

**Logging in: Dismantling the Dark Web of Africa's Timber Industry****Maunga Mulomba**

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**Abstract:** Timber is one of Africa's most valuable natural resources and has long played a vital role in shaping local economies. In recent decades, however, the continent's forests have become deeply entangled in the global illegal timber trade, which is estimated to be worth up to \$157 billion annually. As international demand for tropical timber has grown, so too has the scale of unlawful harvesting and export across Africa. This paper explores how Africa has become a key supplier of unprocessed timber to global markets. Despite efforts to promote legal and sustainable logging, enforcement has been inconsistent and easily undermined. Corruption, regulatory gaps, and a general lack of political resolve have allowed illegal operators to move timber with minimal resistance. These conditions have weakened conservation efforts and facilitated illicit financial flows. The paper analyses the actors involved in the illegal trade and the reasons behind its persistence. It concludes by outlining practical reforms aimed at improving transparency and reducing harm to both people and forests.

**Keywords:**

1. Timber
2. Logging
3. Rosewood
4. Africa
5. Forests

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**1. Introduction****1.1. Illegal Logging and IFFs**

Long before modern materials shaped our cities and lifestyles, timber was the cornerstone of human civilization. It kept us warm, sheltered our communities, and facilitated the transport of our goods. The abundance and versatility of timber made it the go-to material for just about everything. And in many ways, it still is. However, as global demand increased with international trade and industrialization, it also became one of the most exploited natural resources.

Timber is now tied to one of the most profitable forms of organized crime. Illegal logging involves the cutting, transporting, and selling of timber in violation of national laws (Brack & Hayman, 2001, p. 5). It is not just a threat to forests but also a major source of illicit financial

flows (IFFs)— an expression that refers to the movement of money that is illegal in its origin, transfer, or use (UNCTAD, 2020, p. 5). IFFs do not only drain public revenue, but they also worsen inequalities, fuel instability, and erode public trust. Due to their hidden nature, these flows are difficult to measure not only because of challenges in collecting reliable data, but also due to the complexities in defining what constitutes an illicit financial flow (UNCTAD & UNODC, 2022, p. 9). Even so, estimates place the global value of illegal logging between US\$51 billion and US\$157 billion per year, making it the third largest transnational crime after drug trafficking and counterfeiting (GFI, 2017, p. 99).

Given the scale of the problem, illegal logging receives comparatively little political or public attention. It often operates behind legal facades and with official complicity—much like parts of the drug trade, such as the legal prescription of opioids. Yet, governments that routinely launch billion-dollar crackdowns on narcotics are far less inclined to police a trade like illegal logging. There are no dramatic police raids nor political speeches declaring war on the perpetrators. Instead, the illegal timber quietly blends into legal markets, hidden behind fake permits, bribed officials, and front companies.

## **1.2. A Focus on Africa**

Africa has long been a target of natural resource exploitation. For over a century, foreign entities have benefitted from the extraction of raw materials such as gold, diamonds, and oil. In recent decades, forests in Sub-Saharan Africa have increasingly come under threat from illegal timber harvesting.<sup>1</sup>

This paper looks at how the continent became a key player in the illegal timber trade. It breaks down how the industry works, who profits from it, and why it's so difficult to stop. The essay begins with a brief overview of the modern history of the timber trade in Africa and examines the shift in demand from Europe to Asia. The next section provides an overview of the scale and scope of illegal logging across the continent. This is followed by an analysis of the industry's operations, including its key players and mechanisms. Using case studies, the next sections address the impacts of the illegal timber trade and why it persists. The paper concludes with recommendations for reform and identifies who should be responsible for implementing them.

## **2. A Brief History of Africa's Timber Trade**

### **2.1. From Europe to Asia**

Like many of Africa's natural resources, the timber trade came under European control during the colonial period. This structure was formalized at the Berlin Conference of 1884–1885, where Western powers divided the continent in pursuit of land and raw materials (Yahaya, 2023). Under colonial rule, forest concessions were handed over to European companies (World Rainforest Movement, 2022).<sup>2</sup> The profits generated from the timber operations were then sent back to Europe, leaving local communities with little in return. Even after many African nations gained independence in the 1960s, the extractive economic models largely persisted, with many of the same European companies continuing to operate under concessions inherited by the new

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<sup>1</sup> Tina Butler (2005, 20 April). "Timber Hungry China Moves into Africa." Mongabay.

