The Mafia in the Park

A charcoal syndicate is threatening Virunga, Africa's oldest national park



By Holly Dranginis June 2016



Cover image: Burning field in Karenga, Virunga National Park Photo: Holly Dranginis / Enough Project

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Executive Summary

An illegal charcoal cartel is helping to finance one of the most prominent militias in central Africa and destroying parts of Africa's oldest national park. Nursing alliances with Congolese army and police units and operating remote trafficking rings in the sanctuaries of Congo's protected forests, the Democratic Forces for the Liberation of Rwanda (FDLR) is a kingpin in Africa's Great Lakes region's organized crime networks and a continuing threat to human security. For years, the group has helped sustain its activities by exploiting valuable natural resources, including minerals, ivory, fish, and marijuana. But one of the FDLR's most successful revenue-generating businesses is the illicit charcoal trade in the Democratic Republic of Congo's cherished Virunga National Park.

Headquartered deep in the remote southwestern sector of Virunga, the illegal charcoal trade is lucrative. Some have estimated it has an annual value of up to \$35 million.¹ The FDLR and its collaborators have developed tremendous business acumen, increasingly motivated by profit incentives and enabled by highlevel state cover. As one park ranger told Enough, "Armed groups have turned Virunga into their sanctuary."² The FDLR is under sanctions by both the United States and United Nations, and its charcoaltrafficking activities constitute ongoing violations of both sanctions regimes.³ In the regular course of business, the FDLR also commits a range of domestic and international crimes, including forced labor and illegal taxation. Yet, impunity for charcoal trafficking crimes remains absolute for high-level perpetrators. The FDLR's business elements are distinct from its traditional combat structure and "have become the main *modus operandi* for FDLR survival," according to a 2014 U.N. study.⁴ Even the most effective efforts to address the FDLR's military and political interests will fail if its profit incentives are left untended.

Virunga faces a number of threats, including poaching and oil exploration, but the illegal charcoal trade is uniquely damaging. As far back as 2008, a U.S. Department of State cable described it as "the most important single threat to the park's long-term sustainability."⁵ Since then, demand for charcoal has only grown.⁶ The illegal charcoal trade is also a serious threat to regional human security. By providing funding

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to the FDLR and other armed groups, including Congolese state actors, it helps sustain patterns of corruption and violence. "It's not just FDLR," a source who requested to remain anonymous told Enough. "It's police, politicians, and businessmen. It's a big mafia."⁷

The success of the illegal charcoal trade relies on the widespread deforestation⁸ of parts of Virunga and the perpetration of human rights abuses, including reprisal murders and sexual slavery. These acts stoke one another and accelerate cycles of insecurity, poverty, fear, and environmental destruction. As activist Jeredy Kambale Malonga told Enough of the FDLR, "They use violence directly to make the [charcoal] business work."⁹

Charcoal made from the park is particularly valuable—rare higher-density wood yields longer-burning, higher quality charcoal, and can sell for over 60 percent more than lower-quality charcoal.¹⁰ An estimated

As long as the FDLR is sustained and emboldened by lucrative business operations like the charcoal trade, peacebuilding in eastern Congo will falter. 92 percent of charcoal used in North Kivu comes from Virunga.¹¹ The trees are cut and turned to cooking fuel inside or near the parks, then transported to markets in nearby communities or larger cities. While demand for Virunga's charcoal is concentrated in Congo, the business is also regional, with smugglers transporting illegal charcoal from Virunga into both Uganda and Rwanda, where old growth forests have nearly disappeared.¹²

The FDLR does not work alone. Some Congolese national police and military commanders are involved in the illegal charcoal trade. They draw significant revenues from profit-sharing with the FDLR,¹³ as well as their own production, trafficking, and taxation of illegal charcoal. Some state officials also provide critical protection to the FDLR's commanders and officers in Virunga. These activities illustrate Congo's broader violent kleptocratic regime, involving the state's manipulation of proxy groups, valuable natural resources, force, and licit state authority in service to the accrual of personal wealth through parallel state systems. Civilians are also a critical

component of the illegal charcoal trade, with the FDLR recruiting local people by force or through economic pressure to help produce, guard, transport, and sell charcoal from Virunga.¹⁴

Charcoal trafficking is part of the FDLR's broader network of criminal activity including kidnapping, minerals smuggling, and elephant poaching. While much more is needed to curb the group's other sources of conflict financing, a number of policy responses—especially aimed at mining and poaching—are in motion. Meanwhile, the charcoal trade goes virtually unnoticed, and largely uninhibited by law enforcement or policy interventions.

Virunga's governing body, the Congolese Institute for the Conservation of Nature (ICCN),¹⁵ and its park rangers have effectively protected some parts of Virunga from deforestation and armed group takeover. However, they are outmatched militarily by the FDLR in direct combat scenarios, and rangers are not currently dispatched to patrol Virunga's southwestern sector where charcoal production is rampant. As long as the FDLR is sustained and emboldened by lucrative business operations like the charcoal trade, peacebuilding in eastern Congo will falter. Given these dynamics, it is time for a policy shift related to counter-FDLR operations and the protection of Virunga National Park. Policymakers should view the FDLR not as a strictly military, political, or ideological threat; it is also a profit-seeking organized crime network with state and civilian collaborators. In order to counter Congo's charcoal mafia, high-ranking FDLR commanders and their partners within the Congolese army should be targeted for sanctions and prosecuted for their roles in the illegal trade. Authorities should improve sustainable defection opportunities for low-ranking soldiers within the FDLR in Virunga, to deprive the illegal trade of essential manpower. Perhaps most importantly, given widespread dependence on charcoal as a primary source of fuel among households across the region, coercive efforts to end the charcoal trade such as military operations and targeted arrests must be accompanied by alternative fuel initiatives to prevent a sudden deficit of cooking fuel among millions of people in the region.

Some initiatives have begun to address the charcoal trade, but they are insufficient to either curb the growing regional demand for illegal charcoal or dismantle the FDLR's deadly networks. Some Congolese community-based organizations investigate economic and environmental crimes, but face debilitating threats. Recent Congolese army operations against the FDLR have disrupted some FDLR strongholds, but they have been largely piecemeal and under-resourced. Alternative energy initiatives like microhydro power and legal charcoal plantations need more support to scale up and reach more end-users. Training for justice officials on prosecuting environmental crimes has begun, but more domestic political pressure and international investment is needed for capacity-building efforts to translate into action.

In order to help end the FDLR's threat, restore accountability, and protect Virunga, Congolese government and military institutions, foreign governments, finance institutions, and the United Nations should take steps to halt the illegal charcoal trade. To this end, the Enough Project recommends the following:

Recommendations

- 1. Alternative Energy: Impact investors and financial institutions like the United Kingdom's development finance institution CDC Group plc, the International Finance Corporation (IFC), the U.S. Overseas Private Investment Corporation (OPIC), and the U.S. Trade and Development Agency (USTDA) should invest in Virunga Alliance's microhydro power projects to improve local access to clean, alternative, sustainable energy and livelihoods. The Central African Forest Initiative (CAFI) should ensure that its \$200 million grant to the Congolese government to address deforestation supports microhydro power. These investors and donors should also support the rapid expansion of shorter-term, legal alternative energy initiatives starting with comprehensive market assessments and collaboration with local organizations. These alternatives include legal charcoal plantations and the use of alternative biomass briquettes and fuel-efficient cookstoves, like those led by the World Wildlife Fund (WWF) and Rwanda-based Inyenyeri. Finally, the World Bank should evaluate the potential for supporting the development of an electrical grid for the city of Goma, to distribute power from Virunga's microhydroelectric projects to illegal charcoal's primary end-users.
- 2. Law Enforcement: Virunga Alliance donors, the U.N. Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO), and the U.N. Office on Drugs and Crime (UNODC) should support the improvement of intelligence gathering related to charcoal activities in Virunga. In particular, the ICCN should receive financial and logistical support to reestablish legal checkpoints on the park's major access roads to gather data and interdict major charcoal shipments coming from southwestern Virunga. The ICCN should continue its scoping missions in southwestern Virunga and

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eventually dispatch ranger forces there with the support of MONUSCO troops. The U.S. Congress should pass H.R. 2494 - Eliminate, Neutralize, and Disrupt Wildlife Trafficking Act of 2016¹⁶ - to support the professionalization of wildlife conservation law enforcement agents to better address charcoal trafficking in Virunga. The Presidential Task Force on Combating Wildlife Trafficking should also support training by the U.S. Agency for International Development (USAID) and the U.S. State Department on charcoal trade interdiction as part of its efforts to improve upstream law enforcement related to wildlife trafficking.

- **3.** Protection for defenders: MONUSCO justice and human rights units should increase protective monitoring and support to conservation activists who are targeted for defending Congo's national parks and investigating environmental crimes, and refer cases of abuse to justice officials for investigation. The U.S. Congress should pass S.284 Global Magnitsky Human Rights Accountability Act,¹⁷ which would give the United States authority to impose sanctions on anyone committing abuses against individuals seeking to expose illegal government activity. It should also pass the aforementioned anti-wildlife trafficking legislation, H.R. 2494, which would authorize technical assistance for protecting rangers and improving legal responses to attacks on forest defenders.
- 4. Domestic Criminal Accountability: U.N. and U.S. Special Envoys to the Great Lakes Region, Said Djinnit and Tom Perriello, should increase pressure on the Congolese government to establish an internationalized justice mechanism to investigate and prosecute grave international crimes.¹⁸ In the meantime, Congo's military court prosecutors should pursue economic crimes including the pillage of natural resources and extortion in eastern Congo, especially those related to FDLR and Congolese army units in Virunga. They should prioritize the arrest of high-level perpetrators and seizure of their assets, and interview low-level perpetrators to gather intelligence and evidence rather than fining or imprisoning them. The United States Institute of Peace should continue its initiative providing capacity-building for jurists on the prosecution of economic crimes, emphasizing improved intelligence-gathering strategies, high-level investigations, and applying the war crime of pillage legal framework. In its consultations with justice officials in Congo, the U.S. State Department's Office of Global Criminal Justice should emphasize the importance of investigating and prosecuting economic crimes alongside atrocity crimes.
- 5. International justice: As part of its ongoing case against the FDLR's top military commander, Sylvestre Mudacumura, the International Criminal Court (ICC)'s Office of the Prosecutor (OTP) should investigate Mudacumura's command and control over FDLR business operations—especially charcoal cartels—and pursue charges of natural resource pillage if sufficient evidence arises. The court should also use its Article 77 authority to pursue defendants' assets if they are the proceeds of crimes charged, including forced labor and murder perpetrated in tandem with the exploitation of forests and mines in eastern Congo.¹⁹
- 6. Military Interventions: As plans for joint Congolese army-MONUSCO operations advance, Special Envoys Djinnit and Perriello should encourage selective joint operations against FDLR strongholds in Virunga, incorporating MONUSCO's plan to target charcoal hubs and apprehend key FDLR commanders there. MONUSCO along with the U.N. and U.S. special envoys should encourage the Congolese army to vet its commanders stationed in Virunga, and suspend and prosecute those complicit in the charcoal trade. MONUSCO bases near charcoal-trafficking hubs should monitor counter-FDLR operations for civilian reprisal risk, and shore up civilian protection units in communities vulnerable to attack.

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7. Demobilization Efforts: As MONUSCO considers reestablishing joint counter-FDLR operations with the Congolese army, it should improve its disarmament, demobilization, repatriation, reintegration, and resettlement (DDR/RR) efforts for FDLR combatants in Virunga. It should launch a revitalized defection campaign in Virunga, and provide opportunities for repatriation, third country asylum, and sustainable livelihoods in Congo for defectors coming out of FDLR business-oriented strongholds in Virunga. Special Envoys Perriello and Djinnit should continue to encourage the governments of Rwanda and DRC to increase support for repatriation and third country asylum for FDLR defectors, with particular attention to the combatants who are part of the FDLR's business operations in North Kivu.

Introduction

The eastern Democratic Republic of Congo faces a range of challenges, including armed conflict, a recent spike in mass killings and kidnappings, and crippling poverty. Adding to the instability, a national political crisis has recently escalated, with President Joseph Kabila clinging to power ahead of a possible third term and overseeing brutal crackdowns on civil society.²⁰ Undergirding ongoing armed conflict and Kinshasa's

abuse of power is a sophisticated, diversified criminal network operating in the east. Black and gray markets for valuable commodities like ivory and gold still finance militias and corrupt state actors in Congo. One of those markets is the illegal charcoal trade, which has been valued at an estimated \$35 million a year,²¹ but elicits relatively little attention compared to other trades. Meanwhile, it poses unique environmental and security threats that call for immediate policy interventions.

First, the illegal charcoal trade is headquartered in Virunga National Park, which has the richest biodiversity of any protected place on the African continent.²² Virunga is also Africa's oldest national park, and the illegal charcoal trade relies on the destruction of old-growth forest there. A recent surge of media coverage and campaigns have brought attention to Virunga, but conservation efforts will falter if the illegal charcoal trade—"an area of huge concern," according to Virunga's director, Emmanuel de Merode—continues.²³

The trade itself involves a range of crimes and human rights violations, including extortion, forced labor, murder, and sexual slavery.

Second, illegal charcoal is a centerpiece of the criminal business network in eastern Congo. It is run by one of the region's most established and enduring armed militias, the Democratic Forces for the Liberation of Rwanda (FDLR), together with government, army, and civilian collaborators. Several sources in Congo, including local activists and U.N. officials, told Enough that although minerals and ivory are more lucrative pound for pound, charcoal represents one of the FDLR's primary sources of income.²⁴ According to a July 2014 assessment by the U.N. Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) Joint Mission Analysis Cell (JMAC), the FDLR alone could be generating \$2.7 million a year through charcoal production just in North Kivu.²⁵ Furthermore, because the FDLR's business operations run parallel to its traditional combat structure, even the most effective efforts to address the FDLR's military and political interests will fail if its profit incentives are left untended.

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Third, illegal charcoal trafficking is an extremely violent business. The trade itself involves a range of crimes and human rights violations, including extortion, forced labor, murder, and sexual slavery. It resembles a mafia-like enterprise with profit as its primary objective and violence as a crucial means for achieving that objective.

Based on interviews with a range of direct stakeholders, including local charcoal traders, leading Congolese lawyers and conservationists, Congolese Institute for the Conservation of Nature (ICCN) authorities, and MONUSCO officials, this report provides background on Virunga National Park and the illegal charcoal trade, including the primary actors involved, major hubs and trade routes, and human rights abuses perpetrated in the course of business. It discusses measures taken to combat the trade and what new policies and initiatives are needed to more effectively address the problem.

Africa's oldest national park

Covering roughly 3,000 square miles in northeastern Congo, Virunga is Africa's oldest national park and a UNESCO World Heritage site.²⁶ Virunga's biodiversity is unmatched by any other protected place in Africa, and includes rare bird species, some of the last mountain gorillas on earth, and endangered forest elephants.²⁷ The park gained recent attention as the subject of the 2014 Academy Award-nominated documentary produced by Leonardo DiCaprio, "Virunga," and sparked international controversy over oil exploration there by the British company, Soco International.²⁸

Tensions related to international interests, conservation, and economic potential have affected Virunga since its establishment. During Belgium's colonial rule, the land was declared a national park by King Albert in 1925. It was dubbed Park Albert, then renamed "Virunga" in 1969, after the volcanoes that tower over the park and draw intrepid tourists. Community leader Laurent Kamundu, who lives on the southwestern side of Virunga, told Enough that over the course of generations, his family came to value conservation. "We grew up here," he said. "We wanted to protect this space."²⁹

In the mid-1990s, foreigners came into the area again, this time from just over the Rwandan border in the wake of Rwanda's genocide.³⁰ Many believe the refugee crisis and insurgencies that stemmed from it led to the initial destruction of the southwestern part of the park. "During repetitive rebellions," Kamundu told Enough, "Immigrants came into the park and destroyed everything we were protecting."³¹ When the current director of Virunga, de Merode, a Belgian prince and career conservationist, took over in 2008, the park was under the de facto control of the Rwandan-backed rebels, the Congress for the Defense of the People (CNDP). De Merode had to negotiate with the rebels and maintain good relations with the Congolese government, performing what U.S. embassy personnel at the time described as a "tight-rope act that for the time being [was] producing results."³²

Today, the southwestern part of Virunga is entangled in a similar snare of rebel control, this time with complicity by the Congolese government. The park's governing authority, the ICCN,³³ has largely stayed away, with no consistent presence there since the 1990s. The FDLR maintains several strongholds and periodically attacks or threatens to attack villages just outside the park's borders.³⁴ According to Juan Moreni, head of MONUSCO's base in the area, a diverse set of ethnic and national groups all converge here, and experience chronic tensions.³⁵ "If something happens," Moreni told Enough, "it's because someone's economic interests are affected."³⁶ Many are involved in the illegal charcoal trade, which is contributing to significant forest loss and desertification in the area. In an interview in the town of

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Kitchanga in the southwestern part of Virunga, the chair of Kitchanga's administrative council told Enough, "The areas [where charcoal traffickers operate] are mostly deforested. ... Now you have to go deep inside the park to find trees."³⁷



According to Global Forest Watch's interactive map, in a roughly 135-square mile section of the southwestern part of the park where charcoal production is heavy, over 23 square miles of forest cover - or over 11,000 football fields were lost between 2001 and 2014.[i] Pink shading indicates tree cover loss between 2001 and 2014. For more information about forest loss, forest monitoring, and conservation initiatives around the world, visit www.globalforestw atch.org.

