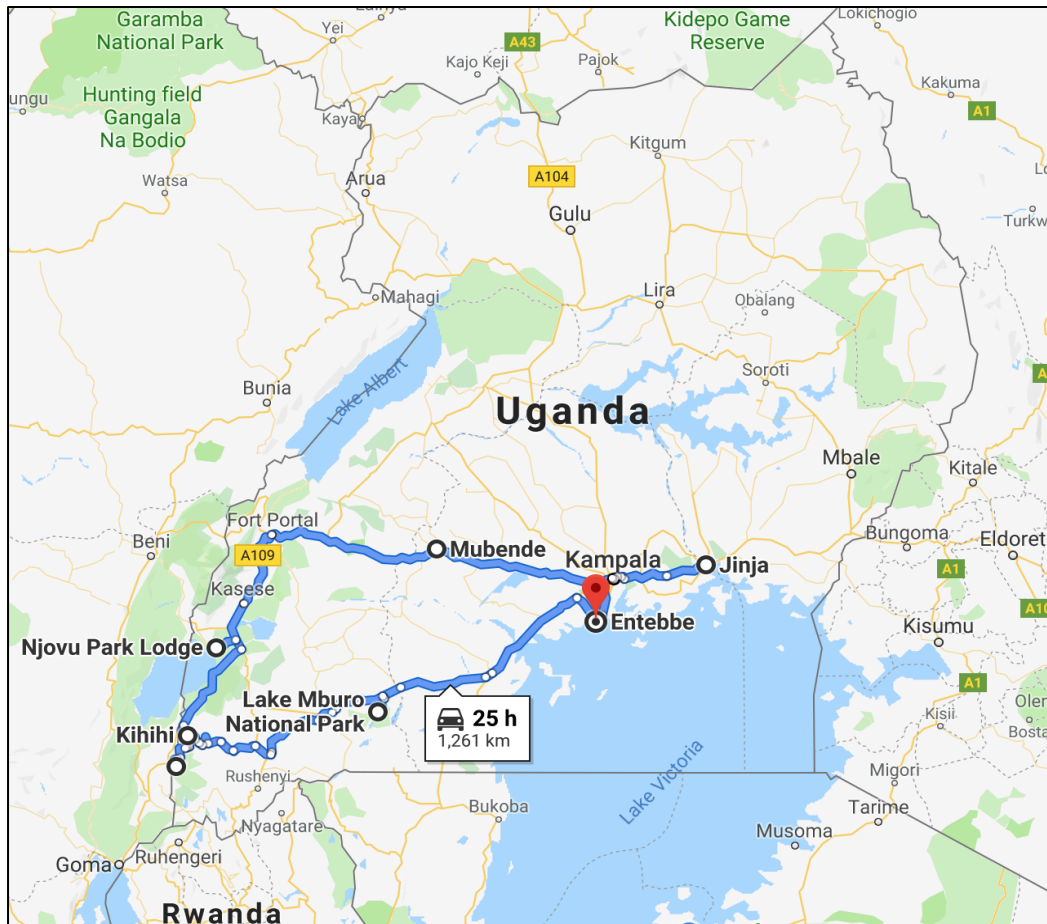


The Current State of Wildlife Conservation in southern Uganda

An informal account of current wildlife conservation efforts in Uganda based on personal interviews and first-hand survey conducted over a southern circuit during the month of September, 2019.



Southern Circuit: Entebbe, Kampala, Mubende, Jinja, Fort Portal, Mubende, Kihhihi, Katwe, Fort Portal, Mubende, and Jinja

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Part I – It Takes a Village

One of the major dilemmas of wildlife conservation is human-animal conflict. In Uganda, in order to preserve natural habitat, protect wildlife, and enhance the tourism industry, the Ugandan government works with conservation and development NGOs to target public education and outreach initiatives which engage local communities in the preservation and protection of wildlife and wildlife habitat. The Ugandan Wildlife Authority (UWA), with direct support from the Ugandan military, is the primary institution responsible for wildlife health and tourism in Uganda. Experienced UWA safari guide and eco-tour operator, Nelson Byamukama believes that the key to wildlife conservation is community involvement. His argument is that the local communities “make or break” the local landscape. Passing through towns, Byamukama references the seemingly endless cascade of roadside litter and piles of burning garbage: “With or without government support, if the people so choose, they can destroy the environment in a single day.”