<https://news.mongabay.com/2005/04/timber-hungry-china-moves-into-africa/Mongabay+7>

<sup>2</sup> Forest concessions are legal agreements to extract timber and manage specific public forest areas

governments.<sup>3</sup> As a result, Africa remained trapped in a cycle where it exported raw timber at low prices while often importing finished wood products at a higher cost.<sup>4</sup>

The trade routes established during colonial rule secured Europe's position as the primary destination for African timber well into the post-independence period. This dynamic began to change in the late twentieth century, when economic crises and structural adjustment programs steered forestry policies toward industrial exports. In the process, many small-scale loggers were pushed out of the formal sector. The informal timber trade increasingly operated without oversight, and this caused a rise in illegal activity across the supply chain.<sup>5</sup> Around the same time, environmental concerns about logging that had been growing steadily in the global north began to attract serious political attention.<sup>6</sup>

Efforts to address the global illegal timber trade reached a turning point at the 2002 World Summit on Sustainable Development held in Johannesburg, South Africa. In his address to delegates, European Commissioner Poul Nielson called on wood-consuming countries to take responsibility for their role in the illegal timber trade and urged Europe to show leadership in the fight against illegal logging (Ottitsch et al., 2007, p. 21).

The summit helped accelerate the development of the EU Action Plan for Forest Law Enforcement, Governance, and Trade (FLEGT), which was formally adopted by all member states in 2003. The aim of this initiative was to reduce illegal logging by promoting sustainable forest management and improving governance in producer countries (Hadiprasetya & Kim, 2022). At the heart of the action plan was the introduction of the Voluntary Partnership Agreement (VPA). This bilateral trade agreement between the European Union and timber-exporting countries helped ensure that only legally sourced timber made its way into the European market (European Court of Auditors, 2015). These safeguards were further strengthened in 2013 with the introduction of the EU Timber Regulation, which barred the import of any timber without verifiable legal origins (Kim et al., 2023).

Despite negotiating and signing the VPAs, many African countries had problems with implementation. Corruption, limited awareness in the private sector, and the high cost of compliance made the rollout of VPAs inconsistent and often difficult (Carodenuto & Ramčilović-Suominen, 2014). Studies also show that in countries like Cameroon and the Central African Republic, weak legal enforcement and political instability further slowed progress, despite the VPAs' potential to strengthen governance and promote legal timber trade (Adams et al., 2020).

For European timber companies operating in Africa, the new regulations only added to a long list of challenges. In 2018, Rougier—a major French timber company that had been operating in Central Africa for nearly a century—declared bankruptcy. Among the reasons cited were chronic port congestion in Douala, Cameroon; long delays in VAT reimbursements from African governments; and the increasing scarcity of high-value tree species. The company's inability to adapt by diversifying products or utilizing lesser-known species further contributed to its decline.<sup>7</sup> Other companies, including the Dutch-owned Wijma Cameroon Group and Italy's

<sup>3</sup> Paolo Omar Cerutti, Thiago Kanashiro Uehara, & Jon Wallace (2023, 18 May). "Deforestation in Africa: Where, Why, and What Can Be Done?" *Chatham House*. <https://www.chathamhouse.org/2023/05/deforestation-africa>

<sup>4</sup> FAO (1965). "Timber trends and prospects in Africa." <https://www.fao.org/4/24755e/24755e05.htm>

<sup>5</sup> Paolo Omar Cerutti, Robert Nasi, & Joan Baxter (2015, 3 February). "Once 'Invisible,' Africa's Domestic Loggers Come into the Light." CIFOR-ICRAF Forests News. <https://forestsnews.cifor.org/26637/africa-artisanal-domestic-logging-timber-vpa-flegt>

<sup>6</sup> The G8 Action Programme on Forests was introduced in 1998 and listed illegal logging among its five main priorities.