The ongoing presence of armed groups, combined with extensive illegal poaching and mining, make Virunga the most insecure national park in the world, according to park and U.N. officials.³⁸ Virunga is also affected by an unprecedented rate of human encroachment with 4 million people living within a day's walk, many of whom pursue livelihoods like farming, fishing, and charcoal production in violation of national and international regulations.³⁹ Nearly all of these nearby residents rely on wood or charcoal for cooking, including the city of Goma with a population of 1 million.⁴⁰ *Ndobo*, the local name for darker and denser charcoal made from old-growth trees in the national parks, burns longer than "common charcoal" made from younger, non-native trees, like eucalyptus. A 110-pound bag sells for around \$30, almost double the cost of eucalyptus-sourced charcoal. Virunga hosts some of the only remaining old-growth forest in the region, making it increasingly threatened.

[i] Global Forest Watch, "No Title," available at http://www.globalforestwatch.org/map/12/-1.41/29.17/ALL/grayscale/loss,forestgain/612?tab=analysis-

tab&geostore=agpzfmdmdy1hcGlzchULEghHZW9zdG9yZRiAglCQ4MSBCgw&begin=2005-01-01&end=2015-01-01&threshold=30 GFW incorporates data and information from, and is delivered using technologies supplied by, third party suppliers to WRI ("Third Party Providers"), including: Heroku, Google Earth Engine, Google Maps/Earth, Google Apps Engine, and CartoDB.

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Congo's Threatened Forests: Kahuzi-Biega and Garamba

Virunga is not Congo's only UNESCO World Heritage Site severely affected by illegal charcoal trafficking and armed violence. Kahuzi-Biega and Garamba National Parks typify a similar paradox: breeding grounds for rare species, exceptional tourism potential, and deadly armed groups, they are made more dangerous by their unique natural value. "Human activity is significant in some areas of the park," a recent U.N. Group of Experts report said of Garamba, in northeastern Congo. "...[G]old and diamond mining, as well as timber harvesting for charcoal and wood, threaten wildlife, including elephants."⁴¹ Garamba is particularly vulnerable to cross-border violence, including by Joseph Kony's Lord's Resistance Army and South Sudanese poachers. The park's manager, Erik Mararv, recently said of protecting Garamba, "It's worth so much more than just the animals. It's about trying to stabilize a whole region which has been unstable for decades."⁴²

As part of its investigations into eastern Congo's illegal charcoal trade, Enough conducted field research in South Kivu near Kahuzi-Biega National Park, south of Virunga, where an illegal charcoal trade also thrives. "It's becoming concerning," Radar Ninshuli, the director of Kahuzi-Biega told Enough in Bukavu. "We try to prevent people from destroying the park, but they have a new system – they cut trees [inside the park] at night, then pull them out so it looks like the trees are cut legally."⁴³

Kahuzi-Biega is considered a critical habitat for the world's largest ape, the Grauer's gorilla, which has suffered a staggering 77 percent decline since 1995, according to a recent report by the Wildlife Conservation Society.⁴⁴ Ninshuli emphasized that charcoal and poaching overlap. "[Charcoal] is interrelated with everything else," he told Enough. "People who mine, poach, and burn charcoal are all the same." He added, "It's mostly youth who prey on the park," referring to minors conscripted into the Raya Mutumboki rebel factions in particular.⁴⁵ Like in Virunga, rangers patrolling Kahuzi-Biega face direct threats of violence in their day-to-day operations. On March 31, a ranger was shot and killed investigating an abandoned vehicle left on a road in the park.⁴⁶

Charcoal is a lucrative business in Kahuzi-Biega, given the demand. According to Bukavu-based conservationist Dominique Bikaba, more than 98 percent of South Kivu's population uses wood-derived cooking fuel, and that population is growing.⁴⁷ The ICCN in Kahuzi could benefit from better coordination, Ninshuli admitted,⁴⁸ to help combat widespread bribery and lack of awareness of the park's legal restrictions.⁴⁹ Some positive initiatives are underway. According to Ninshuli, the ICCN plans to use checkpoints and satellite imagery to better monitor illegal activity,⁵⁰ and community-based organizations have established helpful initiatives. For example, the organization Strong Roots educates communities about conservation and demobilization. Bikaba, who founded and runs Strong Roots, told Enough, "As conservationists, we aren't only focused on forests, on wildlife, but also communities."⁵¹

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Virunga's rangers

In 2008, de Merode became the leader of an underequipped, bloated team of park rangers, hampered by corruption.⁵² He has since helped streamline the forces building a new guard.⁵³ After a significant overhaul, Virunga's ranger forces show increasing promise as a viable law enforcement unit for the park.

"It's a new type of ranger," ICCN's head of security Gilbert Dilis told Enough. "These are young guys—never in an armed group, very clean [records], and clever."⁵⁴ Just shy of 500 male and female rangers,⁵⁵ they undergo rigorous training and face severe threats by militias, poachers, and civilian assailants. In the past 10 years, more than 150 rangers have been killed.⁵⁶

No rangers currently patrol in Virunga's southwestern areas where FDLR activity is heavy and charcoal production thrives. For decades, chronic and severe armed group control in the area has made ranger patrol impossible.⁵⁷ The ICCN hopes to change that soon. "One goal [is] to reoccupy some places in the park – for example, Masisi, one of our biggest problem areas for charcoal," Dilis told Enough. In July 2015, ICCN conducted a scoping mission to the area around



Burning field in Karenga, where charcoal production and FDLR violence have a devastating impact on the habitat and community. Photo: Holly Dranginis / Enough Project

Kitchanga for the first time in decades. Enough staff met with Dilis during the mission. "Our message to the local communities is, 'Don't collaborate with armed groups. Don't help them transport charcoal.' Of course it's a risk for them to stop helping, because then the FDLR could turn on them."⁵⁸ In order to regularly patrol there, the ICCN would have to compete with the FDLR's quasi-state structures and well-organized militias who threaten civilians, rangers, and park officials. But as Dilis told Enough, "We'll try to restore [the forest] and eventually have [rangers] patrol."⁵⁹ ICCN officials, including de Merode, have said that having MONUSCO units patrol together with rangers in the area would help make them more effective.⁶⁰

Anatomy of the trade

The charcoal trade in Virunga was first documented by the U.N. Group of Experts in 2008, when the group traveled to Luofu, just outside the western edge of Virunga and "noted the felling of thousands of trees."⁶¹ In each of the following seven years, the Group would report on illegal charcoal activities, which occurred in broad swaths of Virunga and involved various armed actors, including the Congolese army and police.⁶² The FDLR's charcoal cartels resemble a South American drug trafficking network more closely than a traditional rebel army, given the group's strategic use of human rights violations, diverse alliances, and capitalization on the extreme poverty and weak governance that permeate many rural civilian communities.

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Who's involved

The FDLR

Today, the FDLR has a monopoly on Virunga's charcoal trade, though the success of the business relies on the involvement of lesser armed groups,⁶³ civilians, and state actors. Historically, a number of armed groups have controlled Virunga's charcoal trafficking, including the CNDP, a Rwanda-backed armed group once commanded by accused war criminal Bosco Ntganda.⁶⁴ By law, Virunga's southwestern sector is under the control and jurisdiction of the ICCN, but much of the southwestern sector of the park where



Burungu town, on the southwestern border of Virunga just south of Kitchanga. Residents of Kitchanga told Enough that five days earlier, the FDLR attacked the town, looting food and supplies. One source said four people were killed. Photo: Holly Dranginis / Enough Project

charcoal production thrives, including in Karenga, near Kitchanga, and in Tongo,⁶⁵ are under the de facto control of FDLR factions.

The FDLR, established in its current configuration in 2000,66 is one of the region's most enduring and organized armed groups.⁶⁷ "The FDLR is the kingpin of the war system in the east," Daniel Ruiz, head of MONUSCO's Goma office in North Kivu, told Enough in July 2015. "[It's] one of the few armed groups with some political agenda and cohesion."68 Foreign and local stakeholders use a range of identifiers to characterize members of the FDLR: rebels, refugees, alleged war criminals, and terrorists.⁶⁹ It is Congo's largest armed group,⁷⁰ and known for its brutality. During a particularly violent period in 2009, the FDLR killed at least 701 civilians within nine months, also raping women and decapitating remains, ratcheting up their psychological toll on communities.⁷¹ As

recently as January 2016, FDLR forces allegedly killed at least 14 civilians in Miriki, 70 miles north of Goma,⁷² and in April, FDLR elements were accused of kidnapping three International Red Cross aid workers.⁷³

At an estimated 1,500-2,000 fighters, the FDLR is much smaller than during its peak strength when some estimated it had 40,000-100,000 troops.⁷⁴ Demobilization efforts, military operations, and mining reforms have helped reduce the power and volume of FDLR forces, but it is far from defeated. FDLR factions preying on Virunga's forests in particular have remained resistant to military operations and demobilization efforts. The group's core leadership is still intact despite an International Criminal Court arrest warrant for its military leader, Sylvestre Mudacumura.⁷⁵ Virunga's remote enclaves provide some factions of the group sanctuary, including the North Kivu component of its business detachment.⁷⁶ "They're heavily armed," Congolese conservationist Bantu Lukambo told Enough of FDLR fighters in Virunga. "They know every inch of the park, and they enjoy protection by the national army."⁷⁷

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The FDLR has cultivated an advanced proficiency in profit-driven organized crime, and appears increasingly driven by financial interests. A set of parallel FDLR cells operate outside the traditional combat structure, running a diverse, orchestrated set of illegal trades to sustain the movement, enrich commanders, and share profits with partners, including Mai-Mai militias⁷⁸ and the Congolese army.⁷⁹ In North Kivu, a specialized unit known as "Miroir" is in charge of the business operations cells.⁸⁰ These cells are the FDLR's financial lifelines, and compete with and obstruct demobilization efforts by providing civilians and combatants with livelihoods. "If we don't start analyzing conflicts like business enterprises, we will fail," Ruiz told Enough in July 2015. Another source said metrics for promotion within the FDLR are evolving: officers who rise fastest through the ranks have superior business savvy, not necessarily the strongest combat record or deepest political ideologies.⁸¹

According to a 2014 U.N. study, the charcoal trade is one of the major axes around which the FDLR's business network revolves.⁸² In recent years, the FDLR's control over several mines in North and South Kivu has diminished, but its illicit gold mining activities persist.⁸³ While more is needed to curb conflict financing derived from minerals, a number of policy reforms have been implemented locally and abroad. Yet, the charcoal trade remains an essential FDLR lifeline and goes on relatively unabated. Meanwhile, the destruction caused by the trade—to both ecosystems and local communities—is uniquely difficult to reverse.

The Congolese state

State officials, especially several army and police units, play a critical supporting role in the FDLR's charcoal cartels, and make the business work to their advantage in various ways. "The Congolese army uses the

State actors tax charcoal traders, share profits with the FDLR, protect FDLR production sites, and run their own. FDLR as a tool," a source who has worked in Virunga for years told Enough. "Political leaders here benefit from using armed groups as tools, even if they don't share their ideologies at all."⁸⁴ State actors tax charcoal traders, share profits with the FDLR,⁸⁵ protect FDLR production sites, and run their own as well. These activities illustrate Kinshasa's broader violent kleptocratic regime, whereby the state strategically uses rebel armies, natural resources, and its legitimate state authority to repress civilians and accrue personal wealth.⁸⁶ "[The charcoal trade] is a question of state monopolization of violence," an expert on Congo's armed groups told Enough.⁸⁷

Since 2008, the U.N. Group of Experts has documented significant Congolese army involvement in the charcoal trade.⁸⁸ In 2010, it confirmed reports that ICC-indictee Bosco Ntaganda oversaw charcoal trading in Virunga when he was part of the Congolese army and that Ntaganda's close ally, Colonel Innocent Zimurinda, was also involved in the trade. Notably, the Group of Experts received reports that Zimurinda's ex-CNDP troops in 2010 occupied "the entire western side of the Virunga National Park," and "[denied] park rangers access to an area covering over 1,000 square kilometers," which

"[was] being progressively cut down."⁸⁹ In 2012, it reported accusations by ex-CNDP officers that another Ntaganda ally, Lieutenant Colonel Gaston Mugasa, took a share of profits from the illegal taxation of charcoal trading in Virunga.⁹⁰ In its most recent final report published in 2015, the Group found that army officers were directly involved in charcoal trading in Karenga, in possession of manifests associated with trucks in Karenga carrying charcoal, and were known by locals to allow the FDLR to operate charcoal

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cartels in the area.⁹¹ According to Enough Project interviews and U.N. investigations, high-level army involvement in charcoal trafficking, includes the 803rd and 805th regiments in particular.⁹²

State entities' involvement in illegal charcoal trading has affected military operations in the area, meant to defeat the FDLR.⁹³ The Congolese army has struck a delicate balance with the FDLR in Virunga, allowing it enough impunity to cultivate its illegal business activities, but periodically demonstrating its power to launch operations that could severely disrupt the FDLR's financial lifelines. "The reality is the army doesn't want to fight the FDLR," said a source who works in Virunga and asked to remain anonymous. "They're collaborating."⁹⁴ Meanwhile, as long as the FDLR is operating in Virunga, the army has the official authorization to have a presence there as well, which gives its troops direct access to the lucrative natural resources and taxation opportunities in the park.⁹⁵

Civilians

Civilians are a critical part of the illegal charcoal trade's machinery, providing the significant manpower and logistical support that makes it thrive. The FDLR forces and hires civilians to do tasks such as producing, transporting, and trading charcoal, and even killing other civilians as revenge for breaking agreements, according to a local organization that investigates human rights violations in Virunga.⁹⁶ Like the international illegal drug market, wherein sales in one place are not easily linked to the criminal

networks and kingpins in charge of cultivation and trafficking, the circumstances around the final sale of illegal charcoal can mask the contraband's origins. "If you walk through the [charcoal] market here in Goma, you would never be able to tell that [Congolese army] or armed groups" are behind it, a local human rights investigator, who requested anonymity, told Enough in July. "They have agreements that determine how they'll share [with civilians]. Both sides crack down to get money out of civilians."⁹⁷

Most civilians living near the park endure severe poverty. For many, the charcoal trade poses ethical and economic dilemmas. The park offers critical, albeit illegal, livelihood opportunities in a place where legitimate jobs are scarce. Upholding the law and supporting conservation compete with the need to earn a living and maintain physical security. As has been said of the guerilla group Revolutionary Armed Forces of Colombia (FARC), whose day laborers in coca production in that South American country are "not members of armed groups but itinerant workers in the only economies in town," the FDLR has a "psychological stranglehold"⁹⁸ on many civilians

The FDLR has a "psychological stranglehold" on many civilians around parts of Virunga, taking advantage of their poverty and deepening it.

around parts of Virunga, taking advantage of their poverty and deepening it.⁹⁹ "It's FDLR looking for clients, and civilians looking for survival," one local activist told Enough. ¹⁰⁰ "You have a very poor community right next to amazing, massive resources," he went on. "The [Congolese army] and armed groups come to them as 'saviors' to pull them out of that."¹⁰¹ Without civilian support, the trade would take a significant blow if not collapse. Thus, successful interventions against illegal charcoal must include safe defection and livelihood opportunities for civilians.

