dangerous job: 200 rangers have been killed since 1996, which is nearly one ranger per month. Director de Merode has developed a plan to address the destructive cycle of forest incursions by rebels and villagers, to increase park funding and protect wildlife by providing affordable electricity to improve the quality of life and encourage industry and jobs outside of the park to reduce the economic temptation to poach or to join rebel groups for a livelihood. This innovative plan hinges on maximizing the benefit of the three in-flow hydro plants the park has developed since 2013.

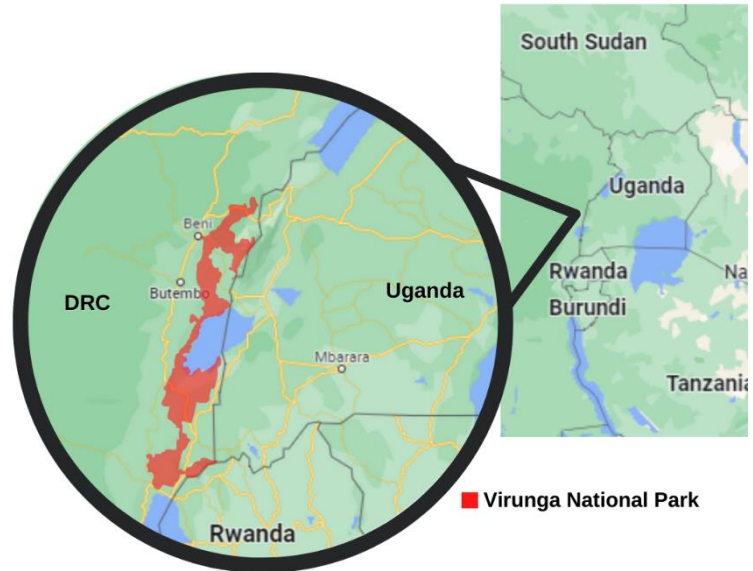


Figure 1. Location of Virunga National Park

Generating Income

In 2019, the Luviro hydro plant still needed to be finished, and the park had run out of money to complete it and fulfill its promise to supply electricity to the community. De Merode and colleagues began to look for other ways to provide long-term funding for the park and found an investor to fund a bitcoin mine. Bitcoin is notoriously energy-consumptive, but the amount of electricity produced by the two hydro plants in Virunga appeared to exceed what was needed locally for community homes and emerging industries.

The park administration bet on the fact that they would generate short and long-term revenue with the excess hydropower electricity at the Luviro plant, even with a bitcoin mine. Bitcoin mines are simply many large computer banks running 24 hours a day, generating computational formulas that result in bitcoin, which are marketed. Virunga purchased three of the ten bitcoin containers in the park and used the proceeds to fund the park. The other seven are owned by the initial investor, who pays for the electricity to run these additional containers. The park's containers generated about \$500,000 in 2022. An additional 1.2 million was made by auctioning off gorilla non-fungible tokens (NFTs), also recorded in the blockchain and represented by an image of a mountain gorilla, to an international market.

Bitcoin as a financial future is not without critics, as some say the hydropower generated by the park should go to different industries with a more secure future. Bitcoin mines require vast amounts of power, and the number of people employed is minimal. Some ask why the park doesn't use the excess power to fund industries that would employ ex-militia and poachers or provide resources across the community. De Merode thinks that quickly securing the park as an entity with governance and secure financing will provide the most significant long-term benefits for everyone.

Virunga does have other investment plans, including coffee and cocoa cultivation, which are projected to bring in as much as \$202 million by 2025. Hydropower has allowed soap, chocolate, and other factories to operate and employ people. Director De Merode estimates that Virunga power and bitcoin proceeds have generated 12,000 jobs and money for park employee salaries and infrastructure projects.

Conclusion

Despite the current international bitcoin financial crisis for consumers and traders, De Merode believes securing the park from local upheavals is more important than bitcoin and NFT market fluctuations. Congo's government recently announced plans to auction oil leases in and around the park, further endangering habitat, wildlife, and nearby communities. Uganda has been advocating for oil development within its national parks, which also threatens Virunga. It is yet to be seen how this source of income will secure the park and its wildlife in the long term.

Director De Merode clarifies that the park is not simply about gorillas or wildlife; he has worked extremely hard to intertwine community benefits with the park's security and its treasures. "There's no way to practice conservation in one of the world's most troubled countries without local support," he says.

References

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