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Chapter 10

Organized Forest Crimes

Charcoal and Timber Trade in the Democratic Republic of the Congo

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Introduction

Approximately 90 percent of the primary forest cover on the globe is gone, largely due to extensive deforestation practices (Nellemann and INTERPOL 2012). This could have further irreversible results given that all human and non-human inhabitants rely on the existence of forests: forests generate water, biodiversity, and even help mitigate climate change through their natural binding of carbon dioxide (Boekhout van Solinge 2014). Against this background, deforestation was one of the major problems addressed at the Glasgow 2021 Climate Change Conference which aimed to accelerate climate action toward limiting global temperature rise to 1.5 degrees.

There have been myriad initiatives implemented with the aim to reduce deforestation practices and promote sustainable trade in timber. For example, REDD+, a United Nations-led initiative in the forest sector, aims to reduce emissions, and some endangered tree species are included in the appendices of the Convention of International Trade in Endangered Species in Wild Flora and Fauna (CITES). Despite several initiatives, deforestation rates remain high, partly driven by illegal logging activities by criminal organizations operating independently or in collaboration with legitimate timber companies. Globally, 15–30 percent of all forestry is illegally obtained; in tropical countries, the rate can even rise to 50–90 percent (Kleinschmit et al. 2016).

The terms "illegal logging" and "illegal timber" incorporate various illicit activities along the supply chain, ranging from illegal harvesting outside concessions or inside nature reserves to illegal trade via tax avoidance or forged certificates (Bisschop 2012).[1] The value of worldwide annual illegal logging and trade is estimated between USD 51 and 152 billion (Nellemann and INTERPOL 2012; Boekhout van Solinge et al. 2016; UNODC 2016). The profitability of illegal logging activities increasingly attracts organized criminal groups of different calibers. These groups range from militias working hand-in-hand with corrupt state officials to informal traders to business entities (Boekhout van Solinge 2014; Boekhout van Solinge et al. 2016). The involvement of armed groups in organized forest crimes is notable because it prolongs

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the existence of alternative forms of governance which feed off predatory and unsustainable activities (UNODC 2016).

Large-scale criminal forest economies run by armed groups generate multiple threats to legitimate governments, domestic and international stability, and harm to the environment (van Uhm 2022). In the Congo Basin and the Amazon, illegal logging devastates some of the world's last rainforests, contributing to carbon release and global warming and resulting in species loss. Because armed groups obtain multiple benefits by sponsoring and regulating illicit economies, they create a climate that disincentivizes legitimate private businesses and foreign investment, leaving local communities with very few avenues to legal income (World Bank 2011).

To illustrate the involvement of criminal organizations and the complex relationship between criminal and legitimate logging businesses, this chapter focuses on the case of the Democratic Republic of the Congo (DCR). The DCR lost the second-largest area of tropical primary forest of any country (after Brazil) in 2018, and its deforestation rates continue to be of great concern. It is partly due to the interactions between armed groups and timber and charcoal traders linked to illegal deforestation that national and international responses have gained little traction to protect the Congo rainforest.

Organized Forest Crime

Organized forest crime is a broad term that covers the involvement of organized crime networks in logging activities – whether as a resource or for forest conversion. It is generally understood as

> the illegal exploitation of forest and forest products/resources by organized criminal groups or criminal networks that ensure their activities through the use of threat or force and through corruption of public officials in order to maintain a degree of immunity from law enforcement.
>
> (Boekhout van Solinge 2014, 86)

Organized forest crimes can occur at every point in the supply chain – from harvest and transportation to processing and sale. Organized criminal groups, including militias and armed groups, coordinate the extraction, smuggling, laundering, and trading of timber and charcoal (Boekhout van Solinge 2010; Stewart 2014; INTERPOL and World Bank 2009; UNODC 2016), while some segments of the private industry are involved in concession violations, paperwork fraud, and the laundering of illegal timber into certified timber (FAO 2020; Bisschop 2015).