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How it works

Territorial control

The criminal nature of the illegal charcoal trade starts with simple land access. For civilians without a tourist permit and non-state combatants, entering Virunga is illegal. But there is a well-established market for access to Virunga operated by FDLR factions and Congolese army and police officials. In exchange for access in and out of the park without criminal penalty or violent attack, civilians can pay informal "tolls." This extortion ranges from 50 cents to \$30, depending on the individual's alliances and purpose, and may include multiple payments.¹⁰² For women, the cost of entry or exit may include sex in lieu of or in addition to cash or food.¹⁰³ The FDLR and their collaborators monitor entries and exits into the park to ensure compliance with their monetary schemes and maximum profits, using spies, logbooks, identity cards, and receipts.¹⁰⁴

Virunga is prime real estate for charcoal traffickers for one major reason: it is one of the last places in the region that still has dense, old-growth forest. Charcoal made from these trees is darker, denser, and burns longer than charcoal made from eucalyptus, so it's more lucrative. A MONUSCO-U.N. Environment Programme (UNEP) study published in 2015 found, "In neighboring Uganda, Rwanda and Burundi, deforestation is well advanced with most of the natural forests having been cleared. Currently, charcoal consumption in these countries is substantially higher than domestic production and supply."¹⁰⁵ Locals call charcoal made from old-growth trees *ndobo*, and it's considered "high-quality,"¹⁰⁶ making Virunga an increasingly valuable host for organized illegal charcoal production.

Production

Charcoal production in the park relies on exhausting, illegal, and often forced manual labor. According to a ranger who has patrolled in charcoal production areas, the FDLR uses axes and machetes to cut towering trees and chop the wood before burying it in underground kilns to smolder into cooking fuel. "It's a massive ordeal, but very low-tech," he said.¹⁰⁷ The ICCN uses drone surveillance to monitor some charcoal activities in southwestern Virunga. "In one picture, we could see 200 bags, each worth \$40 – that's \$8K right there," ICCN official Gilbert Dilis told Enough.¹⁰⁸

The work can be extremely dangerous. "Most people who are forced to cut trees have wounds, holes in their hands," Gomabased activist Jeredy Kambale Malonga told Enough. Malonga is head of natural resources investigations at the human rights organization, Center for Research on



Charcoal stacked in a storehouse behind the charcoal markets in Goma. Enough talked to storehouse managers in Goma who said the journey from the park can take two days and involve at least a half-dozen checkpoints where government officials or rebels collect taxes. Photo: Holly Dranginis / Enough Project

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the Environment, Democracy and Human Rights (CREDDHO) in Goma.¹⁰⁹ He went on, "And because they're not experienced, trees fall [in the wrong way] and they lose limbs, or they're paralyzed." Working at charcoal production sites also poses other long-term health risks. Malonga said prolonged work near the burning charcoal kilns leads to tuberculosis and other serious respiratory problems for individuals involved in the work, and the World Health Organization reported in February 2016 that "over four million people die prematurely from illness attributable to the household air pollution from cooking with solid fuels" like charcoal.¹¹⁰

As of April 2016, the FDLR had charcoal production hubs throughout the southwestern sector of Virunga, including in Karenga, southern Lubero, Kahumiro, around Tongo just west of Mabenga, and in the northern part of Rugari and southern Lubero.¹¹¹ Along Virunga's barren southwestern border near Karenga, it is difficult to fathom the park's unique natural riches a short distance away. Flanked by expansive, burned-out fields, men and women on bicycles and large trucks travel a narrow mountain road. Every two or three minutes, another bicyclist passes each loaded with four charcoal bags, up to 300 pounds total. MONUSCO's Ruiz told Enough, "On the western side of Nyragongo [volcano], [charcoal production] is practically everywhere—patchy destroyed forest, sites burning."¹¹²

Transport

The primary end-users of Virunga charcoal are people in eastern Congo, particularly in Goma.¹¹³ But it is also sold all over east and central Africa, with concentrated downstream markets, for example, in Gisenyi,

Rwanda, and Kisoro, Uganda, according to interviews.¹¹⁴ Two sources in Congo told Enough there was a possibility that Virunga charcoal is also exported to the Middle East for cooking fuel and hashish pipes.¹¹⁵

In the park, the charcoal is packed into towering tarp bags, strapped onto bicycles or stacked in trucks. It takes up to two days by road to get from the park to the first urban point of sale, in Sake or Goma.¹¹⁶ Armed groups running charcoal cartels in Virunga rarely do their own porting, and instead use civilians to carry charcoal out of the park for trading or informal export. "You'll never see Mai Mai or FDLR in Goma, outside the park—it's too risky for them," Malonga, the Goma-based activist, told Enough. Fearing arrest in the cities, they send civilians out to transport sacks of charcoal on foot, bicycles, two-wheel wooden pushcarts known as *chukudus*, and large trucks.¹¹⁷ According to Enough's interviews, the FDLR have their own commercial trucks and also use military trucks with the army's permission.¹¹⁸ In some cases civilians who transport illegal



Charcoal from Virunga packed on a *chukudu*, or wooden cart, on a major access road on the southwestern side of Virunga, bound for market in Sake or Goma. Photo: Holly Dranginis / Enough Project

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charcoal take a minimal cut of the profits—\$3-\$5 dollars per day, according to one Virunga ranger¹¹⁹—and thus make a living on their involvement. In other cases, the labor is forced and unpaid.¹²⁰

The charcoal transit process is heavily fortified by an FDLR intelligence network. Dispatched throughout the supply chain, informants monitor civilian porters and ensure they comply with arrangements and orders, particularly with respect to financial transactions.¹²¹ According to Enough's interviews, civilian informants carry messages back to the park to FDLR commanders, who in turn order reprisals against civilians who disobey, for example, by disappearing off the planned transit route with a charcoal shipment to sell it elsewhere and keep the profits. "Individual attacks [by FDLR] for not paying debts are very common," the community leader Kamundu, who lives in southwestern Virunga, told Enough. "If you embezzle their money, they'll get you."¹²²



Towering bags of charcoal in a villager's yard just north of Burungu town on the edge of Virunga, awaiting transport to market. Photo: Holly Dranginis / Enough Project

Trafficking routes

Virunga charcoal makes its way from production site to point of sale on major access roads and remote footpaths. In the park's east, trucks move from production sites in Rutshuru territory west to Tongo then down to Sake and Goma to avoid the well-patrolled Rumangabo area, or due south on the Rutshuru access road for a faster though riskier trip to Goma. A Goma-based activist who investigates the charcoal trade told Enough, "Each month there was \$27,000 worth on the Rutshuru access road alone. Everything coming down on the Rutshuru road has to be coming from the park, which means it's all illegal," he said.¹²³

In the southwest, trucks on a major road that runs north-south along the length of Virunga carry charcoal coming out of production sites like Karenga, and trading sites in Kitchanga and Mweso south to Sake, then east to Goma.¹²⁴ "We see big trucks coming from Ihula to Goma," the administrative chair of Kitchanga told Enough.¹²⁵ FDLR also hold Kahumiro near Tongo and a remote valley near Kiribizi where they produce charcoal, then use civilian porters to traffic it out on the Kiribizi access road.¹²⁶

As briefly mentioned above, the *ndobo* supply chain expands beyond Congo's borders, with trafficking into Uganda, Rwanda, and Burundi.¹²⁷ Several main roads connect charcoal production and trading hubs to Goma and foreign borders, where sources told Enough that trucks pass with little scrutiny by Rwandan or Ugandan border officials. Trucks move from southwestern production sites west to Ishasha for export to Uganda, or south to Goma, then east to Gisenyi across the Rwandan border. "Of course the charcoal also goes to Rwanda," Malonga told Enough. "We see it with our own eyes—it even goes through formal checkpoints."¹²⁸ He said charcoal produced along the roads in Kibumba all "goes straight to Rwanda," and that charcoal made from *mugando*—a thorny, hardwood tree—near Ishasha goes to Uganda.¹²⁹ Further investigation into Virunga charcoal's supply chain outside of Congo, foreign and corporate beneficiaries, and complicit border officials would help lead to more effective interventions.

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From Park to Market: Illegal Charcoal's Trafficking Routes and Points of Sale

This map was created by the Enough Project* and offers an approximation of some major production sites, trafficking routes, and markets involved in the illegal charcoal trade in and around Virunga National Park. It does not represent all routes and markets, and locations are not exact. A range of sources informed the creation of the map, including 2015 and 2016 interviews with charcoal traders in Goma, Congolese activists who investigate the charcoal trade in Virunga, and UN and ICCN officials, as well as 2014 and 2015 studies by the UN Group of Experts, JMAC, and the UN Environment Program.

*Thanks and credit goes to Virunga National Park for providing the map that serves as the foundational base for this Enough-created version. That Virunga National Park original map can be found here: http://visitvirunga.org/about-virunga/

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Human rights violations

The illegal charcoal trade in Virunga threatens human security indirectly by financing the FDLR, other armed groups, and some Congolese army units, all known to commit atrocities. But Enough's fieldwork revealed that Virunga's charcoal kingpins also utilize the direct perpetration of grave human rights violations as an essential business tactic.¹³⁰

Those close to the situation described a range of abuses connected to the illegal charcoal trade, including forced labor, reprisal killings, disappearances, inhumane acts like burning, sexual slavery, forced marriage, kidnapping, and the pillage of villages.¹³¹ These abuses, when carried out in a systematic and widespread manner, constitute crimes against humanity, and because many are carried out in the context of armed conflict, they could also amount to war crimes.



A log from the dossier in the 2008 criminal case against five individuals for the murder of gorillas and charcoal trafficking in Virunga. A source close to the case told Enough that logs like this were kept to monitor illegal taxation schemes forced on individuals entering and exiting the park. Photo: Holly Dranginis / Enough Project

Forced labor is common within the trade networks. The FDLR forcibly recruits civilians, for example in Biruwe, where investigators from Malonga's human rights organization, CREDDHO, found that civilians are forced to cut trees for the FDLR's charcoal production.¹³² Near Karenga, on Virunga's southwestern flank, the FDLR coerces civilians to carry out salongo, a form of slave labor, including work connected to charcoal production and transport, labeled by the group as mandatory "community service."133 Murder of civilians, often targeting those who resist FDLR orders, is also common in association with charcoal trafficking. In Kiwanja, the FDLR has killed civilians in retaliation for keeping charcoal or cash for themselves in the course of trade, according to research by CREDDHO.¹³⁴ Rebels, especially FDLR and Mai Mai, target park rangers in particular with violence, either in combat circumstances or as reprisal for working toward the preservation of the park.¹³⁵

Various forms of gender-based violence and transactional sex are also part of the charcoal trade. "In most cases," Malonga said, "Women aren't allowed to buy charcoal from FDLR unless they have sex with them."¹³⁶ The FDLR has consistently perpetrated forced marriage and sexual violence within its traditional combat structure,¹³⁷ a practice also found within its charcoal networks. In one case that Malonga's organization investigated in Kiribizi, a woman was

abducted outside the park, taken into an FDLR camp, and forced to collect charcoal from kilns and pack bags bound for market. "She was told by one of the officers, 'This man is now your husband,' referring to another officer," according to Malonga.¹³⁸ "So, apart from being kidnapped, forced to work, she was forced to marry. Then when that man got tired of her, she was passed to another man. Sexual violence related to charcoal is a common reality." ¹³⁹

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Finally, acts of intimidation and attacks on environmental activists and whistleblowers who investigate charcoal trafficking is common in eastern Congo. This is a global trend with forest defenders around the world facing threats and hostility within illegal wood and charcoal supply chains at a rate of roughly two killed per week, according to conservative estimates.¹⁴⁰ For Virunga, local conservationists, rangers, and civil society leaders in favor of forest protection play an essential role in investigating and deterring criminal activity, and informing communities of the value of conservation. Enough's research in Goma and Virunga revealed a pattern of serious threats against conservationists and forest defenders. Lukambo, who is an Alexander Soros Prize-winning conservationist,¹⁴¹ has been exiled three times based on death threats for promoting Virunga's protection.¹⁴² Balemba Balagizi, warden for Virunga's central sector, where a number of major charcoal production and trading sites are located, told Enough that when they try to stop trucks carrying charcoal, they receive death threats.¹⁴³ A lawyer who has worked for the ICCN told Enough he is targeted for working on certain charcoal trafficking cases,¹⁴⁴ and the staff of a Gomabased conservation organization, who Enough interviewed extensively for this report, receive so many threats for their work investigating charcoal-related abuses that they could not be named.

Revenues and taxation

Revenues from the charcoal trade come from two basic streams: the sale of the charcoal itself and taxation, or what de Merode calls, "the protection racket."¹⁴⁵ The exact revenues from illegal charcoal in eastern Congo are unknown, but in 2014, the ICCN estimated that illegal charcoal was a \$35 million annual trade in Congo.¹⁴⁶ In Enough's interviews with ICCN and civilians in Goma in 2015, sources said it was worth between \$30 and \$35 million per year.¹⁴⁷ A 2014 report by MONUSCO's Joint Mission Analysis Cell (JMAC) found that in North Kivu alone, charcoal extraction could generate up to \$2.7 million per year for the FDLR,¹⁴⁸ making illegal charcoal the FDLR's largest revenue source, according to a MONUSCO source who talked to Enough.¹⁴⁹ The JMAC found that the gross selling price of FDLR charcoal trading along the

Kikuku-Skae axis road alone could amount to \$9,000 per day.¹⁵⁰ More research is needed to determine exact revenues, and how much of those revenues go toward sustaining the FDLR movement versus toward enriching commanders or foreign allies.

Prices vary based on where the charcoal is sold, and whether it is high quality *ndobo* from oldgrowth hardwood trees or low-quality charcoal. In Goma, as of March 2016, a 110pound bag of *ndobo* sold for between \$26 and \$30.¹⁵¹ Closer to the point of origin near Virunga, high quality charcoal sells for \$15 to \$20 per bag.¹⁵² During operations against the FDLR, the price tends to increase, in some cases to as much as \$45 per bag in Goma.¹⁵³

Taxation significantly affects armed groups' and army profits.¹⁵⁴ In part because virtually every



A photo from the dossier in the 2008 criminal case picturing a large truck packed with charcoal. A source close to the case told Enough this was an Congolese army truck transporting illegal charcoal. Photo: Holly Dranginis / Enough Project

action related to participating in the charcoal trade is illegal, and in part due to their monopoly of power through violence, Congolese army units and armed groups extort money from civilians for "protection"

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from arrest or attack.¹⁵⁵ In turn, the army also extorts money from armed groups. Traders are taxed up to 50 percent of the original purchase price by the army and police, according to interviews with traders in Goma. On average, they cross through at least six major illegal checkpoints in roughly 40 miles. Taxes are justified by a slew of diverse labels, including an "environment tax" and an "administrative tax." Traders said "tax collectors" are associated with different agencies, including the national police, Congolese army, and the Congolese national intelligence agency (ANR). "They tax less if you make the trip at night,"¹⁵⁶ one charcoal trader told the Enough Project at her storehouse in Goma. But in the dark, low visibility and more frequent armed ambushes pose greater risks to porters than in daylight.¹⁵⁷

More research is needed to identify how the FDLR shelters and spends its charcoal profits. Several sources told Enough that the FDLR trades charcoal for weapons, and uses profits to sustain its forces, buying food, clothing, and other essential supplies.¹⁵⁸ But a number of sources told Enough that at least some cut of the FDLR's and Congolese army's profits from charcoal trafficking goes into the formal international financial system, via businesses, banks, and families of high-ranking FDLR or military living abroad.¹⁵⁹ "The profits go somewhere—laundered through companies in Goma, and out" of the country, Ruiz told Enough.¹⁶⁰

What's at stake

Peace

As long as the FDLR's financial incentives and structures remain intact, military operations and political negotiations will fail, undermining peacebuilding efforts. Numerous U.N. and Human Rights Watch investigations have found that the FDLR is responsible for raping women, abducting children, and burning villages.¹⁶¹ The group's military commander, Mudacumura, is charged by the International Criminal Court with cruel treatment, rape, and murder among other war crimes.¹⁶²

The charcoal trade also directly endangers people around the park, subjecting recruits and communities to a range of violent abuses. "When part of [Virunga] is in control of armed groups ... [o]rdinary life is shut down," an activist who requested not to be named told Enough. "Women cannot access those areas because if they try, they're raped or killed."¹⁶³ The FDLR's activities in charcoal production and trading areas also prolong the climate of fear that the group has built over generations.