<sup>7</sup> Alain Karsenty (2018, 1 August). "The Crisis in the European Tropical Timber Sector in Central Africa (Commentary)." Mongabay. <https://news.mongabay.com/2018/08/the-crisis-in-the-european-tropical-timber-sector-in-central-africa-commentary/>

Cora Wood SA, were forced to sell assets as rising costs, and mounting debt made it increasingly difficult to do business in the region (Karsenty & Ferron, 2017).

In the ten years after the EUTR took effect, Africa's timber exports to Europe fell by more than 50%.<sup>8</sup> The new rules certainly played a role in this decline, but a bigger shift was already underway. By the time Europe tightened its regulations, Asian buyers had established a strong presence in Africa's timber industry. Decades of logging had depleted valuable timber species in Asia, and its local traders increasingly turned to Africa and Latin America to meet domestic demand.<sup>9</sup> Between 2006 and 2013, China, India, and Vietnam increased their global imports of illegal timber by more than 50%, even as Europe cut its illegal imports by the same amount (Gan et al., 2016, p. 46). The illegal timber that once flowed north was now heading east—and predominantly to China.<sup>10</sup>

## 2.2. China's Economic Boom

In 1978, China—under the leadership of Deng Xiaoping—began dismantling the rigid and centralized economy left behind by Mao Zedong. New policies, such as the creation of Special Economic Zones, kicked off an era of rapid industrialization and global integration (Sheng & Yu, 2024). Within a few decades, a country once defined by overpopulation and widespread poverty had risen to become the world's second-largest economy.

As China transformed into a manufacturing giant, it needed cheap and vast quantities of raw materials to support its economic and geopolitical ambitions. A high domestic demand for timber led to years of overharvesting, and by the late 1990s, the government was forced to impose logging bans on key provinces to prevent an ecological collapse (Geng et al., 2020). Neighbouring countries in Southeast Asia were also soon overexploited, so China began to seek resources from distant regions.

Africa's dense tropical forests and poorly regulated timber industry presented an attractive alternative. Investors from China wasted little time securing logging concessions and setting up timber operations across the continent. At times these operations were legal, but more often they were not. By 2016, over three-quarters of the Africa's timber exports were headed to China (IIED, 2017). Of the many timber species leaving Africa's shores, rosewood soon started to dominate the trade.

## 2.3. Rosewood: The Ivory of the Forest

Timber is generally classified into two broad categories: hardwoods and softwoods. Hardwoods come from broad-leaved, flowering trees that shed their leaves annually. These trees are known for their density, strength, and durability (Musah et al., 2021). In contrast, softwoods come from non-flowering, needle-leaved trees that retain their foliage year-round and are lighter and more flexible than hardwoods.

The term rosewood refers to a group of hardwood species within the *Dalbergia* genus, which are native to tropical regions of South and Southeast Asia, West and East Africa, and Latin

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<sup>8</sup> Jason Ross (2024, 27 August). "The New Rules to Curb China's Timber Supply from Central Africa." Wood Central. <https://woodcentral.com.au/the-new-rules-to-curb-chinas-timber-supply-from-central-africa/>

<sup>9</sup> James Bargent (2014, 7 July). "Eco-Trafficking in Latin America: The Workings of a Billion-Dollar Business." InSight Crime. <https://insightcrime.org/news/analysis/eco-trafficking-latin-america-billion-business/>

<sup>10</sup> China is the world's largest importer, exporter, and consumer of illegal timber. See (EIA, 2012, p. 26). Appetite for Destruction. Environmental Investigation Agency. <https://eia.org/blog/the-need-for-china-to-require-importers-to-source-legal-wood-products/>

America (Treanor, 2015). These trees are prized for their rich reddish-brown colour that darkens over time, along with their smooth grain, which can be polished to a high sheen. Rosewood's density and acoustic properties make it especially popular for making musical instruments like guitars, while its beauty and durability have made it a staple in high-end furniture and artisanal woodwork.<sup>11</sup>

However, these same qualities have also made rosewood the world's most trafficked wildlife product (UNODC, 2020, p. 11). Years of overharvesting have severely reduced mature populations, thus driving up prices and making it an even more attractive target for illegal logging. In response to widespread exploitation, countries party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) adopted restrictions on the international trade of several *Dalbergia* species in 2017.<sup>12</sup> Despite these efforts, uncontrolled logging has continued in many parts of the world.