Organized forest crime groups are often linked to high levels of corruption along the supply chain. Corruption may involve low- and high-level officials, making it challenging to pre-empt, detect, and investigate organized forest crime (Cao 2017). Often a large variety of players is involved, ranging from public officials and army officers to armed rebel groups and legal business entrepreneurs.[2]

In addition, organized forest crime networks are linked to high levels of violence and poverty. Boekhout van Solinge (2010) describes how violent timber networks in the Brazilian Amazon, known as the "timber mafia," have been active for years. Colluding loggers and large landholders use gunmen to threaten or even kill opposition from local (indigenous) communities (CPT 2015; Boekhout van Solinge et al. 2016). Global Witness identified the highest prevalence and incidence of violence against forest residents and other environmental protectors in the Brazilian Amazon (Global Witness 2014; 2016). Meanwhile, the DRC has the highest victims among law enforcement and rangers, particularly where rangers protect forests and wildlife against illegal logging for charcoal and timber (Boekhout van Solinge 2008; Nellemann and INTERPOL 2012; UNODC 2016).

Influenced by socioeconomic, political, and ecological changes, criminal organizations that operate in other criminal markets may also "diversify" into organized forest crimes (van Uhm and Nijman 2020; van Uhm 2020a). In recent years, money launderers and drug and arms traffickers have become involved in forest crimes (Boekhout van Solinge 2008; EIA and Telapak 2005; INTERPOL and World Bank 2009). For example, a study in the jungles of Darién in Colombia found that the Gulf Clan, a notorious drug cartel, has become increasingly involved in deforestation and timber trade (van Uhm 2020b). Boekhout van Solinge (2014) found that illegal forest exploitation was closely related to other illegal activities in tropical forests in Brazil, the DRC, and Indonesia. For instance, the proceeds from the sale of timber were used to buy weapons in West and Central Africa, especially during armed conflicts in the Congo, Liberia, and Sierra Leone.

Legal-Illegal Interfaces of Organized Forest Crime

The social organization of organized forest crimes is characterized by various legal-illegal interfaces, the role of trade hubs, and the facilitating role of transit countries. Several major timber businesses in the international timber trade do not exercise necessary due diligence for their suppliers (Bisschop 2015). Indeed, legitimate companies have featured in prosecutions related to trading in conflict timber, breach of export quotas, and tax fraud (EIA 2019).

The complicity of legitimate businesses in illegal logging and deforestation – willful or not – is noteworthy. These companies have access to logging concessions, which can be abused by criminal organizations, and facilitate the laundering of timber. This means that illegally sourced wood can be mixed with legitimately sourced wood, or illegal timber is exported to consumer markets with falsified permits and certificates (Nellemann and INTERPOL 2012). According to Boekhout van Solinge et al. (2016), in some countries "timber traders have gained so much wealth that they are called timber barons or timber tycoons" (87). These are extremely powerful individuals with control over large chunks of forests.

It is worth noting that the logging sector provides jobs and income to rural workers and villagers. These activities are often carried out with or without logging permits, by individual small-scale millers (World Bank 2015). For example, charcoal in the eastern region of the DRC provides an essential energy source for cooking and household heating. Trees are cut down inside the borders of protected areas to burn in special ovens to produce charcoal. It is this crucial livelihood function that renders the illegal trade acceptable in the eyes of local communities and validates it as a legitimate business pursuit (Marijnen and Verweijen 2018).

Organized Forest Crime in the DRC

Historical, Socioeconomic, and Ecological Background

In the Eastern region of the DRC, bordering Rwanda and Uganda, is one of the richest regions of the world in biodiversity and natural resources. Yet, it is one of the poorest in terms of wealth, safety, and peace. It is home to a large pool of endangered species living in a variety of natural environments and climates, among them Earth's last remaining mountain gorillas (Andersen, 2018; de Merode et al. 2009). Moreover, the region is rich in natural resources, including coltan, cobalt, gold, and tropical timber. Through out history, the world demand for these natural resources has triggered power struggles and brutal violence which linger today, causing colossal human rights violations and environmental harms (Milburn 2015; van Uhm 2022).