Wildlife and climate security

The organized criminal exploitation of natural resources is almost always environmentally damaging, but the environmental impacts of the illegal charcoal trade in Virunga are unique. The illegal charcoal trade relies on the clear-cutting and desertification of rare ecosystems. In 2010, the Group of Experts reported:

Charcoal from [Virunga] constituted at least 80 per cent of the Goma market, representing a total value of around \$28 million annually. ...ICCN estimates that over 3 million cubic metres, or several hundreds of thousands of felled trees, are needed to produce this amount of charcoal, which is not only destroying the park, but also threatening numerous species of small animals.¹⁶⁴

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Dilis, who has worked for ICCN in Virunga for five years, took his first trip to Kitchanga in July 2015.¹⁶⁵ During his visit, he told Enough, "When you see the deforestation, it's amazing. I didn't think it was so big. You have Congolese telling you from here to 20 kilometers it used to be forest – and now you can't see a single tree."¹⁶⁶

According to NASA Earth Observatory, Virunga has suffered higher rates of deforestation than other parts of Congo,¹⁶⁷ and the MONUSCO-UNEP study found that "the largest deforestation in the recent decade in North Kivu, as observed by satellite imagery." It emphasized particularly severe destruction in Butembo, on the central-western edge of Virunga, where charcoal is produced and trafficked across the Mpondwe terminal to Uganda.¹⁶⁸ In the Karenga area, an interactive map managed by Global Forest Watch shows significant forest cover loss in recent years.

Deforestation at these levels poses serious threats to wildlife because the forest provides essential habitat. "Virunga is home to rare species," Lukambo told Enough. "Imagine if they disappeared from the

world – that's not only a loss to Congo, but to everyone." ¹⁶⁹ Many armed groups in eastern Congo engage in both poaching and charcoal production, and deforestation threatens many of the same species targeted by organized poaching syndicates. According to Enrico Pironio, a specialist in African wildlife and conservation at the European Commission, "Charcoal is a compounding factor alongside poaching that contributes to wildlife decline [in Africa]."¹⁷⁰ The disappearance of wildlife in this part of the world is already having negative impacts, not least for the future generations who live alongside the park. "As children, we'd go to the park with our teachers to learn about plants and animals," Kamundu told Enough. "But today, if you're teaching children ... there's nothing living here to show them."¹⁷¹

Healthy tropical forests like Virunga are also linked to climate security. Specifically referring to Virunga's deforestation, NASA Earth Observatory explains, "... [F]orests store vast amounts of carbon. Deforestation releases carbon to the "As children, we'd go to the park with our teachers to learn about plants and animals. But today, if you're teaching children, there's nothing living here to show them." *Laurent Kamundu, local community leader*

atmosphere and prevents the forest from taking up more carbon."¹⁷² Enough interviewed people who experience first-hand Virunga's changing temperatures as well as unpredictable rainfall patterns, which are effects of desertification and climate change. Kamundu told Enough, "Out here, the wildlife is suffocating. The temperatures are hotter, the air is drier."¹⁷³ And according to NASA, "In many computer models of future climate, replacing tropical forests with a landscape of pasture and crops creates a drier, hotter climate in the tropics."¹⁷⁴

Rule of law and democratic governance

Finally, the illegal charcoal trade undermines rule of law and democratic governance in Congo. A range of domestic and international crimes are central features of the FDLR's business model, and impunity is nearly absolute. "Large trucks are not apprehended, which means it's a well-organized network," an activist in Goma told Enough.¹⁷⁵ With state officials involved, and Congo's court system failing to carry out

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investigations in high-level cases, the government is sending a clear message that both conservation and the rule of law have limited value, and severe human rights abuses against rural communities are a permissible cost of elite personal enrichment.

Impunity for charcoal trafficking in Virunga also entrenches systems of kleptocracy that exploit the environment, enrich Congo's elite ruling class, and impoverish citizens. According to de Merode, "[Charcoal trafficking] ties into the problem of corruption, which is an enormously damaging problem in eastern Congo. The fiscal disadvantage of clean business is an enormous advantage to parallel criminal trafficking networks."¹⁷⁶ An ICCN official, who preferred not to be named, agreed. "Who gets the biggest piece of the pie?" he said in an interview with Enough. "Kinshasa – politicians, [military generals], and deputies and senators."¹⁷⁷ Given these dynamics, disrupting the illegal charcoal trade and restoring accountability for its kingpins should be a key part of the broader approach to addressing high-level state corruption in Congo.

Interventions

A comprehensive approach

Ending the charcoal trade in Virunga and restoring security in the park's southwestern sector is possible with the right interventions and dedicated coordination. In order to prevent negative side effects like an energy crisis, reprisal attacks on communities in FDLR-held territory, or depressed local economies near the park, a well-sequenced, comprehensive approach is crucial. Alternative fuels and livelihoods must be supported and scaled as soon as possible. Meanwhile, targeted justice efforts and military operations with adequate witness and civilian protection are crucial for deterrence at higher levels. One intervention without others could result in damage to economies and communities. "It needs to be tackled from two angles," explained Ruiz. "Repress the activities and build alternatives." Kamundu, the Kitchanga community leader, said interventions must be inclusive, and prioritize community sensitization, ICCN ranger patrols, and a development strategy that includes agriculture, microloans, and hydropower to "help people disconnect with charcoal."¹⁷⁸

Alternative energy and legal livelihoods

The development of alternative energy sources for consumers of Virunga's illegal charcoal is paramount to ending the FDLR's illegal trade. It is also essential for complementing coercive measures like military operations and high-level arrests. Energy alternative initiatives can also provide significant livelihood opportunities to economically vulnerable civilians trapped in the charcoal trade, further undermining the success of the FDLR's charcoal business.¹⁷⁹

Innovative strategies addressing the demand for illegal cooking fuel favor business models over humanitarian aid. "To really tackle charcoal," de Merode said in a telephone interview with Enough in March, "Go the extra mile. Make the solution commercially viable." According to de Merode, the approach will require impact investors to provide capital and debt funding, for example the International Finance Corporation (IFC) or the United Kingdom's development finance institution (CDC Group plc). "That would put us on a different trajectory," de Merode said of impact investment. "It completely changes how aid is done. The challenge is in bringing it to a conflict zone – but it would solve the scale problem." Donor-

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based humanitarian initiatives have failed to eliminate demand for illegal charcoal. Thankfully, Virunga is in the midst of a technological and economic transformation that could scale initiatives and offer more sustainable solutions to energy challenges. De Merode believes that it is crucial to offset the cost to communities of protecting Virunga from charcoal cultivation with development initiatives. "What the park cost in forfeited assets can be offset by an alternative economy," de Merode said in March. "That's the most important [goal]."

At the center of de Merode's plan for an alternative economy is a series of microhydro dams. The project is run by the Virunga Alliance¹⁸⁰—a partnership between international donors¹⁸¹ and various organizations committed to community development and conservation around the park—and seeks to employ locals

and offset the tremendous regional demand for illegal cooking fuel. These small-scale projects have a lower environmental impact than mega-hydroelectric dams and are even considered useful for mitigating the corruption that often accompanies mega-energy projects like large-scale hydroelectric dams.¹⁸² Virunga Alliance's goal is for the dams to produce nearly 100 megawatts of power – enough for almost 1 million users and 60,000 jobs – by 2020.¹⁸³ Virunga's first hydroelectric plant went online in April 2016, providing electricity to the community of Mutwanga.¹⁸⁴

The microhydro projects are part of a comprehensive vision spanning development, conservation, and security. De Merode emphasized, "It's much more than a hydro plant. It's really trying to make up for 50 years of lost time and 20 years of war," he says. "If you create 100,000 jobs, then it gives an alternative to ex-combatants. If you have 100,000 people whose jobs depend on the park, they're going to want the park to survive." ¹⁸⁵ In order to scale up to meet these expectations,

"If you create 100,000 jobs, then it gives an alternative to excombatants. If you have 100,000 people whose jobs depend on the park, they're going to want the park to survive."

the microhydro projects in the park need investors. Development financing institutions such as the IFC and the U.K.'s development CDC should support the expansion and distribution of microhydroelectric power in and around Virunga. The World Bank should also contribute, particularly to an initial assessment on the establishment of a grid in Goma for the distribution of electricity there. As the Obama administration and the next U.S. president continue to develop the Power Africa initiative, the host agency Overseas Private Investment Corporation (OPIC) should also incorporate support for microhydro initiatives, including in Virunga.¹⁸⁶ The U.S. Trade and Development Agency, with its mandate to support energy development in emerging economies, is also particularly well-placed to provide supportive investment in Virunga Alliance's development initiatives.¹⁸⁷

Several local activists, including Lukambo, support the initiative. "De Merode's plan—the microhydroelectric dams in Matebe—that's a stride forward in solving the problem," Lukambo told Enough, sounding hopeful. "We need energy alternatives. Energy deficiency is an excuse to allow illegal charcoal."¹⁸⁸ For his part, with his organization Innovation for the Development and Protection of Nature (IDPE), Lukambo is developing critical livelihood programs like pig and mushroom farming that also need support from international donors and investors. "Anyone who preys on the park does so out of poverty, so we push for income-generating activities."¹⁸⁹ These locally led efforts should be supported, their leaders consulted as advisors for Virunga Alliance initiatives, and protected against threats.

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Microhydro power initiatives in Virunga take several years to develop¹⁹⁰ and the first rounds of electricity distribution will benefit rural communities near the park. Moreover, these initiatives will not be equipped



Trash burning near a major charcoal market on the edge of Goma. Alternative energy sources for consumers of Virunga's illegal charcoal is paramount to ending the FDLR's illegal trade. Photo: Holly Dranginis / Enough Project

to meet Goma's electricity demands without the construction of a new urban power grid.¹⁹¹ Therefore, it is critical for investors and donors to also support the development of shorter-term alternative energy programs, including legal eco-charcoal plantations, alternative biomass fuel development, and more efficient charcoal production and cooking methods. As far back as 2008, the U.N. Group of Experts advised support for ICCN's initiatives promoting the production of fuel-efficient briguettes made from alternative biomass as a means to "weaken FDLR financial support derived through the illegal production of charcoal."192 Since then, a number of pilot programs have provided alternatives to illegal charcoal. For example, World Wildlife Fund (WWF) is piloting a series of eco-charcoal plantations in eastern Congo to redirect charcoal production to legal areas, raise awareness, and provide jobs. "Virunga is under high pressure, we don't have time to wait on the government, so we are creating ecofriendly alternatives that people will use," Hicham Doudi, one of the program's directors, told Enough in Goma in July 2015. WWF works with local organizations and cooperatives, which lead the planting and harvesting of fast-growing eucalyptus trees for charcoal production in four different regions of eastern Congo, all outside of national park boundaries.¹⁹³

Efficient cookstoves are often made of clay and up to 40

percent more efficient than traditional stoves. Paired with community sensitization and more efficient charcoal production techniques, they are helpful interim measures for combatting the illegal charcoal trade.¹⁹⁴ WWF's plantation initiatives also incorporate the production and distribution of more efficient stoves. Several major initiatives have also supported clean cookstoves outside of Congo, including a comprehensive strategy led by the U.S. State Department, the U.S. Environmental Protection Agency (EPA), U.S. Agency for International Development (USAID), and the Global Alliance for Clean Cookstoves (GACC).¹⁹⁵ These efforts should provide lessons and momentum for the expansion and improvement of similar initiatives in eastern Congo. A Rwanda-based organization, Inyenyeri, has built a particularly good model to increase cleaner, more efficient cooking practices and access to sustainable biomass fuels in Rwanda. Its cookstove and pellet-fuel systems create jobs, raise awareness about conservation, and provide a smoke-free alternative to charcoal cooking, and are up to 80 percent more efficient.¹⁹⁶

The importance of market-informed strategies is as true for efficient cooking initiatives as it is for microhydropower development. The consulting and investment firm I-DEV International is currently carrying out much-needed market research to understand how alternative energy sources can be sustainably developed and integrated into Congo's marketplace.¹⁹⁷ Impact investors and agencies

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supporting efficient cooking initiatives and alternative fuels, such as WWF, USAID, and the GACC, and others should support and make use of such studies to ensure sustainability and market viability.¹⁹⁸

Law enforcement

In cases of charcoal-trafficking and related organized crime, law enforcement agents are the first responders, including ICCN, the Congolese army and national police, and in some cases, MONUSCO. As with military approaches to the FDLR's charcoal-trafficking networks, law enforcement will be ineffective as long as the army and police engage in trafficking, collude with the FDLR, and stand by while FDLR runs its cartels. One ICCN official, who requested anonymity, explained to Enough, "The problem we have is that if we stop a truck, the [Congolese army] tries to stop the arrest. In that case, they're involved. We call the military authorities, tell them, 'We have an issue with your regiment.' [The offenders] might lose their post...but those low level guys are the same – they continue the activities."

The keys to improving law enforcement against charcoal cartels in Virunga are coordination and accountability. ICCN officials should have the opportunity to work with independent, well-trained Congolese police units to investigate and monitor the illegal charcoal trade, then implement selective, strategic arrests to establish deterrence among high-level perpetrators. As long as national police extort fees from charcoal traders and allow or collude with FDLR operations in the park, law enforcement will be hamstrung.

A few promising initiatives to improve law enforcement are underway. One is the U.N. Police (UNPOL) unit on organized crime, meant to help MONUSCO and Congolese counterparts better address organized crime in eastern Congo. But it is undermined by the involvement of state officials in the trade. When investigators begin to gather evidence that moves them up the government or army chain of command, police make them drop the investigation.¹⁹⁹ The unit should conduct trainings with select law enforcement officers vetted for corruption to develop models for how law enforcement can better carry out high-level investigations with independence. In addition, the U.S. Institute of Peace has launched a new initiative to build capacity and momentum among justice officials in Congo for prosecuting economic and environmental crimes in conflict-affected areas. The initiative should prioritize the effective investigation and prosecution of charcoal trafficking and associated human rights violations at national and international levels.

Seizing contraband

Deep in Virunga, and especially on major access roads, ICCN rangers and officials stop trucks and confiscate illegal charcoal. Enough staff visited the storehouse in Goma where the ICCN stockpiles confiscated charcoal. Inside, there were over 400 bags of charcoal, which amount to over \$10,000 worth of illegal, high-quality charcoal. But police involvement in the crimes is a major hindrance to meaningful accountability. "Last year, there were military trucks loaded with charcoal," an ICCN official told Enough. "ICCN tried to seize them, and tried to collaborate with the Congolese National Police to do it, and we got nothing." ²⁰⁰ Moreover, neither

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ICCN nor MONUSCO can seize trucks in the event of a charcoal seizure.²⁰¹ "When we stop a civilian truck, we'd like to seize it," the official said. "If they get it back, they're out trafficking again the next day," the official said.²⁰²

Interventions by the ICCN at the point of origin are particularly important. In the park or nearby, officials cannot as easily ignore whether wood and charcoal were made from trees in Virunga as they can once the charcoal makes its way into urban markets. Once charcoal is seized, interventions are also needed to stop corruption among state officials related to seizures. An ICCN source told Enough that in the past, the seized charcoal would go to the prosecutor's office since it constituted evidence, "but a lot of the seized charcoal was given back to the perpetrators. So now I only send it to the ICCN sites. Enough is enough."²⁰³

Another critical intervention for better law enforcement is improved intelligence gathering, developed through joint efforts by the U.N. Office on Drugs and Crime (UNODC), MONUSCO, ICCN, and others. High-quality investigations are crucial at this stage, because so much is unknown about the way illegal charcoal networks work and who gives orders. Without that intelligence, arrests will be limited to foot soldiers, and evidence against the overall criminal enterprise will be weak.

In order to apprehend the major players, including FDLR commanders in charge of the charcoal trade plus their state and corporate partners, a basic mapping project should be conducted. This could start with the resurrection of ICCN-run and MONUSCO-supported roadblocks on a few major access roads carrying charcoal from southwestern Virunga, along with simple data gathering from drivers who are stopped. Daniel Rosenberg, the environmental expert for the organized crime unit in MONUSCO in 2015 told Enough, "You can't go straight to the big guy. You have to go first to gathering intelligence, to see where the money is going."²⁰⁴ The UNODC's Southern Africa office should complement this mapping with a fact-finding mission on forest crime, specifically charcoal trafficking, using its toolkit on wildlife trafficking and forest crime, to help identify opportunities to improve law enforcement efforts.²⁰⁵

To launch a new intelligence gathering strategy, capacity-building is crucial. "The Congolese National Police needs training – reinforce the capacity of the police on organized crime," Rosenberg recommended. He also recommends what he calls "quick impact projects," starting with basic needs for law enforcement officials, like desks, chairs, printers, and paper. Training should include basic intelligence gathering strategies with a strong emphasis on the fulfillment of human rights and anti-corruption.