The highest demand for rosewood has come from China, where it holds deep cultural and historical significance. *Hongmu*, which is the local term for various rosewood species, has been used in the design of classical furniture since the Ming and Qing dynasties (Treanor, 2015).<sup>13</sup> In the early 2000s, this style saw a revival among China's growing middle class, who sought status symbols that echoed the prestige and craftsmanship of the imperial era (Zhu, 2019). This renewed interest led to a dramatic surge in rosewood imports. As demand continued to grow, Africa emerged as the dominant supplier. By 2018, nearly 90% of China's rosewood imports came from the continent, up from just 40% a decade earlier. Much of the trade, it is believed, involved timber that had been harvested or exported illegally (UNODC, 2020, p. 38).

The illegal trade became highly profitable for Chinese manufacturers, who could command extraordinary prices for their high-end rosewood pieces. An investigation into the illegal timber flows from Madagascar to China revealed that a single bed carved from Malagasy rosewood would sell for as much as US\$1 million (Global Witness & Environmental Investigation Agency, 2010, p. 16). Such lucrative returns helped China build a strong domestic rosewood market that was already worth more than US\$26 billion in 2014 (Baidoo et al., 2023).

### 3. Size and Scope

#### 3.1. Africa's Artisanal Sector: A Brief Case Study of the DRC

Africa is home to some of the world's largest and most biodiverse forests. The Congo Basin rainforest stretches across six countries—Cameroon, the Central African Republic, the Democratic Republic of the Congo (DRC), Equatorial Guinea, Gabon, and the Republic of the Congo—and holds nearly 70% of the continent's forest cover (Tchatchou et al., 2015). It provides essential resources such as food, fuel, and medicinal plants to over 75 million people, and it also plays a vital role in regulating the global climate by acting as a carbon sink.<sup>14</sup>

Congo Basin countries account for approximately 80% of the volume of Africa's timber harvests (EIA, 2019, p. 11; Megevand, 2013, p. 101). Nearly a quarter of the forest area is

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<sup>11</sup> Coorg Rosewood Timbers (2024, 23 May). "What Are the Unique Properties of Rosewood?" <https://coorgrosewoodtimbers.com/what-are-the-unique-properties-of-rosewood/>

<sup>12</sup> CITES Secretariat (2017, 2 January). "New CITES Trade Rules Come into Effect as 2017 Starts." Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). [https://cites.org/eng/new\\_CITES\\_trade\\_rules\\_come\\_into\\_effect\\_as\\_2017\\_starts\\_02012017](https://cites.org/eng/new_CITES_trade_rules_come_into_effect_as_2017_starts_02012017)

<sup>13</sup> In Chinese, hongmu literally translates to red wood.

<sup>14</sup> ClientEarth (2020, 7 August). "How the Republic of Congo's New Forest Law Can Help Preserve World's 'Second Lung'." <https://www.clientearth.org/latest/news/how-the-republic-of-congo-s-new-forest-law-can-help-preserve-world-s-second-lung/>

designated for logging concessions, which are predominantly in Gabon and the Republic of Congo, where industrial logging has grown steadily (EIA, 2019a). Although the DRC contains more than 60% of the rainforest area, a 23-year moratorium on new concessions and a lack of investment caused by years of armed conflict have restricted the expansion of its industrial sector (Kanashiro et al., 2023, p. 11; Megevand, 2013, p. 37).<sup>15</sup> These limitations have, in turn, given rise to an informal timber trade filled with illegal logging activities.