Currently Uganda only has one zoological park. Located in Entebbe, the Uganda Wildlife Conservation Education Center (UWEC) is a sanctuary dedicated to the rescue, rehabilitation, and release of distressed wildlife. Moureen Orichiriza is an animal caretaker at UWEC who is also UWA trained and



Nelson Byamukama (right) and Eric Stikes (left) admire the white rhino couple at UWEC.

like Byamukama, is an example of the next generation of Ugandan leaders, taking the initiative to create positive change within their ‘developing’ country. Byamukama and Orichiriza understand their culture and contend that if the locals are educated on the importance of environmental stewardship – why, for example, it is important to have clean water for drinking and clean soil for crops – then they will take the initiative to protect those resources. “If communities begin to understand the importance of taking care of their environment,” Orichiriza explains, “it will follow that they will understand the need to conserve the local flora and fauna.”



GIS specialist Andrew Westerman sips tea at Eagle's Nest Lodge while taking in the panoramic views over Lake Mburo National Park.

livestock] that they need to feed their family.”

While taking tea at Eagle's Nest Lodge, overlooking Lake Mburo National Park, Byamukama illuminates the flip side of that situation: “In the absence of education, understanding, and compassion we have conflict. Park rangers are sometimes killed for protecting wildlife because people get angry when they lose the crops [or

In agreement with this sentiment is the head chef and bird guide at the Gorilla Conservation Camp (GCC), a guest lodge situated at the border of the Bwindi Impenetrable National Park. The lodge is part of a revenue generating operation for Conservation Through Public Health (CTPH), a nonprofit organization dedicated to the protection of the endangered mountain gorillas living in the Bwindi rainforest. GCC chef Solomon Ngabirano suggests that one solution to wildlife conservation is to work with families living and farming at the edges of the national park, especially active and reformed poachers. According to Mr. Ngabirano, many if not most poachers engage in illegal hunting activity due to the need to earn an income. His idea which is shared by many in Uganda, is that if families living in front-line villages, i.e., along park borders, can be convinced, usually through monetary subsidies, to grow cash crops such as coffee or tea, their poaching income may be replaced with farming income.



CTPH laboratory overlooking the Bwindi Impenetrable Rainforest

However, in order to produce income, crops must have a market. According to both Ngabirano and Byamukama, most Ugandan's do not like to drink coffee but instead prefer tea. As a result, if



CTPH Gorilla Conservation Coffee label

farmers grow coffee plants, generating revenue for this work commonly involves product export out of the country, which adds to both the cost as well as complexity of growing coffee. CTPH has found that one solution to the export problem is to buy coffee beans from local farmers, then process, package, and brand the beans for sale to guests staying that their lodge in Buhoma, at the edge of the Bwindi forest. The coffee is branded appropriately as 'Gorilla Conservation Coffee' because the revenue not only supports local farmers but also supports the activities of CTPH. This sort of solution provides multiple benefits for multiple stakeholders: local farmers gain valuable revenue, CTPH generates essential operating income, consumers get to enjoy a tasty beverage, and the gorilla populations gain life-saving protections.

Ngabirano points out that tea is a crop that not only secures this same multi-benefit result, but also grows in such tight spacing that it prohibits most larger animals from passing through it. When grown along the border of a park, tea crops function as a natural barrier, preventing wildlife from venturing beyond the protected areas of the park thereby minimizing their chances of



Eric Stikes treks through tightly-spaced tea plants, a crop that is virtually impassable without an established trail.

encountering humans and increasing their odds of survival. Unlike coffee, tea is not attractive to most animals as a food source. As such, the natural border formed by growing tea, in contrast to coffee, is doubly effective in preventing human-animal interaction.

Mr. Byamukama is interested in replicating this same conservation approach in other areas of Uganda, beyond Bwindi. He is currently working with farmers with properties bordering the Queen Elizabeth National Park (QENP) in an effort to switch their cash crop from bananas, which is an attractive food-source for elephants, to coffee, which is not as attractive. This switch in crop will help to reduce human-elephant interaction which often results in poaching. Byamukama admits that tea is an even better option as the elephants have a harder time maneuvering through the tightly-spaced tea bushes and are sometimes found to graze on coffee plants. “Plus,” he adds, “Ugandans like tea, not coffee.” Byamukama adds that some investors are curious about planting other cash crops such as oil palm and cacao trees along the borders of the parks but notes that, “those crops have not yet been fully evaluated in terms of potential [negative] impacts such as invasiveness to the landscape or attractiveness to the park animals.”

CTPH agrees wholeheartedly with the need to plant appropriate border crops in the buffer zone between parks and the surrounding communities. However, they are also acutely focused on community outreach and education. Enos Nahabwe is a technician at the gorilla conservation clinic where CTPH conducts laboratory testing of gorilla samples collected in the field in an ongoing effort to assess and monitor the health of local gorilla populations. Mr. Nahabwe understands that wildlife conservation is dependent on community development: “The need to earn an income or provide food for the family can drive the head of the household, almost always the elder male, toward poaching.” Nahabwe and other workers at CTPH regularly canvas frontline villages using an old-fashioned “slide show” presentation of hand-drawn cartoons printed on large, recycled plastic sheets. The presentation, which targets healthy family planning, illustrates common issues in Uganda that can lead to serious problems such as alcoholism, spousal abuse,

school drop-out, and eventually poaching. Due to illegality, poaching can result in arrest and prosecution, further degrading the family unit. “Although,” Byamukama recalls the flaw in Uganda’s regulatory system, “some offenders are out after one or two days and right back at it. We have to find a better way of getting through to people.” This is exactly the motive behind CTPH’s deep dive into community outreach.