To support law enforcement efforts aimed at ending charcoal trafficking, the U.S. Presidential Task Force on Combating Wildlife Trafficking should develop a strategic plan for how to incorporate anti-charcoal trafficking into its objectives. The task force has helped train local law enforcement and justice officials in the region on wildlife trafficking interventions. Given the significant overlaps between poaching and charcoal trafficking, it should explore ways in which providing the same support for charcoal interventions could help achieve their overall goals of protecting wildlife and disrupting organized criminal networks in the region. The U.S. Congress should pass H.R. 2494, the Eliminate, Neutralize, and Disrupt Wildlife Trafficking Act of 2016, which would help with the professionalization of rangers and other wildlife law enforcement. Finally, local law enforcement should closely coordinate with alternative livelihood programs to refer low-level perpetrators to those programs. "Sentencing them is one thing," ICCN lawyer

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Cingoro Mattieu told Enough, "But the most important thing is to lift them up. And that takes political will."²⁰⁶

Rangers: more than a conservation corps

Virunga's rangers are one of the park's greatest hopes for survival, carrying out their roles promoting conservation, rule of law, and development. De Merode told Enough in March, "The quality of the staff is the base activity of the base acti

the best achievement. But "[w]e're still losing ground, we haven't been able to reinforce the borders of the park, which is our main mandate."²⁰⁷ For de Merode, the southwestern sector requires the restoration of state institutions and "the kind of thing that reminds people that the rule of law has value. ..."²⁰⁸

In the past, charcoal kingpins denied the ICCN access to the areas of the park they controlled.²⁰⁹ Today, in part due to the CNDP's dissolution and M23's defeat, access to the area is opening up.²¹⁰ In

Virunga's rangers are one of the park's greatest hopes for survival.

both Virunga and Garamba, the ICCN is experimenting with joint ranger-army patrols in particularly dangerous areas. The army units that are stationed in Virunga with rangers face stricter consequences for corruption and abuse, and are paid better than army units not stationed in the park.²¹¹ This collaboration means that reforms to the ranger corps in Virunga could also contribute to improvement of the army as well.



Weapons and empty lunch plates inside a compound in the town of Kitchanga. THe rangers were taking a lunch break during the ICCN's first scoping mission in the communities on the southwestern side of Virunga since the 1990s, where charcoal trafficking and FDLR violence is heavy. Photo: Holly Dranginis / Enough Project

The ICCN should follow up on its 2015 scoping mission in Virunga's southwestern sector and establish consistent patrols there to monitor security and crime levels with help from MONUSCO and vetted units of the Congolese army. They should continue sensitizing local people to the park's laws and building communities' trust in the ICCN's work. Enough's sources overwhelmingly agreed that MONUSCO doesn't take a strong enough (or any) role in the FDLR-held charcoal hubs in Virunga, but that with the right supportive approach with ICCN, MONUSCO peacekeepers could be helpful reinforcement, including by providing more logistical support like helicopters, drone monitoring, and investigators.²¹² "Last year we had an FDLR ambush on the rangers," ICCN's Dilis told Enough, "Within 10 minutes, [MONUSCO] came to show force, and the FDLR scattered." ²¹³ MONUSCO should coordinate with ICCN to play a more direct, supportive role to ICCN rangers in areas affected by charcoal trafficking.

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Justice: investigate high-level perpetrators and protect whistleblowers

One of the primary enablers of the illegal charcoal trade in Virunga is also a classic tool of Congo's kleptocratic government: impunity for high-level perpetrators, especially state actors. The majority of arrests related to charcoal trafficking are civilians, low in the FDLR's cartel hierarchy. According to lawyers and justice officials, army and rebel commanders are de facto immune from prosecution.²¹⁴ They are either left alone—protected by the army or their own threat of violence against law enforcement—or escape meaningful penalties by paying off the system.²¹⁵

A lawyer in Goma, who chose to remain anonymous for security reasons, said, "The majority of [charcoal trafficking] cases are brought against civilians, because they're easier to arrest. We have untouchable people—the big fish." Low-level arrests and prosecutions do little to disrupt the trade because civilian drivers and porters are easily replaceable. Convictions are also inappropriate in cases where civilian defendants committed crimes under threat or other form of duress. Meanwhile, these cases create a façade of justice and keep impunity for high-ranking commanders—those with the most responsibility for the most serious crimes—intact.

Unsolved Murders

In 2007, seven mountain gorillas were killed within two months in a series of assassinations in Virunga.²¹⁶ Several media reports highlighted heavy rebel violence threatening the park.²¹⁷ But in 2008, prosecutors charged five individuals with related crimes who were all subordinates of Virunga's then-park director, Honoré Mashagiro.²¹⁸

Several accounts of the events connect the gorilla murders with Virunga's illegal charcoal trade. A source who helped investigate the case told Enough that the murders were a symbolic threat, meant to discourage rangers and conservationists from disrupting charcoal trafficking networks in the park.²¹⁹ A veteran Virunga ranger found the bodies of four of the gorillas, and commented, "Nothing like this has ever happened before."²²⁰ Many were shocked. Lawyers amassed a thick dossier of evidence, including witness statements, a photo of an army truck loaded with charcoal, and copies of logbooks listing individuals allowed into the park to buy, produce, and trade charcoal in exchange for illegal taxes.²²¹ Although Mashagiro was never charged, according to the dossier, 157 witnesses gave statements against him,²²² and he was named in the verdict as the defendants' supervisor.²²³

Enough interviewed two eastern Congolese individuals who recalled the crimes and the case. Both work in the field of conservation. Both said independently that Mashagiro was never prosecuted but eventually dismissed from his ICCN post, and alleged he was heavily involved in Virunga charcoal trafficking prior to that dismissal.²²⁴ In a 2008 National Geographic report, Mashagiro denied allegations that he was involved in the gorilla murders or the illegal charcoal

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trade.²²⁵ When Enough spoke with Mashagiro in Goma last July, he said, "My whole heart is still with ICCN, and if I'm not with the park anymore, it's because of some incidents."²²⁶ He said conservation efforts are most effective when they are "on good footing" with locals. Of the FDLR, he said, "They're the ones doing charcoal and poaching. [When I was Virunga's director], I knew they were there, but I never saw them."²²⁷

Lawyers and activists Enough interviewed in Congo said the case is emblematic of enduring impunity for environmental crimes, the intertwined nature of charcoal trading and violence, and the fog of war. When Enough staff asked if there was attention on the case as the court trial unfolded, Bukavu-based activist Dominique Bikaba put things in perspective. "Really, who would remember Mashagiro's trial?" He listed high-level rebel commanders: "Nkunda, Ntaganda ... you were running for your life. No one was paying attention to a case about gorilla murders." But today, Bikaba and others say justice and transparency related to the case is crucial. A Congolese lawyer close to the case told Enough, "The truth about this case should be told."²²⁸

Law enforcement and alternative fuels will not effectively end the FDLR's charcoal cartel if perpetrators of the illicit trade continue to operate with impunity. Congo needs high-level prosecutions against individuals orchestrating the illegal charcoal trade. Investigations should include asset tracing to pursue the seizure of illegal profits. If those profits are entering the international financial system, a range of financial tools could be applied to help seize assets and deter predicate crimes. "Put the finger where it hurts," one U.N. official recommended in his interview with Enough. "Seize the perpetrators' property."²²⁹ Deterrence efforts would be stronger if they faced losing their money, he told Enough.²³⁰ The Group of Experts has a mandate to investigate beyond Congo's borders and should coordinate with the UNODC along with international financial and law enforcement agencies to identify FDLR assets abroad.

A new conservation law was passed by the Congolese parliament in 2014, increasing the penalties for charcoal-trafficking crimes. But as long as low-ranking perpetrators are the only targets of arrest, little will change. Several of Enough's sources said charcoal trafficking is a crime of necessity for low-level perpetrators.²³¹ One lawyer in Goma told Enough that recidivism among low-ranking civilians involved in the charcoal trade is high. "I've handled cases of repeat offenders. They say they can't afford not to commit the crimes." Instead of jail, she said, those civilians should be referred to livelihood programs, and the priorities for justice officials should shift.²³² "The goal is to catch the real big fish," an ICCN official told Enough. "For that, we need better investigations."²³³

To improve the independence and expertise needed to carry out high-level cases, including asset tracing, the U.N. and U.S. Special Envoys to the Great Lakes Region, Said Djinnit and Tom Perriello, should encourage the Congolese government to pass pending legislation to create an internationalized criminal justice mechanism. Known commonly in Congo as the specialized mixed chambers, this initiative would provide Congo with an independent set of chambers specially equipped to prosecute high-level serious crimes.

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The theft of natural resources, if perpetrated in the context of armed conflict, constitutes the war crime of pillage under the Rome Statute.²³⁴ Thus, Congolese military prosecutors and the International Criminal Court should pursue cases of natural resource pillage in Congo related to FDLR and army charcoal-trafficking crimes. They should also use their Rome Statute Article 77 power to trace assets that may be

the direct or indirect proceeds of crimes.²³⁵ By doing so, they would interrupt the long-standing impunity shrouding economic war crimes in Congo, break new ground in international criminal law practice, and seize assets that could fund reparations programs for affected communities or sustainable development initiatives in Virunga.

Finally, to improve prosecutions, witnesses, local investigators, and whistleblowers all need better protection. "Whenever [high-level individuals] are cited, they don't get arrested. It's hard to get evidence against them because people are afraid to speak out," North Kivu Chief Prosecutor Dieudonné Kongolo Illunga said.²³⁶ They are afraid for good reason. Lukambo has faced constant threats for his investigations related to charcoal trafficking and illegal exploitation in the park. "I have always been ready to die to protect the environment,"237 he told Enough. Lawyers and investigators working on cases related to the charcoal trade should be protected by MONUSCO justice units and monitored by international human rights groups. State officials, including Congo's National Intelligence Agency (ANR), should refrain from meddling in cases and intimidating witnesses.

The U.S. Congress can do its part to help support and protect local investigators and whistleblowers



Bantu Lukambo, an award-winning conservationist who grew up in Virunga, in his office in Goma, using hand-drawn maps to explain charcoal trafficking routes in and around Virunga National Park. Photo: Holly Dranginis / Enough Project

defending Virunga from organized crime. It should pass S.284 - Global Magnitsky Human Rights Accountability Act, which would enable the use of U.S. sanctions against any foreign individual known to abuse people seeking to expose illegal government activity. Because the illegal charcoal trade in eastern Congo is infused with army and police participation, many of the individuals who investigate illegal charcoal trade uncover evidence of state participation, which elicits direct threats. The Global Magnitsky Act could address this specific problem and help encourage the brave work of advocates working to support government accountability, forest conservation, and security.

Military interventions: end the affair

Military and peacekeeping efforts are key to ending the FDLR's charcoal-trafficking networks because the FDLR is a deadly, well-organized militia, accustomed to furthering its interest through the use of force in a complex, armed conflict. As ICCN lawyer Mattieu said of the illegal charcoal trade, "What drives all this is war repeating."²³⁸ Military operations against the FDLR—both military and demobilization campaigns—

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are crucial to protecting Virunga and enabling more effective ranger patrols. Ending the FDLR will take concerted, multi-pronged efforts, but one of those is to disrupt its charcoal revenues. Thus, one important priority is targeted military operations and FDLR demobilization in charcoal production areas.

Some attempts have been made to carry out such operations. Back in 2014, MONUSCO and the Congolese army were set to carry out joint military operations against the FDLR, nicknamed "Sukola II," in January 2015. As part of the preparations, MONUSCO developed a strategic plan to combat the charcoal-trafficking networks in and around Virunga. The strategy targeted a few major FDLR charcoal hubs, and included plans to target a few high-level perpetrators for arrest to signal the possibility of accountability. However, the joint operations never took place, due in part to MONUSCO's concerns about the human rights records of two key commanding Congolese army officers. The Congolese army carried out Sukola II alone, and the plans to target key charcoal operations in Virunga never happened.²³⁹

Although carried out unilaterally by the Congolese army, since Sukola II began in early 2015, it has had some impact on FDLR around Virunga. "Today, because of the operations," a Virunga ranger told Enough last July, "They're no longer going outside their camps. Before, they'd move freely and look for ladies, food. Now they're more concentrated in their deep camps."²⁴⁰ According to Enough's interviews, they have also encouraged demobilization by a number of FDLR combatants.²⁴¹ However, the operations lacked strength and failed to permanently disrupt FDLR strongholds in the park.

"We'll be falling back on you"

Without strategic civilian protection plans, military operations against the FDLR could have disastrous consequences for communities around the park. On July 5, 2015, FDLR forces attacked the town of Burungu, on the border of Virunga on the southwestern flank. According to the head of administration in Kitchanga, who was in Burungu shortly after the attack, four people were killed.²⁴² "The FDLR's message was clear," said Kamundu, who also talked to Burungu residents in the days following the attack. "Now that we have to leave the charcoal trade, we'll be falling back on you."²⁴³

Residents in the area said the FDLR's finances are strained, which leads to attacks against villagers.²⁴⁴ The FDLR ambushes communities as a means of resupply, stealing sacks of rice and flour, and machetes. But they also kill people in the process. "If there was no charcoal trade, that would push the FDLR out of the park. But it would come with casualties," Kamundu explained. The head of Kitchanga's administration told Enough that the Burungu attack was "because the army is pushing FDLR out of the park, so the FDLR needs to be attacking the population." He said, "When they were in the park relying on the charcoal, they weren't coming to attack villages."

Recently, the Congolese government and MONUSCO restarted negotiations related to joint operations against armed groups in eastern Congo²⁴⁵ and the FDLR is among potential priority targets. As joint operations strategies develop, MONUSCO and the army should include MONUSCO's plan to target major charcoal hubs, with a concerted protection plan for civilians in the area before, during, and after operations to prevent reprisal attacks and protect communities from violence.

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Any successful military approach must also include the complete recalibration of relations between the FDLR and Congolese army in charcoal production and trading areas in Virunga. Military operations in the recent past have been compromised by [army]-FDLR alliances. "There's no one [involved in the trade] who doesn't have a relationship with the [Congolese army]. It's large-scale," a U.N. official told Enough.²⁴⁶ An expert on Congo's armed conflict told Enough that during Sukola II, the Congolese army was "shadow-boxing with the FDLR."²⁴⁷ In addition to their ineffectiveness, weak and disingenuous military operations also entrench civil society's mistrust in the army, according to Goma-based activist Malonga.²⁴⁸

Restoring independence between the FDLR and the Congolese army must be part of the overall plan to address the FDLR, beginning with vetting and purging of officers known to collaborate with FDLR. That process alone will help weaken charcoal producing activities, given FDLR's dependence on Congolese army alliances to operate their networks. "Curbing the charcoal trafficking would be so easy, if the Congolese officers weren't involved," Lukambo told Enough in July.²⁴⁹

Finally, MONUSCO should improve disarmament, demobilization, rehabilitation, repatriation, and reintegration (DDR/RR) for FDLR ex-combatants. In particular, it should increase defection campaigns targeting combatants in Virunga and develop strategies for encouraging the dissolution of business entities within the FDLR. Giving FDLR fighters sustainable, rights-based, defection opportunities is critical to weakening the group's business enterprises and restoring peace. "Demobilization [in southwestern Virunga] is theoretical," Lukambo told Enough in an email recently.²⁵⁰ Internally displaced persons camps, where FDLR ex-combatants sometimes end up if they defect, are under-resourced, and also vulnerable to violence and recruitment. These problems create perverse incentive structures for FDLR combatants considering defection, including those claiming refugee status. With refugee and IDP camps and DDR/RR transit camps that offer effective protection, livelihood referrals, and sustainable repatriation and reintegration plans, the U.N. High Commissioner for Refugees (UNHCR) and MONUSCO could better encourage defections and thus help weaken the FDLR without relying solely on costly military operations.

Conclusion

Without interventions, the illegal charcoal trade will grow, and so too will its destructive impacts. Kamundu, the civil society leader in Kitchanga, sees it first hand from his home on the edge of Virunga. "I think the charcoal trade is increasing," he told Enough. De Merode said that in the park's southwestern sector, the charcoal trade is only growing and it is very difficult to gain control of the area.²⁵¹ And according to the 2014 UNEP study, demand for charcoal all over the central African region could grow threefold by 2050.²⁵² Since regional population growth is booming, the market will thrive unless more is done to curb demand and dismantle the FDLR's business networks.