The first years after the declaration of independence from Belgium in 1960 were characterized by violence, political disputes, and international interference (Gerard 2020). In 1965, this largely settled when Joseph Mobutu became the dictatorial president of the DRC after a successful coup, a position he held until 1997 (Vanthemsche 2012).[3] However, from the mid-1970s onwards, his dictatorship started to crumble when the resource prices on the world market tumbled and (foreign) investment was lacking (Hoffmann et al. 2016). The country became bankrupt, which resulted in the expansion of informal governing networks, with ethnic and interest-based groups challenging the state's monopoly on the legitimate use of force. It became an ideal breeding ground for armed groups that began working as protectors for local interest groups, filling the power vacuum opened by economic and political insecurity (Marijnen 2018). By the end of the 1980s, when Mobutu announced a multiparty democracy and competition increased, armed groups were more intensively deployed as protective forces for the promotion of the interests of local politicians (Vlassenroot and Raeymaekers 2008). The political competition that followed was especially noticeable in the Eastern DRC, where conflict over territory, identity, and local authority erupted (Verweijen 2016).

A highly impactful and horrifying event for the eastern region was the genocide in Rwanda in 1994, resulting in millions of Hutu refugees[4] fleeing over the border into the DRC. The region became the target of large-scale deforestation,

devastating pollution, and heavy poaching for bushmeat by the many refugees that settled in refugee camps in the region (Biswas and Tortajada-Quiroz 1996; Draulans and Van Krunkelsveen 2002). The period that followed was marked by the First Congo War (1996–1997), in which Mobutu was overthrown, and the Second Congo War (1998–2003), which ended with a peace agreement[5] generating relative stability on the national level (Verweijen 2016).

However, in the Eastern Congo, conflict, violence, and a high level of poverty endure today. The dynamics in the region are very complex, in which armed groups, many of which emerged during the Congo wars, are still violently present. The armed groups are highly involved in illegal deforestation activities, from which they generate revenue and establish a certain level of legitimacy in the local communities. Illicit profits from deforestation practices for wood and charcoal fund these armed groups. One of the most notable of them, in the context of organized forest crimes, is the Democratic Forces for the Liberation of Rwanda (Forces démocratiques de libération du Rwanda – FDLR). It was established in 2000 by former members of the *Interahamwe* Hutus after the Rwandan genocide in 1994. They have far-reaching control of the illegal charcoal business in various areas in the Eastern DRC (Verweijen et al. 2020).

Other noteworthy armed groups are referred to as Mai-Mai groups, which is an umbrella term for community-based self-defense militia groups that aim to uphold control over the local territory against other armed groups and outsiders (Hoffmann et al. 2016). They are usually organized on an ethnic basis and engage in struggles around the protection of their communities and their interests (e.g., land, natural resources, etc.) (Mathys 2017). They represent a variety of organizations with varying sizes and capacities. Moreover, they have a local focus and are often close to the local population; almost everyone in the Eastern DRC has a family member who is part of a Mai-Mai group (Verweijen 2017). It is estimated there are around 22 separate Mai-Mai factions with a combined strength of about 8,000–12,000 troops (Mulunda Guy 2014).[6] They are involved in the deforestation of tropical timber in the Eastern DRC by "taxing" illegal logging, collaborating with timber companies, and controlling deforestation in the territory under their control.

In the Eastern DRC there are various parks, among them Virunga National Park (Parc National des Virunga) – a UNESCO World Heritage Site internationally recognized for its exceptional wildlife and habitats, such as the famous endangered mountain gorillas. The Park has been the object of attraction for many armed groups that vie for control over natural resources. The Parks have been subject to large-scale deforestation activities for the illegal timber trade and charcoal production (d'Huart et al. 2009).[7] Yet, in addition to the armed groups that depend on forest crimes, through deforestation for charcoal or timber, extremely high levels of poverty in the Eastern region of the DRC drive local communities into illegal practices inside the borders of Virunga as they attempt to provide for their livelihoods (e.g., Bakole 2021; Hochleithner 2021). To respond to these threats, militarized strategies to protect Virunga

National Park have often resulted in violent clashes between armed groups and park guards. The violence that the park authority uses against loggers and charcoal traders has also caused considerable grievances among the local communities (Verweijen et al. 2020).