Like much of Africa, most of the logging activities in the DRC are now done by small groups of locals operating with limited resources (EIA, 2024a). Artisanal logging has become a lifeline in a country that hosts the third-largest population of poor people in the world (UNDP, 2024, p. 6). However, legal participation in the timber sector remains out of reach for most. A five-year permit costs nearly 943,000 francs, or roughly US\$600—an impossible sum in a nation where even basic needs go unmet.<sup>16</sup>

On the other hand, those who are granted legal access to the DRC's timber resources have consistently failed to uphold the law. A preliminary review of 82 forest concessions—managed by 29 companies and spanning over 14.5 million hectares—revealed a troubling reality. Over 42% of these concessions were found to be in violation of tax payments, and only 15% of logging companies were fulfilling their social obligations to local communities.<sup>17</sup>

The continued marginalization of informal loggers and lawlessness in the industrial sector have created a breeding ground for illegal activity. Therefore, it is hardly surprising that an exceptionally high share of timber harvested in the DRC is illegal. About 90% of the country's logging activity is estimated to be in violation of the law (Lawson, 2014, p. 2). But this level of illegality is not a problem unique to the DRC. Across the continent, a familiar pattern of poor oversight of the informal sector has allowed illegal logging and timber-related IFFs to persist. In 2021, the DRC government announced plans to lift its long-standing moratorium on new logging concessions.<sup>18</sup> Given that the sector is already struggling with regulation and compliance, expanding access for industrial operators could further increase the scale of illegal trade in the region.

### 3.2. The Scale of the Illegal Trade

Estimating the scale of Africa's illegal timber trade is complex because no single method can capture its full extent. Satellite-based monitoring provides valuable data on forest cover loss and can help estimate the volume of timber being logged. Comparing this data with officially reported timber exports may reveal signs of illegal activity. However, they provide limited understanding of the financial networks that sustain the trade and the actors who profit from it. To uncover these dimensions, monetary indicators like illicit financial flows (IFFs) are essential. Unfortunately, measuring IFFs is extremely difficult due to their covert and complex nature. The cross-border movement of illicit money linked to crime, corruption, and tax evasion is diverse and difficult to track (Forstater, 2018). Moreover, the absence of consistent and

<sup>15</sup> A logging moratorium is a government-imposed suspension on the issuance of forest concessions

<sup>16</sup> Francine Ishay Mulumba (2018, 6 May). "Illegal Logging Grows in DRC – Along with Corruption and Harm to the Environment." Global Press Journal. <https://globalpressjournal.com/africa/democratic-republic-of-congo/illegal-logging-growing-drc-along-corruption-harm-environment/>

<sup>17</sup> Environmental Investigation Agency (2024, 14 October). "DRC's Logging Industry Marred by Systemic Illegality, New Findings Show." <https://eia.org/press-releases/drcs-logging-industry-marred-by-systemic-illegality/>

<sup>18</sup> Gloria Pallares (2024, 17 January). "In DRC, Titling Industrial Loggers Shows No Impact on Deforestation." CIFOR-ICRAF Forests News. <https://forestsnews.cifor.org/85601/in-drc-titling-industrial-loggers-shows-no-impact-on-deforestation?fn=en>

reliable data on IFFs, along with the lack of a unified measurement framework, further complicates efforts to assess their scale, patterns, and impact on development (UNODC & UNCTAD, 2017). This ambiguity is reflected in the estimates given in official reports. According to the African Development Bank (2021, p. 4), anywhere from 50 to 90 percent of the continent’s timber trade is illegal. Such a wide range suggests both data limitations and the widespread nature of illegal logging in Africa. While the exact figures remain uncertain, the high levels of illegality point to systemic corruption as a key enabling factor.

3.2.1. Corruption

The trade of timber, unlike narcotics or humans, is not always illegal. It becomes illegal when the timber is harvested, transported, or sold in violation of national and international regulations. Once it is mixed with legal stock and given fake documentation, it becomes difficult to trace. According to the Financial Action Task Force (2021), environmental crimes like illegal logging are considered low risk and high reward. For instance, in the DRC, forestry laws appear tough on paper, with stiff fines and jail terms. In practice, offenders often avoid serious consequences by settling cases with small payments far below the legal maximum (Lawson, 2014, p. 15). This is part of what makes illegal logging so attractive.

The high profit and low-risk factors have fuelled widespread corruption involving government officials, law enforcement, and political elites. One way to detect these illegal activities is by comparing trade data. If the value of timber exports reported by one country doesn't match the value of imports reported by its trading partner, the difference is known as a trade discrepancy.<sup>19</sup> The trade data between Cameroon and Vietnam illustrates this concept clearly. From 2013 to 2017, Vietnam reported timber imports significantly higher than the export figures declared by Cameroon.