Ending the illegal charcoal trade in eastern Congo will depend on coordinated, efficient efforts to develop and distribute alternative energy, launch effective military operations, prosecute high-level perpetrators, and improve economic opportunities for those vulnerable to recruitment by the FDLR's charcoal kingpins. It will require the leadership and collaboration of the ICCN, Congolese and foreign civil society groups, MONUSCO, U.S. government agencies, and local and national Congolese state institutions. Elevating the dismantling of this illegal trade in the list of peacebuilding priorities for the Great Lakes region would lead to important achievements with lasting impact: hamstring a violent terrorist group, restore communities to a more peaceful existence, and save one of the most valuable protected places on the planet.

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Endnotes

¹ Reliable, updated information on revenues from illegal charcoal requires further research. Estimates gathered during Enough Project research varied. In an interview with an ICCN official, the source estimated the trade was valued at \$30+ million per year or \$750,000 per week. Another source close to Virunga said the trade is worth \$35 million per year in an interview with the Enough Project. In a confidential 2014 study by MONUSCO Joint Mission Analysis Cell (JMAC) viewed by the Enough Project, MONUSCO reported that ICCN estimated that illegal charcoal production generates around \$35 million annually, and that the claim needs further research. (United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," (July 2014), viewed by the Enough Project). An April 2015 study published jointly by MONUSCO and the U.N. Environment Programme (UNEP) and Office of the Special Envoy of the Secretary-General for the Great Lakes Region (OSESG), said a conservative estimate of the annual net profits to organized crime derived from charcoal is \$12-\$35 million. (UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015." (April 2015), available at

 $http://postconflict.unep.ch/publications/UNEP_DRCongo_MONUSCO_OSESG_final_report.pdf).$

² Enough interview with a Virunga park ranger who requested anonymity, Goma, July 2015.

³ The United States and United Nations have designated both individual leaders of the FDLR and also the entity. See U.S. President (George W. Bush), Executive Order 13413 "Blocking Property of Certain Persons Contributing to the Conflict in the Democratic Republic of the Congo," October 27, 2006, available at

https://www.treasury.gov/resource-center/sanctions/Documents/13413.pdf and U.S. Treasury, "Treasury Department Designates Militant Groups in the DRC," Press release, January 3, 2013, available at https://www.treasury.gov/press-center/press-releases/Pages/tg1815.aspx; U.N. Security Council, "Resolution 2198 (2015) Adopted by the Security Council at its 7371st meeting, on 29 January 2015," S/Res/2198 (2015), January 29, 2015, available at http://www.securitycouncilreport.org/atf/cf/percent7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9percent7D/s_res_2198.pdf and U.N. Security Council, "Resolution 2078 (2012) Adopted by the Security Council at its 6873rd meeting, on 28 November 2012," S/Res/2078 (2012), November 28, 2012, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/2078percent20percent282012percent29 ⁴ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," (July 2014), viewed by the Enough Project. ⁵ WikiLeaks U.S. State Department Embassy Cables. "Virunga Park Report: Tentative Agreement by Rebel Group to Maintain Conservation Efforts in the Gorilla Sector," December 12, 2008, available at

https://wikileaks.org/plusd/cables/08KINSHASA1099_a.html (last accessed June, 2016).

⁶ The vast majority of illegal charcoal demand comes from low- and middle-income households in Congo and the surrounding region. Populations in the region have grown significantly since 2008, for example, according to World Bank data, DRC's population growth rate in 2014 was 3.2 percent, (see, The World Bank, "Population growth (annual %)" available at http://data.worldbank.org/indicator/SP.POP.GROW?cid=GPD_2), and in 2009 the International Rescue Committee assumed a 3 percent growth rate in Goma (see, International Committee of the Red Cross, "Democratic Republic of the Congo: supplying Goma with water," June 15, 2009, available at https://www.icrc.org/eng/resources/documents/interview/congo-kinshasa-interview-050609.htm.)

⁷ Author interview with a source who works in Virunga and requested anonymity, Goma, July 11, 2015.

⁸ Notes from the Great Lakes Experts Meeting on "Trans-boundary Ecosystem Based Management of Fishery Resources and Oil Governance in the Great Lakes of Africa, or TGAL," Umubano Hotel, Kigali, Rwanda, December 1-2, 2015.

⁹ Enough interview with Jeredy Kambale Malonga, Goma, July, 2015.

¹⁰ As of March 2016, high-quality charcoal made from old-growth trees sold for roughly \$26 per bag, and lowerquality charcoal made from eucalyptus sold for \$16 per bag. Information based on email correspondence with Jean Kim Chaix, director of the Charcoal Project, March 2016.

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¹¹United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," pg. 3.

¹² UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015," para. 48, 50-51, 55-56; author interview with a source who works for a private exporter, Goma, July 12, 2015; Bantu Lukambo, July 10, 2015 (Rwanda and Uganda); CREF (Rwanda and Uganda/Kasindi) in Kinshasa meeting; MONUSCO working group meeting (Rwanda); Cingoro Mattieu (Rwanda); and see, Stefan Lovgren, "Congo Gorilla Killings Fueled by Illegal Charcoal Trade," National Geographic News, August 16, 2007, available at http://news.nationalgeographic.com/news/2007/08/070816-gorillascongo_2.html.

¹³ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," pg. 3

¹⁴ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," author interviews with Lukambo, Gilbert Dilis, Malonga. Author interview with a civil society advocate who investigates human rights violations related to natural resource exploitation in North Kivu and requested anonymity, Goma, July 10, 2015.

¹⁵ Virunga National Park is run as a public-private partnership between ICCN, which is the DRC's national parks authority, and the Virunga Foundation, a charity registered in the United Kingdom. For more information, see Virunga National Park, "Who We Are," available at https://virunga.org/who-we-are/ (last accessed June 2016).
¹⁶ Eliminate, Neutralize, and Disrupt Wildlife Trafficking Act, H.R. 2494, 114th Cong. (2015-16), available at https://www.congress.gov/bill/114th-congress/house-bill/2494 (last accessed June 2016).

¹⁷ Global Magnitsky Human Rights Accountability Act (S.284), 114th Cong. (2015-16), available at https://www.congress.gov/bill/114th-congress/senate-

bill/284?q=%7B%22search%22%3A%5B%22Magnitsky%22%5D%7D&resultIndex=1 (last accessed June 2016). ¹⁸ Civil society has long called for the establishment of "Specialized Mixed Chambers" in Congo to prosecute war crimes, crimes against humanity, and genocide. Draft legislation that would establish the chambers has been considered in parliament, but never made into law. The construction and name of the mechanism continues to evolve in its proposed form. What is most critical is that Congo have a mechanism with specialized jurisdiction, separate from military and civilian courts but still part of the national system, and that incorporates a strong role for international oversight and expertise. As an October 2015 Human Rights Watch report stated, "The establishment of an internationalized justice mechanism (be it a court or chambers), for a temporary period of time, will be crucial for effectively overcoming impunity for grave international crimes in Congo." See Human Rights Watch, "Justice on Trial," (October 1, 2015), available at: https://www.hrw.org/report/2015/10/01/justicetrial/lessons-minova-rape-case-democratic-republic-congo).

¹⁹ International Criminal Court, "Rome Statute of the International Criminal Court," (July 1, 2002). Article 77, pg.
54. Available at: https://www.icc-cpi.int/nr/rdonlyres/ea9aeff7-5752-4f84-be94-

0a655eb30e16/0/rome_statute_english.pdf

²⁰ See Jeffrey Gettleman, "Congo Lurches Toward a New Crisis as Leader Tries to Crush a Rival," The New York Times, May 11, 2016, available at http://www.nytimes.com/2016/05/12/world/africa/congo-moise-katumbijoseph-kabila.html, Jeffrey Gettleman, "Home of Congo Presidential Challenger is Surrounded by Police," The New York Times, May 5, 2016, available at http://www.nytimes.com/2016/05/06/world/africa/congo-moise-katumbipresident-joseph-kabila-election.html, Jeffrey Gettleman "Businessman and Dictator Face Off as Congo Lurches Toward Abyss," The New York Times, March 30, 2016, available at

http://www.nytimes.com/2016/03/31/world/africa/congo-elections-moise-katumbi.html?_r=0, and Nicholas Bariyo, "Congo Escalates Crackdown on Pro-Democracy Activists," Wall Street Journal, March 19, 2015, available at http://www.wsj.com/articles/congo-escalates-crackdown-on-pro-democracy-activists-1426780368 ²¹ See endnote 1.

²² Virunga National Park, "About Virunga National Park," Virunga National Park, available at http://visitvirunga.org/about-virunga/ (last accessed May 2016).

²³ Author interview with Emmanuel de Merode by telephone, February 26, 2016.

²⁴ Author interview with Daniel Rosenberg, Goma, July 21, 2015; UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and

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recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015." (April 2015), para. 53, available at

http://postconflict.unep.ch/publications/UNEP_DRCongo_MONUSCO_OSESG_final_report.pdf); Lukambo. ²⁵ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," pg. 3.

²⁶ Virunga National Park, "About Virunga National Park," Virunga National Park, available at

http://visitvirunga.org/about-virunga/ (last accessed May 2016).

²⁷ Ibid.

²⁸ For the film, see "Virunga," available at http://virungamovie.com/. For information about the SOCO International controversy, see Marc Santora, "SOCO Oil Company Paid Large Sums to Officer in Congo, Activists Say," New York Times, June 9, 2015, available at http://www.nytimes.com/2015/06/10/world/africa/soco-oilcompany-paid-large-sums-to-officer-in-congo-activists-say.html and Daniel J. Graeber, "SOCO gives up oil license in protected DRC park," United Press International, November 4, 2015, available at

http://www.upi.com/Business_News/Energy-Industry/2015/11/04/SOCO-gives-up-oil-license-in-proteced-DRC-park/5081446639436/.

²⁹ Author interview with Laurent Kamundu, Kitchanga, July 16, 2015.

³⁰ Walter, Barbara F. and Jack L. Snyder, *Civil Wars, Insecurity, and Intervention* (New York: Columbia University Press, 1999), pgs. 119-121.

³¹ Ibid.

³² WikiLeaks U.S. State Department Embassy Cables. "Virunga Park Report: Tentative Agreement by Rebel Group to Maintain Conservation Efforts in the Gorilla Sector."

³³ The ICCN is charged with basic management and law enforcement in Virunga, but it has also taken on a range of responsibilities related to communities near the park, recognizing that the only way to effectively protect Virunga is to work with populations who live alongside it. "ICCN does sensitization of FDLR-affected populations, and builds infrastructure – roughly \$10,000 per project, including toilets, schools, and reforestation," explained the ICCN's head of security, Gilbert Dilis. Author interview with Dilis, Goma, July 11, 2015.

³⁴ Author interviews with Juan Moreni, Kitchanga, July 15, 2015; with Kamundu, Kitchanga, July 16, 2015; with Lukambo; with Dilis, Goma, July 11, 2015.

³⁵ Moreni.

³⁶ Ibid.

³⁷ Author interview with administrative head of Kitchanga town who requested anonymity, Kitchanga, July 16, 2015.

³⁸ Author interviews with a source who works in Virunga, July 10, 2015; Dilis, and Daniel Ruiz, Goma, July 2015.
 ³⁹ Author interview with a source who works in Virunga, July 10, 2015.

⁴⁰ World Wildlife Fund for Nature, "The Economic Value of Virunga National Park," (July 2013), available at http://assets.worldwildlife.org/publications/611/files/original/The_Economic_Value_of_Virunga_National_Park_L R.pdf?1375288396

⁴¹ United Nations Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2015/19, para. 218, January 12, 2015, available at

http://www.securitycouncilreport.org/atf/cf/percent7B65BFCF9B-6D27-4E9C-8CD3-

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⁴² Alastair Leithead, "The War on Elephants," BBC, April 28, 2016, available at

http://www.bbc.co.uk/news/resources/idt-6d40b788-af2f-4646-8177-c8db7ce6a881

⁴³ Author interview with Radar Ninshuli, Bukavu, July 25, 2015.

⁴⁴ A.J. Plumptre and others, "Status of Grauer's Gorilla and Chimpanzees in eastern Democratic Republic of Congo: Historical and current distribution and abundance," (New York: Wildlife Conservation Society, Fauna and Flora International, and ICCN, April 2016), available at:

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⁴⁶ Dominique Bikaba, in an email to the author on April 13, 2016, and Christopher Torchia, "Suspected rebels kill ranger in Congo park," Associated Press, April 1, 2016, available at:

http://bigstory.ap.org/article/d19fc44d62f844d4bc86035112a5df5e/suspected-rebels-kill-ranger-congo-park. ⁴⁷ Bikaba email. And see, Sadiki, N., Vandecasteele, I., Moeyersons, J., Ozer, A., Ozer, P., Kalegamire, D. and Bahati, C. "Développement de la ville de Bukavu et cartographie des vulnérabilités, R.D. Congo." *Annales des Sciences et Sciences Appliquées de l'Université Officielle de Bukavu* (2) (2010):120-127. Available at

http://orbi.ulg.ac.be/handle/2268/82774.

⁴⁸ Ninshuli.

⁴⁹ Ibid.

50 Ibid.

⁵¹ Dominique Bikaba, appeared in "I am Congo – the Conservationist," video production, Enough Project, (2012) available at https://www.youtube.com/watch?v=0NEmkoEgYMw

⁵² WikiLeaks U.S. State Department Embassy Cables. "Virunga Park Report: Tentative Agreement by Rebel Group to Maintain Conservation Efforts in the Gorilla Sector," and Ariel Zirulnick "In eastern Congo, a gorilla reserve tries to rise above its troubled region," Christian Science Monitor, August 2, 2015, available at

http://www.csmonitor.com/World/Africa/2015/0802/In-eastern-Congo-a-gorilla-reserve-tries-to-rise-above-its-troubled-region.

⁵³ In 2014, a reorganization to streamline the management of the park's three sectors put 150 rangers in each sector, with the remaining 50 stationed at the park's headquarters in Rumangabo, 30 miles north of Goma. Dilis, July 11, 2015.

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 ⁵⁵ For more on the integration of female rangers into Virunga's force, see Jessica Hatcher, "Meet the First Female Rangers to Guard One of World's Deadliest Parks," National Geographic, October 14, 2015, available at http://news.nationalgeographic.com/2015/10/151014-virunga-women-rangers-mountain-gorillas-congo/.
 ⁵⁶ "Rangers Killed in Africa's Oldest Park Push Death Toll to 150," National Geographic, March 14, 2016, available at http://news.nationalgeographic.com/2016/03/160314-two-rangers-killed-virunga-national-park/.

⁵⁷ Dilis; Author interview with de Merode by telephone, February 25, 2016.

⁵⁸ Dilis, July 16, 2015.

59 Ibid.

⁶⁰United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF:
 FDLR Incorporated? The movement's business model at a crossroads"; de Merode interview; Dilis, July 11, 2015.
 ⁶¹U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of the Congo,"
 S/2008/772, para. 57, December 12, 2008, available at

http://www.un.org/ga/search/view_doc.asp?symbol=S/2008/772.

⁶² For example, see the following U.N. Group of Experts Reports: U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of the Congo," S/2008/772, para. 36, December 12, 2008; U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of the Congo," S/2009/253 para. 65, May 18, 2009; U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2010/596, para. 253, November 29, 2010; U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of the Congo," S/2011/345, para. 65, June 7, 2011; U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of the Congo," S/2012/348, para. 138, June 21, 2012; U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Laperts on the Democratic Republic of the Group of Experts on the Democratic Republic of the Group of Experts on the Democratic Republic of the Group of Experts on the Democratic Republic of the Group of Experts on the Democratic Republic of Congo," S/2012/348, para. 138, June 21, 2012; U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2014/42, para. 96, January 23, 2014; U. N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2015/19, para. 75, January 12, 2015 U.N. Security Council, "Midterm Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para. 75, January 12, 2015 U.N. Security Council, "Midterm Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para. 75, January 12, 2015 U.N. Security Council, "Midterm Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/797 para. 34, October 16, 2015.