"The Makala Highway": Logging for Charcoal

The DRC has one of the lowest rates of electrification in the world, and the underprivileged local communities often have no choice but to rely largely on charcoal to cook their daily meals. An estimated 92 percent of the charcoal consumed in the North Kivu Province is illegally sourced inside Virunga (Dranginis 2016). What locals call *makala* (Swahili for "charcoal") is made by felling trees and slowly burning the wood in covered ovens called *kilns* (Verweijen and Marijnen 2018). It is generally considered one of the main driving forces of deforestation in Virunga. It is estimated that more than 1,300,000 sacks of charcoal are produced illegally off the trees of the Virunga National Park each year (Languy et al. 2009). Not only is the commodity itself considered a basic need but also the lack of livelihood opportunities and the contested status of the park cause many locals to view charcoal production as justified (Verweijen and Marijnen 2018).

Due to its considerable economic profits, the illicit makala trade represents one of FDLR's primary sources of income. At the foot of Mount Nyiragongo, there is a veritable makala "highway," along which the charcoal sacks are transported to Goma by motorcycles, bicycles, trucks, and by foot. This trade is facilitated by corrupt public officials who line the route with strategically located roadblocks to create traffic bottlenecks in order to extort "taxes" from the carriers (Schouten and Jaillon 2019; Languy et al. 2009).

Specialized FDLR units run a diverse, orchestrated set of illegal trades to sustain the movement, enrich commanders, and share profits with partners, including Mai-Mai militias and the officers of Congolese Army. These structural units are distinct from FDLR's combat fractions. Governance of the illegal charcoal trade is part of the FDLR's broader repertoire of criminal activity including kidnapping, illegal mining, weapons trafficking, drugs production, and the illegal ivory trade. This resembles organized criminal groups more closely than a traditional rebel army, given the FDLR's financial lifelines, diverse alliances, and capitalization facilitated by the regional extreme poverty and weak governance.

Charcoal-controlling FDLR factions govern the illicit charcoal business in the region. In doing so, they provide artisanal loggers and charcoal traders with livelihoods. They hire young men and women from local communities to produce, transport, guard, and trade makala. In practice, the FDLR uses local young men and women who carry charcoal from the park to the main "depots" in the village. The main "depots" belong to the "Mère Bosses" who employ the transporters. From the "depots" in the village, charcoal is mainly transported

to Goma on motorcycles and bicycles. Each motorcycle carries around six to eight sacks of charcoal per transportation.

For the production of charcoal, FDLR's permission is essential, but if traders complain about the terms of their agreement with the FDLR, they risk being killed, especially since the FDLR has "eyes" along the charcoal trade routes, including in the urban areas. Each month charcoal entrepreneurs pay USD 20 to the FDLR to enter the southern area of Virunga which the militia controls and an additional 10 percent of the profit of the sacks. The Congolese Army is paid USD 0.5–1 per charcoal sack along the way to Goma. Inside Virunga, the price is USD 6.5. Meanwhile, on the Rutshuru-Goma road, the price increases to around USD 10–15, culminating at USD 25–30 per sack of makala in Goma. The total value of illegal charcoal trade in Goma is estimated around USD 35 million annually (Dranginis 2016).

"Chainsaws and Tokens": Deforestation and Timber Trade

Tropical timber has become an important part of the local political economy in the Eastern DRC. Many timber merchants have little choice but to work with local Mai-Mai groups to facilitate this trade since the deforestation practices often occur in regions occupied by militia groups controlling the roads and forest areas. The militias enforce tax payments, both in the form of money, goods, or in exchange for a contribution from the merchants to social services in the communities controlled by the Mai-Mai. These groups, for example, arrange for the timber traders to clean the streets or fulfill other socially relevant services. In other cases, Mai-Mai groups pay laborers to cut down trees, tax chainsaws in their areas of control, levy fines for the use of "unauthorized" chainsaws, or distribute the chainsaws to timber traders.

In contrast to the supply of illegal charcoal for local consumption, most of the illegal timber from the Eastern DRC is destined for the international market which is entered by neighboring countries. A large proportion of the timber produced in the Eastern DRC for international markets is illegal and comes from the rainforests in the Congo Basin. It is exported through North Kivu and crosses the border at Kasindi with Uganda or is sent to Goma, where it is moved to Rwanda.