According to Nahabwe, the CTPH presentation helps families to see that with education and vocational training comes options beyond subsistence farming and poaching, meaning that the families need not breed as many children. “It is not uncommon for Ugandan families that are living off of the land to have in excess of five kids,” Nahabwe points out. In this regard, the term “family planning” in



Enos Nahabwe (left), Solomon Ngabirano (center), and Andrew Westerman (right) pose in front of the Bwindi forest with the CTPH community outreach

Uganda is synonymous with population control. Human overpopulation is a serious factor in the natural capital accounting equation. There are endless examples that illustrate how competition over resources (not only between humans and animals but also between humans) can result in lethal conflict. Many conservationists believe that this sort of conflict can be more peacefully resolved with proper planning in general and population control specifically.

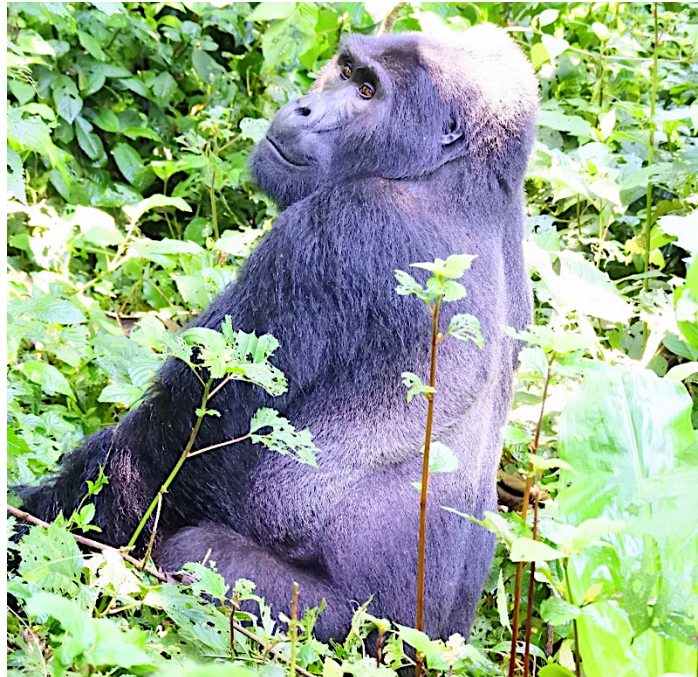


Boaz Muhumuza (left) debriefs a tour group prior to embarking into the Bwindi rainforest in search of mountain gorillas.

Another UWA wildlife professional working as a Bwindi forest guide, Boaz Muhumuza, echoes Mr. Nahabwe’s concerns about human-animal interaction. Prior to a gorilla trek into Bwindi, Muhumuza warns a tour group during their debriefing that, “sick people are not permitted access to [the] gorillas due to [the] risk of disease

transference,” - a particular problem in primate conservation due to their genetic proximity to humans. “We [Africa] recently lost thousands of western lowland gorillas to Ebola,” Nahabwe laments. Muhumuza adds that, in addition to poaching and disease control, trap hunting and logging also pose threats to wildlife in Uganda. “Traps set by local hunters here accidentally ensnare non-target animals [NTAs] all the time. It’s a problem.”

Fortunately, the CTPH presentation offers achievable, low-tech solutions that are culturally appropriate because solution development has included continuous input and feedback from local Ugandans. The solutions are complex and multi-faceted and include options such as alternative (to poaching) income opportunities and community support activities. For example, CTPH has secured access to low-interest loans for front-line families in order to incentivize non-poaching revenue-generating activities such as farming and goat herding. They have also worked to establish a Human-Gorilla Conflict Resolution Team, nicknamed HUGO. In this program, professional wildlife handlers (from UWA or an appropriate NGO) train local people chosen by their community on how to safely ‘scare’ back



A male silverback gorilla in Bwindi. Though still wild and unpredictable, many of the gorillas have become habituated to humans and tolerates the almost daily intrusions from tourists.

into the park those animals that have strayed onto private lands, thereby avoiding human-animal conflict. The designated HUGOs are non-paid volunteers that receive vocational training - typically in farming and animal husbandry - in exchange for their services.