⁶³ Since at least 2010, numerous Mai Mai rebels have shared in the FDLR's illegal charcoal profits, and helped protect charcoal production sites in Virunga, particularly Mai Mai La Fontaine. Mai Mai commander Jean Emmanuel Biriko, known as "Manoti," who was recently arrested for his role in kidnappings in Rutshuru, has been accused of high-level involvement in charcoal trafficking in southwestern Virunga. According to recent interviews with conservationist Bantu Lukambo and other Congolese activists who requested to remain anonymous, Mai Mai rebel groups are still involved, but their role is limited. "Mai Mai are in the park, but ... the FDLR runs the charcoal

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trade because they have more control of the park," Lukambo told Enough. "It's a space issue – to do charcoal trading, you have to be strong. Mai Mai are few, the FDLR is a whole army." Author interview with Bantu Lukambo, IDPE, Goma, July 10, 2015.

⁶⁴ In 2008, Ntaganda was reported to control several charcoal markets near the park, including Rupangu, where at the time, over 30,000 kilograms (66,000 pounds) of charcoal were produced daily, according to U.N. Security Council, "Report of the Group of Experts on the Democratic Republic of the Congo," S/2008/772, December 12, 2008, para. 36.

⁶⁵ Lukambo.

⁶⁶ Human Rights Watch, "DR Congo: Arrest Rebel Leader Wanted by ICC," (July 2015), available at https://www.hrw.org/news/2015/07/13/dr-congo-arrest-rebel-leader-wanted-icc

⁶⁷ Jason K. Stearns and Christoph Vogel, "The Landscape of Armed Groups in the Eastern Congo," (New York: Congo Research Group, December 2015), available at http://congoresearchgroup.org/wp-content/uploads/2015/11/The-Landscape-of-Armed-Groups-in-Eastern-Congo1.pdf

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⁶⁹ Kamundu; and see, U.S. Department of State, "Country Reports: Africa Overview," available at http://www.state.gov/j/ct/rls/crt/2012/209979.htm, and International Criminal Court, "Mudacumura Case" available at https://www.icc-cpi.int/drc/mudacumura.

⁷⁰ Stearns and Vogel.

⁷¹ Human Rights Watch, "You Will Be Punished," (December 2009), available at

https://www.hrw.org/report/2009/12/13/you-will-be-punished/attacks-civilians-eastern-congo.

⁷² Thomas Wilson, "Congo Says 14 People Killed by Rebels in East of Nation," Bloomberg, January 7, 2016, available at http://www.bloomberg.com/news/articles/2016-01-07/congo-says-14-people-killed-by-rebels-in-east-of-nation ⁷³ Reuters, "Three Red Cross Workers Kidnapped in Congo by Suspected Rebels," May 4, 2016, available at http://news.trust.org/item/20160504083915-yqdbh/?source=reOtherNews3 and The East African, "Rwanda: Kidnap of IRC Staff Triggers Fears of Hutu Rebels Regrouping," May 7, 2016, available at

http://www.theeastafrican.co.ke/news/Kidnap-of-IRC-staff-triggers-fears-of-Hutu-rebels-regrouping/-/2558/3193834/-/wg0t4gz/-/index.html.

⁷⁴ The larger estimate of 40,000 to 100,000 comes from the report by Human Rights Watch, "Rwanda: Observing the Rules of War?" (December 2001), available at https://www.hrw.org/reports/2001/rwanda2/Rwanda1201.pdf. The smaller 1,500-2,000 estimate, based on 2014 field interviews and MONUSCO, is found in the report by the Enough Project, "How to Dismantle a Deadly Militia: Seven Non-Military Tactics to Help End the FDLR Threat in Congo," (November 2014), available at http://www.enoughproject.org/files/FDLRReport-

HowToDismantleADeadlyMilitia-EnoughProject-Nov2014.pdf. MONUSCO estimated there were 1,500-2,000 FDLR fighters in 2014, while the Congolese government has claimed there are as few as 500 left, which several of Enough's sources said was inaccurate. In 2015, the U.N. estimated there were 1,400 active fighters, according to Elsa Buchanan, "DRC and United Nations 'failing to arrest' FDLR rebel leader Sylvestre Mudacumura," International Business Times, July 13, 2015, available at http://www.ibtimes.co.uk/drc-united-nations-failing-arrest-fdlr-rebel-leader-sylvestre-mudacumura-1510562

⁷⁵ International Criminal Court, "Situation in the Democratic Republic of the Congo," No. ICC-01/04, July 4, 2012, available at https://www.icc-cpi.int/drc/filings/doc1426669.pdf

⁷⁶ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads."

⁷⁷ Lukambo.

 ⁷⁸ Elsa Buchanan, "Battle for control of the DRC: Who are the Mai-Mai groups?" International Business Times, October 29, 2015, available at http://www.ibtimes.co.uk/battle-control-drc-who-are-mai-mai-groups-1526276
 ⁷⁹ According to a recent U.N. investigation, the North Kivu branch of the FDLR's parallel business structure, answers to Sylvestre Mudacumura who is indicted by the ICC but remains at large. Found at United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," pg. 2.
 ⁸⁰ Ibid.

⁸¹ Author interview with researcher who requested anonymity, Goma, July 19, 2015.

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⁸² United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads."

⁸³ See, The International Peace Information Service (IPIS) "Mineral supply chains and conflict links in eastern DRC: 5 years on," (May 2015), available at http://business-humanrights.org/sites/default/files/IPIS-conflict-mapping-report-April-2015.pdf pgs. 27-28; U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para. 80, January 12, 2015; and U.N. Security Council, "Midterm Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para. 80, January 12, 2015; and U.N. Security Council, "Midterm Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/797 para. 34, October 16, 2015, available at https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/292/17/PDF/N1529217.pdf?OpenElement.

⁸⁴ Author interview with a source who works in Virunga, Goma, July 10, 2015.

⁸⁵ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads."

⁸⁶ See, Tom Burgis, *The Looting Machine: Warlords, Oligarchs, Corporations, Smugglers, and the Theft of Africa's Wealth* (New York: Public Affairs, 2015), and Pierre Englebert, "Congo Blues: Scoring Kabila's Rule," Atlantic Council, May 11, 2016, available at: http://www.atlanticcouncil.org/publications/issue-briefs/congo-blues-scoring-kabila-s-rule.

⁸⁷ Researcher, July 19, 2015.

⁸⁸ U.N. Security Council, "Report of the Group of Experts on the Democratic Republic of the Congo," S/2008/772, December 12, 2008, para. 57.

⁸⁹ U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2010/596, para. 257, November 29, 2010, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/2010/596
 ⁹⁰ U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of Congo," S/2012/248, para, 100, hung 21, 2012.

S/2012/348, para. 100, June 21, 2012.

⁹¹ U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para. 77, January 12, 2015.

⁹² For information about the 803rd and 805th, Researcher. Source who works in Virunga who requested anonymity also conveyed information about the 803rd.

⁹³ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," and author interviews with a South-Kivubased conservationist activist, July 25, 2015, and a source who works in Virunga who requested anonymity, July 11. ⁹⁴ Source who works in Virunga, July 11.

95 Ibid.

⁹⁶ Author interview with a civil society advocate who investigates human rights violations related to natural resource exploitation in North Kivu and requested anonymity, Goma, July 10, 2015.

⁹⁷ Ibid.

⁹⁸ General (ret.) Sergio Mantilla, National Army of Colombia, speaking about the FARC and civilians during panel discussion, "Lessons for Africa from Colombia's Counter-Insurgency Experience," hosted by The Africa Center for Strategic Studies on March 7, 2016, Fort McNair, Washington, DC. Video available at:

https://www.youtube.com/watch?v=AY2T_kKHF2o. Peace talks between FARC and Colombian government representatives are ongoing, but the FARC still controls significant territory in Colombia and continues to operate gold and drug-trafficking networks, according to investigations by the Bogota-based organization, Peace and Reconciliation Foundation, available at www.pares.com.co.

⁹⁹ James Bargent, "Colombia: From Coca Cultivation to Gold Mining and Back," Insight Crime, September 22, 2015, available at http://www.insightcrime.org/news-analysis/colombia-bajo-cauca-region-from-illicit-coca-cultivation-gold-mining-back-again.

¹⁰⁰ Civil society advocate, Goma, July 10, 2015.

¹⁰¹ Ibid.

¹⁰² Author interview with a source who works in Virunga and requested anonymity, Goma, July 11, 2015.

¹⁰³ Author interviews with a civil society advocate; and Malonga, July 2015.

¹⁰⁴ According to a criminal file related to the case, Kaseka, et al., which included charges related to the 2007 murders of several Virunga gorillas, in 1999, illegal charcoal trafficking and taxation was logged by perpetrators in charge of networks in certain parts of the park, with lists of names, dates, and how much was paid when individuals entered or exited Virunga near charcoal production hubs.—Enough staff interview with an ICCN official,

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Goma, July 13, 2015. In 2010, the Group of Experts reported that Congolese army Lieutenant Colonel Fiston of the 502nd brigade was selling cards to hundreds of individuals a day for access to Virunga. "Each card costs \$30 and is valid for one entry into the park. At the end of their work, they must provide [Congolese army units] with two sacks of charcoal before exiting the park," the Group of Experts reported.—U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2010/596, para 258. Currently, according to Enough's interviews with researchers investigating the trade, some civilians are issued tickets or receipts when they pay to enter or leave the park.

¹⁰⁵UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015." para. 48, pg. 13

¹⁰⁶ Author interviews with Malonga; civil society advocate, Goma, July 10, 2015; and U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2008/773, para. 113, December 12, 2008, available at: https://documents-dds-

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¹⁰⁷ Virunga ranger.

¹⁰⁸ Dilis, Goma, July 11, 2015.

¹⁰⁹ Center for Research on the Environment, Democracy and Human Rights, available at http://www.creddho-rdc.org/index.php/en/

¹¹⁰ Malonga, and see World Health Organization, "Household Air Pollution and Health," available at http://www.who.int/mediacentre/factsheets/fs292/en/.

¹¹¹ Motivated in part by this commercial advantage, the FDLR has set up several major camps in Virunga's southwestern sector, including Kinyamuyagha, Kapopi, Kahumiro, Rwehe, Tongo, and Malianga, according to Lukambo.

¹¹² Ruiz.

¹¹³ World Wildlife Fund for Nature, "The Economic Value of Virunga National Park," (July 2013), available at http://assets.worldwildlife.org/publications/611/files/original/The_Economic_Value_of_Virunga_National_Park_L R.pdf?1375288396

¹¹⁴ Author interview with a source who works for a private exporter, Goma, July 12, 2015.

¹¹⁵ Ibid; and author interview with U.N. official who requested anonymity, Goma, July 13. More research is needed to identify the geographic reach of illegal charcoal exports from Congo.

¹¹⁶ Traders in Goma told Enough they will typically port a truck up to Kitchanga in a group of five, load the truck up with 100-200 bags of charcoal, and then take public transport mini buses back to Goma while another set of traders drives the packed truck back down.

¹¹⁷ Observations by author in Kitchanga, Burungu, Karenga, Sake, and Goma; and interviews with Dilis and Lukambo.

¹¹⁸ Dilis and a person who requested to remain anonymous due to security concerns, July 11. And see, U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2008/773, para. 113 (b).

¹¹⁹ Virunga ranger.

¹²⁰ Malonga; and see, U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para. 76 and U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2010/596, para. 257.

¹²¹ Kamundu, Malonga and author interview with Cingoro Mattieu, Goma, July 13, 2015.

¹²² Kamundu.

¹²³ Civil society advocate.

¹²⁴ Lukambo, author interview with researcher, Goma, July 2015 and Enough staff observations on Kitchanga-Sake road in July 2015. Along that stretch, the FDLR have strongholds, for example in Ihula, north of Kitchanga, near Kalembe in Walikale, according to residents in Kitchanga.

¹²⁵ Author interview with administrative head of Kitchanga town, in Kitchanga, July 16, 2015.
 ¹²⁶ Lukambo.

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¹²⁷ Lukambo; Dilis; UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015," para. 48, 49, 51.
¹²⁸ Malonga.

¹²⁹ Ibid.

¹³⁰ Ibid.

¹³¹ Author interview with a civil society advocate who investigates human rights violations related to natural resource exploitation in North Kivu and requested anonymity, Goma, July 10, 201; Malonga; Lukambo.
 ¹³² Malonga.

¹³³ U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2015/19, para 76.

¹³⁴ Malonga.

¹³⁵ Ibid.

¹³⁶ Ibid.

¹³⁷ Human Rights Watch, "You Will Be Punished," (December 13, 2009), Section III: Human rights abuses by FDLR and allies, available at: https://www.hrw.org/report/2009/12/13/you-will-be-punished/attacks-civilians-eastern-congo; https://www.hrw.org/news/2014/06/10/democratic-republic-congo-ending-impunity-sexual-violence; https://www.un.org/sc/suborg/en/sanctions/1533/materials/summaries/entity/forces-democratiques-de-liberation-du-rwanda-(fdlr)

¹³⁸ Malonga.

¹³⁹ Ibid.

¹⁴⁰ A 2016 press release by Global Witness said that in 2014 at least 115 forest defenders were killed, (Global Witness, "New Data on the Murder Rate of Environmental and Land Activists in Honduras, the highest in the World," Press Release, March 4, 2016, available at https://www.globalwitness.org/en/press-releases/global-witness-releases-new-data-murder-rate-environmental-and-land-activists-honduras-highest-world/), and a 2014 Global Witness study said in 2013 92 were killed, and in 2012, 142 were killed (Global Witness, "Deadly Environment: The Dramatic Rise in Killings of Environmental and Land Defenders," (April 2014), available at https://www.globalwitness.org/en/campaigns/environmental-activists/deadly-environment/. Available data is imperfect, however, since many killings go unreported. According to National Geographic, this is particularly true in Congo where reliable reporting is scarce, implying the threats and assassinations could be even more common than the Global Witness study revealed. See, Rachel Nuwer, "Illegal Logging Has Become More Violent Than Ever," National Geographic, February 3, 2016, available at http://news.nationalgeographic.com/2016/02/160202-Illegal-loggers-murders-violence-defending-

land/?utm_source=Twitter&utm_medium=Social&utm_content=link_twngm20160203illegal-logging-violence&utm_campaign=Content&sf20279636=1

¹⁴¹ The Alexander Soros Foundation gives an annual award to activists working at the nexus of environmentalism and human rights. See, Alexander Soros Foundation, "Alexander Soros Foundation Honors Two Activists For Risking Their lives to Protect The Democratic Republic of Congo's Virunga National Park," Press Release, October, 27, 2015, available at http://alexsoros.com/news/alphonse-muhindo-bantu-lukumbo/

¹⁴² Lukambo.

¹⁴³ Balagizi, email exchange with author, July 23, 2015.

¹⁴⁴ Author interview with Congolese lawyer who requested anonymity, Goma, July 13, 2015.

¹⁴⁵ De Merode, phone interview with the author.

¹⁴⁶ News of Rwanda, "Rwanda: FDLR Generating U.S. \$71 Million From Businesses With Wives of DRC Officers," August 28, 2014, distributed by AllAfrica and available at http://allafrica.com/stories/201408290133.html

¹⁴⁷ Dilis, July 11; and a source who works in Virunga, July 10, 2015.

¹⁴⁸ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads."

¹⁴⁹ Author interview with UN official, who requested anonymity, July 21.

¹⁵⁰ United States Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO), "JMAC NTF: FDLR Incorporated? The movement's business model at a crossroads," pg. 3

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¹⁵¹ Kim Chaix, email exchange with author March 2016.

¹⁵² Ibid; and author interview with a charcoal trader in Goma who requested anonymity, Goma, July 2015.

¹⁵³ Author interview with local civil society representative who prefers to remain anonymous, Goma, July 10, 2015. Enough's interviews revealed that the price of illegal charcoal fluctuates with military operations against the FDLR. "When operations against FDLR [in January 2015] were publicized, the price of [high-quality] charcoal went from \$30 to \$45 per bag" a Goma-based activist told Enough. "That's evidence of FDLR control of the trade," he added. ¹⁵⁴ Depending on the transaction, the taxation and extortion associated with the trade could increase or decrease revenue streams to the FDLR. For example, taxation on charcoal by the army could cut into the FDLR's profits on the sale of the material, but FDLR's extortion of civilians for cash related to access to the park and civilian-run

production sites could add to the profits FDLR makes on the strict sale of materials.

¹⁵⁵ Author interview with a civil society advocate who investigates human rights violations related to natural resource exploitation in North Kivu and requested anonymity, Goma, July 10, 2015; Malonga; Lukambo; source who works in Virunga; researcher; Congolese lawyer who requested anonymity.