**Table 1.** Export-Import Discrepancy between Cameroon and Vietnam (2013–2017)

Year	Cameroon Exports to Vietnam	Vietnam Imports from Cameroon	Dollar Difference
2013	US\$55 million	US\$78 million	US\$23 million
2014	US\$68 million	US\$105 million	US\$37 million
2015	US\$78 million	US\$145 million	US\$67 million
2016	US\$73 million	US\$175 million	US\$102 million
2017	US\$88 million	US\$190 million	US\$102 million

Source: EIA (2020, p. 25)

The increase in the dollar difference over this period suggests that more shipments were being under-reported, misclassified, or smuggled outright. An investigation into the Senegal-Gambia-China rosewood trade route, revealed that illegal loggers were falsifying the declaration of rosewood shipments by labelling the containers as peanuts or metal scraps to bypass customs checks and export the timber illegally to China. However, once the containers arrived in China,

<sup>19</sup> Hiau Looi Kee (2024, 17 January). “Exploring the Puzzle of Trade Discrepancies in International Trade Statistics.” World Bank Blogs. <https://blogs.worldbank.org/en/developmenttalk/exploring-puzzle-trade-discrepancies-international-trade-statistics>

they were frequently declared as rosewood in import data.<sup>20</sup> The use of such deceptive tactics could account for the trade discrepancy between Cameroon and Vietnam

The Zambia-China timber flow also revealed a similar pattern. Between 2017 and 2020, Chinese customs data showed its timber imports from Zambia were six times the value of Zambia’s reported exports. The result was a cumulative trade discrepancy of roughly US\$214 million.<sup>21</sup> A comprehensive audit across multiple African countries would likely uncover widespread trade discrepancies in the timber industry.

3.2.2. EIA Reports on Africa

Africa loses up to US\$17 billion annually in revenue due to the illegal timber trade (African Development Bank, 2021, p. 13).<sup>22</sup> Such figures have raised serious concerns for a continent that contributes only 3% to the global GDP (UNIDO, 2023). In response, several governments have imposed export bans over the years with limited success.

The UK-based NGO Environmental Investigation Agency (EIA) has exposed many violations of these bans, along with cases of corruption.

Table 2. Selected EIA-documented cases of timber trade violations in Africa

Country	Illegal Activities
Equatorial Guinea <sup>1</sup>	Minister of Forests received US\$24.6 million/year in bribes (2015 - 2021) for timber exports to China
Ghana <sup>2</sup>	Over 50% of rosewood exports (2012 - 2019) occurred under an active ban
Nigeria <sup>3</sup>	US\$300 million in illegal rosewood exports in 2016
Gambia <sup>4</sup>	US\$471 million trade discrepancy (2010 - 2018) between recorded exports and global import records
Zambia <sup>5</sup>	US\$7.5 million/year paid in bribes and informal “fees”
Mozambique <sup>6</sup>	89% of timber exports to China (2017 - 2023) violated log export ban
Mali <sup>7</sup>	220,000 rosewood trees illegally exported to China (2020 - 2022)

Sources: <sup>1</sup> EIA (2023, p. 2); <sup>2</sup> EIA (2019b, p. 2); <sup>3</sup> EIA (2017, p. 26); <sup>4</sup> EIA (2020, p. 3); <sup>5</sup> EIA (2019c, p. 1); <sup>6</sup> EIA (2024b, p. 2); <sup>7</sup> EIA (2022, p. 2).