Timber dealers based in Beni and Goma commonly have connections with international timber traders and determine the scale of timber production through financing or equipping loggers in exchange for timber supplies at low prices. These logging companies often target African mahogany for buyers in Asia and Europe. Even though artisanal permits are meant for small-scale logging by Congolese communities looking to improve their livelihoods, they have been hijacked by timber companies stripping the forests with little concern for the human or environmental consequences (Global Witness 2012).

Timber has become an increasingly important commodity for militia groups. Some Mai-Mai groups are entirely focused on the economic aspects of the business. In doing so, they resemble organized criminal groups. They govern and "tax" local communities, and are known to have been involved in other serious crimes such as the ivory trade or the illegal arms trade (United Nations, 2016). Timber has regularly been exchanged or traded for arms, or the profits of the illegal timber trade have been used to buy firearms. Collaborations with local officials, in particular the Congolese Army – the FARDC [Forces armées de la République démocratique du Congo], make obtaining weapons easier. Moreover, some FARDC officers use military trucks to transport the timber. The trucks are exempt from all taxes and controls on their way to trade hubs, such as Goma. FDLR's taxation records show that some timber trucks traversed the area with marks indicating their contents "were for the commander ('comdi') or the neighbouring [sic] FDLR Canaan subsector ('kanani')" (UNSC 2016, 10).

The cost per tree for the local population is very low. The price rises in trade hubs, such as Beni, Goma, and Kasindi, and then increases exponentially across the border in Rwanda and Uganda (Spittaels and Hilgert 2010). For example, a standard plank of African mahogany costs around USD 20 in the small villages in the Congo Basin between Kisangani and Nia-Nia, meanwhile, it is sold to timber traders in Beni for USD 35–40 and in Goma for USD 65.

Interactions between Militias and Business Entrepreneurs

The deforestation in and around Virunga National Park has been facilitated by different relationships and interactions between militia groups and private actors, such as charcoal or timber traders. Both the FDLR and Mai-Mai armed groups are embedded in the local communities within and around their territories (e.g., Verweijen 2017). On the one hand, they generate income and provide security for locals who are not sufficiently supported by the state and who struggle daily for survival.

On the other hand, the militias generate income from these businesses through a predatory taxation system. For instance, the militias issue tokens in the form of a small piece of paper to charcoal and timber traders. These tokens provide access to areas that can be deforested. The armed groups also offer protection to timber or charcoal traders against other armed groups, business entities, thieves, robbers, or park rangers (Boekhout van Solinge et al. 2016). Moreover, timber traders with concessions also collaborate with militias by laundering their illegal timber, listing it as having been harvested within their concessions. Under these conditions, the timber trade has taken on a rather informal management system, whereby militia groups interact with landowners, timber trade associations, traditional chiefs, and high-ranking officials among the military (e.g., Mapesa et al. 2013).

This said, the interactions between timber and charcoal traders with militias are not always voluntary and wanted: many timber and charcoal traders face

threats from the armed groups and are forced to work with them only. The embeddedness of armed groups in local communities along with their territorial control exercised by force makes it almost impossible for timber traders and concession merchants to operate their businesses without the extralegal protection of the armed groups.

Public and Private Sector Responses

Regionally there have been various efforts to decrease the activities of militia groups and their involvement in deforestation. Preventive initiatives to reduce the illegal trade include, for instance, the "EcoMakala project." Through this project, thousands of local farmers have been planting fast-growing trees on more than 12,000 hectares (approximately 30,000 acres) of land, that are used to legally produce "sustainable charcoal" – or EcoMakala – that would replace the charcoal from inside the park. Another initiative is the construction of hydroelectric power plants by the park's management in collaboration with its donors that generate energy for the surrounding communities. This provides an alternative to the use of charcoal as a cooking fuel (Marijnen and Verweijen 2018). However, due to local demand for "high quality" Ndobo Makala and limited numbers of villages that have access to energy from the park's hydroelectric power plants, the pressure of deforestation remains an issue.