¹⁵⁶ Charcoal trader in Goma.

¹⁵⁷ Ibid.

¹⁵⁸ Researcher; Virunga ranger; and a source who works in Virunga, July 10, 2015.

¹⁵⁹ UN official, July 13, 2015; researcher; Rosenberg. And in 2009, the Group of Experts noted it "has researched extensively the internal and external support networks of FDLR. In particular, the Group has identified residual but substantive links between FARDC and FDLR, focusing on FDLR's regional and international support networks. The Group has also researched the extent to which FDLR leaders in the diaspora located in North America, Europe and Africa are involved and complicit in the day-to-day

http://www.un.org/ga/search/view_doc.asp?symbol=S/2009/603operational command of FDLR" found in U.N. Security Council, "Final report on the Group of Experts on the Democratic Republic of the Congo," S/2009/603, para. 21, November 23, 2009, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/2009/603. ¹⁶⁰ Ruiz.

¹⁶¹ U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2011/738, para. 29, 72, 643 (d) and annex 80 on pg. 392, December 2, 2011 available at

http://www.un.org/ga/search/view_doc.asp?symbol=S/2011/738; U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of the Congo," S/2012/843, para. 146 and annex 46 A1(d) available at http://www.un.org/ga/search/view_doc.asp?symbol=S/2012/843; Human Rights Watch, "You Will Be Punished," (December 2009), available at https://www.hrw.org/report/2009/12/13/you-will-be-punished/attacks-civilians-eastern-congo; Human Rights Watch, "DR Congo: Brutal Rapes by Rebels and Army, Over 180 Civilians Killed, Most by Rwandan Rebels," (April 2009), available at https://www.hrw.org/news/2009/04/08/dr-congo-brutal-rapes-rebels-and-army, and Human Rights Watch, "DR Congo: Arrest Rebel Leader Wanted by ICC," (July 2015), available at https://www.hrw.org/news/2015/07/13/dr-congo-arrest-rebel-leader-wanted-icc.

¹⁶² International Criminal Court, "Situation in the Democratic Republic of the Congo: The Prosecutor v. Sylvestre Mudacumura," Case Information Sheet, February 24, 2016, available at https://www.icc-cpi.int/iccdocs/PIDS/publications/MudacumuraEng.pdf

¹⁶³ Author interview with a civil society advocate who investigates human rights violations related to natural resource exploitation in North Kivu and requested anonymity, Goma, July 10, 2015.

¹⁶⁴ U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2010/596, para. 254, November 29, 2010.

¹⁶⁵ Dilis, July 16, 2015.

166 Ibid.

¹⁶⁷ NASA Earth Observatory, "Deforestation in the Democratic Republic of the Congo," September 26, 2012, available at http://earthobservatory.nasa.gov/IOTD/view.php?id=79276

¹⁶⁸ UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015," para. 54.

¹⁶⁹ Author interview with Lukambo, Goma, July, 10, 2015.

¹⁷⁰ Enrico Pironio, comments as panelist on "Combating Wildlife Poaching and Insecurity in Africa," Johns Hopkins

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School for Advanced International Studies, Washington, DC, July 15, 2015.

¹⁷¹ Kamundu.

¹⁷² NASA Earth Observatory, "Deforestation in the Democratic Republic of the Congo," September 26, 2012.
 ¹⁷³ Kamundu.

¹⁷⁴ Rebecca Lindsey, Tropical Deforestation,' March 30, 2007, NASA Earth Observatory, available at http://earthobservatory.nasa.gov/Features/Deforestation/deforestation_update2.php

¹⁷⁵ Author interview with a civil society advocate who investigates human rights violations related to natural resource exploitation in North Kivu and requested anonymity, Goma, July 10, 2015.

¹⁷⁶ De Merode.

¹⁷⁷ Source who works in Virunga.

¹⁷⁸ Kamundu.

¹⁷⁹ Lukambo; and author interview with Congolese lawyer based in Goma who requested anonymity, July 12, 2015.
 ¹⁸⁰ See, Virunga Alliance, https://virunga.org/virunga-alliance/ and The Howard G. Buffett Foundation, "Congo's Mountain Gorilla Park Announces Partnership For Economic Revival In War-Torn Eastern Province," Press Release, October 8, 2013, available at http://www.prnewswire.co.uk/news-releases/congos-mountain-gorilla-park-announces-partnership-for-economic-revival-in-war-torn-eastern-province-226855991.html

¹⁸¹ Funders like the Howard G. Buffett Foundation (http://www.thehowardgbuffettfoundation.org/) and the 11th Hour Project (http://www.11thhourproject.org/) have committed millions of dollars to improving the ranger forces, creating jobs, and building the micro-dams.

¹⁸² Peter Fairley, "Power Potential and Pitfalls on the Congo: Developing Africa's Cleanest and Largest Hydropower Opportunity," Earthzine, March 8, 2010, available at http://earthzine.org/2010/03/08/power-potential-and-pitfalls-on-the-congo-developing-africas-cleanest-and-largest-hydropower-opportunity/

¹⁸³ Virunga Alliance, "Virunga Alliance: Stability Through Sustainable Development in Eastern Congo," PowerPoint slide deck presentation, No Date, available at https://virunga.org/wp-content/uploads/2014/11/VA_ENG-BOOKLET_PRINT.pdf; Reuters, "Congo opens hydroelectric plant in east to jumpstart economy," December 16, 2015, available at http://af.reuters.com/article/commoditiesNews/idAFL8N14526520151216. The Virunga Alliance, through donations from the Howard G. Buffett Foundation, plan to expand construction within the park. The Buffet Foundation has agreed to give the hydro project \$39 million to see to the completion of two more plants in North Kivu and the Virunga Alliance is also seeking to acquire a further \$166 million from investors to build an overall total of eight hydro-electric plants.

¹⁸⁴ Virunga National Park, "Virunga's First Hydroelectric Plant Online!," available at

https://virunga.org/archives/virungas-first-hydroelectric-plant-online/

¹⁸⁵ Kim Lewis, "Virunga National Park Offers Economic Boost to Eastern Congo," Voice of America, October 8, 2013, available at http://www.voanews.com/content/drc-park-virunga-gorilla-electricity-kivu-conflict/1765378.html
 ¹⁸⁶ In 2015 OPIC financed an \$18.45 million hydro-electric project in neighboring Uganda. See "Information Summary for the Public," available at https://www.opic.gov/sites/default/files/files/butama-summary-info.pdf.
 ¹⁸⁷ U.S. Trade and Development Agency (USTDA), "Our Mission," available at

https://www.ustda.gov/about/mission. The USTDA has established helpful models for supporting small hydroelectric initiatives in the Great Lakes Region and should support similar projects in Congo. See, "Rwanda: Multiple Small Hydropower Projects" USTDA, (last accessed May 2016), available at

https://www.ustda.gov/business-opportunities/market-opportunities/rwanda-multiple-small-hydropower-projects.

¹⁸⁸ Lukambo.

¹⁸⁹ Ibid.

¹⁹⁰ The first set of microhydro dams managed by Virunga Alliance was launched in 2010. They currently provide 400kw to 3,600 homes. The next round of dams is underway, including 1.1MW, 12.6MW and an additional 80MW in "Phase Three" (2016-2020). These initiatives are also expected to create roughly 60,000 new jobs. (Virunga Alliance, "Virunga National Park: Stability through Sustainable Development in Eastern Congo." Virunga Alliance. ¹⁹¹ A source who works in Virunga, July 10, 2015.

¹⁹² U.N. Security Council, "Interim Report of the Group of Experts on the Democratic Republic of the Congo,"
 S/2009/253 para. 66, May 18, 2009, available at http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-

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4E9C-8CD3-CF6E4FF96FF9%7D/DRC%20S2009253.pdf.

¹⁹³ According to Doudi, 45,000 hectares of plantations could cover the cooking fuel needs for the entirety of Goma's 1.2 million population. WWF currently runs 9,000 hectares of eco-charcoal plantations. Though a good interim solution, WWF and collaborators should take care in scaling up plantations, and conduct thorough environmental impact assessments, given the damage eucalyptus can cause to water sources and ecosystems. For discussions on the various ecological and environmental impacts of eucalyptus plantations, see John A. Stanturf, et al., "Eucalyptus beyond Its Native Range: Environmental Issues in Exotic Bioenergy Plantations," *International Journal of Forestry Research*, (2013):5, available at http://www.hindawi.com/journals/ijfr/2013/463030/.

S. Shyam Sunder, "The Ecological, Economic, and Social Effects of *Eucalyptus*," Food and Agriculture Organization of the United Nations Corporate Document Repository, available at:

http://www.fao.org/docrep/005/ac777e/ac777e08.htm#TopOfPage; Komaza, "Environmental Impact," available http://www.komaza.org/our-approach/environmental-impact.php)last accessed May 2016)

¹⁹⁴ Traditional techniques for producing charcoal, including those used by FDLR, waste up to 70 percent of the energy in the wood. With more advanced fixed-location techniques, charcoal production could reduce the volume of charcoal needed by each household.

¹⁹⁵ For more information on the United States' work with GACC, see U.S. Department of State, The United States' Commitment to the Global Alliance for Clean Cookstoves: Year Five Progress Report," Fact Sheet, September 24, 2015, available at http://www.state.gov/r/pa/prs/ps/2015/09/247240.htm. The U.S. agencies involved in the 2010-2015 initiative should pursue opportunities to renew funding for these projects and expand to eastern Congo. USAID also supports Central African Regional Program for the Environment, which has supported the use of clean cook stoves. See, Central African Regional Program for the Environment (CARPE) Summary of the Partners Meeting, Washington, DC January 27-28, 2014," available at

http://carpe.umd.edu/resources/Meeting_pres/CARPE_Jan27-28_Summary_03142014.pdf and Central Africa Regional Program for the Environment, "Home Page," available at http://carpe.umd.edu/.

¹⁹⁶ Technology Exchange Lab, "The Inyenyeri Fuel and Stove System," available at

http://www.techxlab.org/solutions/inyenyeri-the-fuel-and-stove-system (last accessed May 2016).

¹⁹⁷ Telephone meeting with I-Dev's Nairobi staff, March 2016.

¹⁹⁸ As part of the United States' Commitment to the Global Alliance for Clean Cookstoves, USAID, NIH, CDC, and OPIC all have funding through 2020 for the implementation of this initiative. As they develop their strategies for the next four years, those agencies should explore the potential for viable initiatives in eastern Congo.

¹⁹⁹ Author interview with UN Official, Goma, July 21, 2015.

²⁰⁰ ICCN official who requested anonymity, Goma, July 11.

²⁰¹ Ibid and Mattieu.

²⁰² ICCN official who requested anonymity, Goma, July 11.

²⁰³ Author interview with an ICCN official who requested anonymity, Goma, July 13, 2015.

²⁰⁴ Rosenberg.

²⁰⁵ See a similar study by the UNODC on wildlife trafficking and forest crime in Botswana, UNODC "ICCWC Toolkit Report Presentation in Botswana," available at http://www.unodc.org/southernafrica/en/toc.html and the UNODC's wildlife trafficking toolkit, UNODC "Wildlife and Forest Crime Analytic Toolkit," (2012) available at http://www.unodc.org/documents/Wildlife/Toolkit_e.pdf

²⁰⁶ Mattieu.

²⁰⁷ Author interview with De Merode by telephone, February 25, 2016.

208 Ibid.

²⁰⁹ U.N. Security Council, "Final Report of the Group of Experts on the Democratic Republic of Congo," S/2010/596, para. 257.

²¹⁰ Dilis, July 11.

²¹¹ Dilis and de Merode.

²¹² Author interview with a Virunga ranger who requested anonymity, Goma, July 10, 2015; Dilis; Lukambo.

²¹³ Dilis, July 11.

²¹⁴ Author interview with Dieudonne Kongolo Illunga, Goma, July 13, 2015; two Congolese lawyers in separate interviews who each requested anonymity.

²¹⁵ Two anonymous Congolese lawyers.

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²¹⁶ Mark Jenkins, "Who Murdered the Virunga Gorillas?" National Geographic, July 2008, available at http://ngm.nationalgeographic.com/2008/07/virunga/jenkins-text

²¹⁷ Paulin Ngobobo, "Massacre of Congo's Gorillas," The Guardian, September 1, 2007, available at http://www.theguardian.com/environment/2007/sep/01/conservation and Daniel Pepper, "The Story Behind the Killings of Congo's Rare Mountain Gorillas," U.S. News and World Report, February 6, 2008, available at http://www.usnews.com/news/world/articles/2008/02/06/the-story-behind-the-killings-of-congos-rare-mountain-gorillas

²¹⁸ The information and analysis of the case is based on Enough's interviews with two Congolese conservationists, one who helped investigate the case, as well as Enough staff's review of the physical copy of the final verdict in the case in September 2015 in Goma's criminal tribunal. The judgement was issued on September 27, 2008, and the charges were for malicious destruction and gorilla massacres. According to those records, Mashagiro held the position of Director of ICCN / North Kivu at the time of the commission of crimes charged, and the defendants charged were five of Mashagiro's subordinates (Karonkano Baseka, Garafurura Batasema, Budo Habimana, Ngayabarezi Nazigaruye, and Tegerinisi Semajeri). According to interviews, Mashagiro was never tried or convicted.

²¹⁹ Congolese lawyer who requested anonymity.

²²⁰ Daniel Pepper, "The Story Behind the Killings of Congo's Rare Mountain Gorillas."

²²¹ Enough staff review of a file in the criminal case against five individuals for the massacre of gorillas in 2007 and other crimes, Goma, July 2015.

²²² Enough staff review of a file in the dossier, September 2015.

²²³ Verdict in the case as viewed by Enough staff, September 2015.

²²⁴ Author interviews with a Congolese lawyer who requested anonymity, July 13; and a South-Kivu-based conservation activist, July 25, 2015. See also, "Mark Jenkins, "Who Murdered the Virunga Gorillas?" National Geographic, July 2008, available at http://ngm.nationalgeographic.com/2008/07/virunga/jenkins-text.

²²⁵ Mark Jenkins, "Who Murdered the Virunga Gorillas?" National Geographic, July 2008.

²²⁶ Author interview with Honoré Mashagiro, Goma, July 13, 2015.

227 Ibid.

²²⁸ Congolese lawyer who requested anonymity.

²²⁹ UN official, Goma, July 13, 2015.

²³⁰ Ibid.

²³¹ Kitchanga administration head; Illunga; Lukambo; Congolese lawyer who requested anonymity, July 12, 2015.

²³² Author interview with a Congolese lawyer based in Goma who requested anonymity, Goma, July 12, 2015.

²³³ Author interview with a source who works in Virunga and requested anonymity, Goma, July 11, 2015.

²³⁴ Pillage related to widespread natural resource exploitation has scarcely been prosecuted in modern war crimes trials, however, due in part to a rift between lawyers and investigators prosecuting atrocity crimes and experts in tracking illicit financial flows. For more, see Holly Dranginis, "Grand Theft Global: Prosecuting the War Crime of Pillage in the Democratic Republic of the Congo," (Washington: Enough Project, January, 2015), available at http://www.enoughproject.org/files/GrandTheftGlobal-PillageReport-Dranginis-Enough-Jan2015.pdf
²³⁵ Article 77, "Rome Statute of the International Criminal Court," found at Prevent Genocide International, available at http://www.preventgenocide.org/law/icc/statute/part-c.htm.

²³⁶ Illunga.

²³⁷ Lukambo.

²³⁸ Mattieu.

²³⁹ UN official, Goma, July 13, 2015.

²⁴⁰ Virunga ranger.

²⁴¹ Ruiz in an email to the author; Enough Project interview with MONUSCO DDR/RR staff, Goma, January 21, 2016.

²⁴² Kitchanga head of administration, interview with Enough in Kitchanga, July 16.

²⁴³ Kamundu.

²⁴⁴ Kitchanga head of administration, interview with Enough in Kitchanga, July 16.

²⁴⁵ UN official, Goma, July 13, 2015.

²⁴⁶ UN official, July 21.

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²⁵² UNEP-MONUSCO-OSESG, "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo. Final report. April 15, 2015, "2015, para. 48.

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²⁴⁷ Author interview with expert on Congo's armed conflict, Goma, July 2015.

²⁴⁸ Malonga.

²⁴⁹ Lukambo.

²⁵⁰ Lukambo, in an email to the author, April 18, 2016.

²⁵¹ De Merode in interview with author.