Another solution from CTPH aims at long-term investment in future (conservation) leadership for Uganda. CTPH has developed a youth-focused organization called the “kids league” which is aimed at, according to Nahabwe, “changing the culture of poaching and undesirable family practice.” In this program, youth are targeted for education and training on wildlife conservation and healthy family practices. The kids then compete in academic tournaments to win prizes. For example, some children might compete in a conservation quiz tournament for the opportunity to be selected for a local soccer team or to attend a special field trip.

The bottom line for CTPH is that community involvement and development, specifically public health, is a necessary component in any effort toward wildlife conservation.

Part II – Socioeconomic and political Headwinds

Every Tuesday evening, in a town called Kihhi, halfway between the mountain gorilla rainforest of Bwindi and the Queen Elizabeth National park which is famous for elephants and tree-climbing lions, a handful of leaders come together at the weekly Rotary International meeting to discuss community development and conservation. One of the rotary members, Caroline Twahebwa, who represents the international NGO Wildlife Conservation Society (WCS), identifies human-animal conflict as the principal challenge to wildlife conservation. According to Twahebwa, the Ugandan national treasury allocates a percentage of tourism revenue back into the respective communities neighboring a revenue-generating tourist attraction. This program is proving to be a considerable boon for front-line villages as funds may be used to compensate farmers for livestock lost to predation, for vocational training, or for public health projects. However, Twahebwa argues that the funds don't always reach their intended recipients due to corruption in the political system. "Without funding," Twahebwa notes, "it is difficult if not impossible for people living in tin shacks and mud huts to prioritize saving the animals over feeding their children."

While conservation and development (C&D) projects are having visible, positive impacts for Uganda, resource-consumptive capitalism is alive and well throughout the country, arguably creating turbulent headwinds against C&D efforts. Examples include companies such as: 1XBET which actively advertises online gambling opportunities that allow Ugandans to place bets on various activities right from their mobile phone (1xbet.com), and; Coca Cola which via their plastic bottled soft drinks and water is arguably responsible, albeit indirectly, for a considerable portion of the litter problem that is rampant throughout Uganda¹. These sorts of examples might be considered adversarial to government-supported environmental protection efforts as well as family planning efforts aimed at redirecting people's time and (very limited²) money toward more productive outlets.

This sort of contradiction in policy seems commonplace in present-day Uganda, and in Africa as a whole, sparking curious debate on the fallout from colonialism – a topic only slightly beyond the scope of this paper. The Ugandan government is actively importing Chinese durables such as motorcycles and electronic goods while also pursuing large contracts for Chinese infrastructure services and labor for projects such as road and hydropower station construction^{3,4}. Meanwhile, the Ugandan government is trying to fight wildlife poaching, an activity largely driven by the unrivaled Chinese market appetite for rare resources like elephant tusks and rhino horns.

¹ Reference to 'corporate social responsibility' and 'cradle-to-cradle' design (<https://www.c2ccertified.org/>).

² Average earned income in Uganda was \$113 per month (~\$5.50/d) in 2016/17 (<https://observer.ug/business/55252-subsistence-farming-tops-local-sources-of-income.html>)

³ <https://www.voanews.com/episode/some-controversy-uganda-surrounding-china-built-dam-3791951>

⁴ <https://www.voanews.com/episode/chinas-uganda-road-construction-building-debt-dependence-3784571>

Unfortunately, Uganda is hardly alone in this proposition with China as many other African countries are finding themselves a target for Chinese interest and investment. In fact, China is investing heavily for access to the African market and Africa's natural resources. The effort resembles what could be construed as 'colonialism 2.0'. Witnessing this dynamic brings up the concept of intervention by the international community, specifically Great Britain, France, Belgium, Germany, Portugal, Spain, Italy, Netherlands, and the U.S.A. One has to wonder whether or not it is fair and just that a consortium of nations which has witnessed first-hand the destruction and widespread (and long-term) chaos that is the detritus of colonialism, should stand idly by while the victim of their ill-advised conquests, indeed an entire continent, is slowly oiled up and forced, naked in poverty and chained by debt, once more upon the auction block?

For now, at least there remains some hope for countries like Uganda when young entrepreneurs like Nelson Byamukama, Moureen Orichiriza, Solomon Ngabirano, Enos Nahabwe, and Boaz Muhumuza are taking the initiative to educate themselves and then "pay-it-forward" by educating others on life essentials such as environmental stewardship, healthy family planning, responsible business management, biodiversity conservation, etc. If future leaders can successfully contend with and correct Machiavellian corporate interests, single-bottom-line capitalism, political corruption, and socially-accepted dysfunction – indeed this is the task for all concerned with conservation and sustainability – then there will be a future for both humans and animals, together.



A Ugandan family of five ride precariously on a motorcycle through the busy streets of Kampala. This photo illustrates issues of poverty, overpopulation, environmental pollution, and human resiliency and determination.

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