In addition, the DRC has been implementing REDD+, a United Nations initiative to reduce emissions from deforestation and forest degradation activities (Hund et al. 2017), and was considered one of the pilot countries in 2010 (Ruppel and Bwiza 2013). It aims to stabilize forest cover to 63.5 percent by 2030 and to maintain it thereafter. In addition, the DRC has introduced various environmental rights and obligations. These include the state's obligation to protect the environment and ensure the health of local populations, including indigenous people. The development of local and indigenous communities also depends on the contribution of forestry companies, through negotiated corporate social responsibility investments that directly benefit local communities.

For international donors assisting the DRC government on environmental protection, forest management is a central concern. In 2010, a Voluntary Partnership Agreement (VPA) in the Forest Law Enforcement, Governance, and Trade (FLEGT) action plan was negotiated between the European Union (EU) and the DRC (Ruppel and Bwiza 2013). In 2011, a "wood exploitation permit" and "provincial forest councils" were created to improve forest management. Recently, the president of the DRC, in collaboration with the Central African Forest Initiative (CAFI), endorsed a ten-year agreement (2021–2031), which was announced at COP26 (UNDP 2021), and which included the maintenance and restoration of large forest areas. However, despite several initiatives and projects, due to the grey areas of timber and charcoal businesses and the presence of armed groups collaborating with private actors, deforestation remains an urgent issue in the DRC.

The involvement of the private sector in organized forest crimes means it may play a key role in contributing to the mitigative mechanisms that can reduce social and environmental harmful activities. This may include the monitoring of forest areas, the promotion of alternative livelihood practices, and the implementation of introduced legislations through the entire trade chain. It occupies the ultimate position – especially larger corporations with economic resources in poor supply regions – to push toward a legal and sustainable timber trade network (Boekhout van Solinge et al. 2016) and alternative energy solutions to replace charcoal. However, driven by their business interests some private sector companies are also part of the problem of illegal deforestation by collaborating with armed groups, laundering commodities, and turning a blind eye to harmful circumstances.

Conclusion

The rapidly disappearing forests around the world have become a major concern for the international community. They are considered important pillars in countering climate change and are essential to all life on Earth. Despite various initiatives to reduce deforestation, the rates are still worrisome, partly due to illegal logging. High demand for timber products makes the illegal timber and charcoal trade very profitable. This in turn increasingly attracts organized crime and militia groups as well as private businesses involved in both illegal deforestation activities and timber trafficking.

The Eastern DRC case study illustrates how the relationships and interactions between militia groups and timber and charcoal merchants in the DRC perpetuate illegal deforestation. In a war-torn context, in which these armed groups are pulling the strings, it is difficult if not life threatening to do any legal timber and charcoal trade without collaborating with the armed groups.

Despite various initiatives, both on a local and global level, to counter the deforestation rate and the involvement of militia groups, deforestation persists. Although private sector actors are part of the problem, they should be considered key players in the efforts to reduce the worrying deforestation activities around the globe.

Notes

1 A broad definition for "illegal logging and the related timber trade," used by the International Union of Forest Research Organizations (IUFRO), is "all practices related to the harvesting, processing and trading of timber inconsistent with national- and sub-national law" (Kleinschmit et al. 2016).

2 For instance, in Indonesia, investigations by the Environmental Investigation Agency (EIA) and Telapak (2004; 2005; 2021) revealed the involvement of economic, political, and military elites along with corrupt state officials and civil servants from the forestry sector and judiciary, Malaysian businessmen, brokers, bankers, and international logging companies.

3 He renamed the country Zaire and his politics became focused on the development of Zaire as an independent country (Hoffmann et al. 2016).
4 Among these refugees were *Interahamwe*, those Hutus who orchestrated the genocide against the opposing Tutsis (Marijnen & Verweijen 2018).
5 The peace agreement was signed by many of the political-military factions who were involved in the war(s). Furthermore, they disbanded the military wings and integrated them into a new national army (Marijnen 2018).
6 These estimations are to be taken as approximations. Mai-Mai groups are difficult to calculate with precision because new Mai-Mai formations develop or older ones disintegrate and regroup (Eriksson Baaz and Verweijen 2013).
7 The situation for the Virunga Park became grave to the extent that it was included in the List of World Heritage in Danger in 1994 (Van de Giessen 2005).

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