Specific timber exports in Africa often involve more than one country, with some nations acting as primary sources of illegally harvested timber, while others serve as transit points for

<sup>20</sup> Andrei Popoviciu (2024, 23 January). “Conflict Timber: Gambian Traffickers Continue Rosewood Trade Despite Ban.” Al Jazeera. <https://www.aljazeera.com/features/2024/1/23/conflict-tinder-gambian-traffickers-continue-timber-trade-despite-ban>

<sup>21</sup> Environmental Investigation Agency (2021, 8 September). “Mukulagate: The Network of Institutional Patronage Behind Forest Looting.” <https://eia.org/blog/20210908-mukulagate/>

<sup>22</sup> The calculation of this figure was based on Interpol's estimate that the annual financial losses from the illicit timber trade globally were about US\$100 billion.

its movement to global markets. Illegal loggers take full advantage of porous borders and corrupt customs officials to move timber across regions with little fear of being prosecuted. In Guinea, for instance, the loggers have been documented cutting trees and quietly moving them into Sierra Leone using pickup trucks and remote staging points to dodge detection and bypass export bans (EIA, 2024c). These practices illustrate how the problem of illegal logging covers multiple countries, which makes it harder to trace and control. Tackling a trade that is so wide in scope requires not just national reforms but also stronger regional cooperation and intelligence sharing.

#### **4. Actors**

The illegal trade involves a complex web of legal and illegal actors interacting to facilitate the movement of illegal timber along the trade chain (van Uhm et al., 2022). Corruption, collusion, and unchecked power create ideal conditions for these networks to operate. As Peer Schouten of the Danish Institute for International Studies puts it, 'If you want to be in the timber trade, you need to know a general, a politician, and armed groups to do business—or you'll be harassed too much'.<sup>23</sup>

The Global Organized Crime Index identifies five types of criminal actors that operate across illicit markets, and all five of them are active in the timber trade.<sup>24</sup>

##### **4.1. State-Embedded Actors**

State-embedded actors hold positions in government, the military, or the political elite. They use their influence to control access to timber resources, protect allies from legal consequences, and ultimately decide who profits from the illegal trade.

A high-profile case involving the trade of rosewood (known locally as Mukula) from Zambia to China demonstrates how state actors are integral to the illegal timber network. The investigations exposed the involvement of officials from the Ministry of Community and Social Services, the Ministry of Tourism and Arts, the Zambia Agency for Persons with Disabilities (ZAPD), and even the vice president's office. Land grants meant to support people with disabilities were used as a cover for the illegal logging of Mukula timber. The Zambia National Service (ZNS) helped stockpile and transport the wood, while fake auctions were staged between the state-owned Zambia Forestry and Forest Industries Corporation (ZAFFICO) and a politically linked Chinese entrepreneur, who exported the timber under ZAFFICO's name.<sup>25</sup>

##### **4.2. Foreign Actors**

Foreign actors are the bridge between Africa's timber and the global market. The high level of corruption in the timber sector means they can boost profits by dodging taxes and sidestepping regulations. The small-scale traders often shield their illegal operations behind front companies or local partnerships. Meanwhile, multinational corporations influence policy by pressuring

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<sup>23</sup> Musinguzi Blanshe (2024, 4 April). "Big Men, an Ugly History, and the Ruthless Congo Basin Timber Smuggling Business." Pulitzer Center. <https://pulitzercenter.org/stories/big-men-ugly-history-and-ruthless-congo-basin-timber-smuggling-business>

<sup>24</sup> The Global Organized Crime Index, developed by the Global Initiative Against Transnational Organized Crime (GI-TOC), is a multi-dimensional tool that assesses criminality and resilience across 193 countries, based on criminal markets, criminal actors, and resilience factors. <https://ocindex.net/>

<sup>25</sup> Environmental Investigation Agency (2021, 8 September). "Mukulagate: The Network of Institutional Patronage Behind Forest Looting." <https://eia.org/blog/20210908-mukulagate/>

governments into easing environmental regulations or ignoring violations altogether. The preservation of key trade partnerships means African officials are often willing to oblige.

The 2019 controversy involving Helena Huang illustrates the impunity some foreign actors enjoy. Authorities in Ghana arrested Helena for transporting undocumented rosewood, but she fled after securing bail and was later deported without prosecution.<sup>26</sup> Her case mirrored that of Aisha Huang, another Chinese national who was deported in 2018 despite serious charges related to illegal gold mining. A senior government official later defended Aisha's release and cited the need to preserve strong diplomatic relations with China—particularly in the context of Ghana's US\$2 billion infrastructure deal with the Chinese firm Sinohydro.<sup>27</sup>

### 4.3. Mafia-Style Groups

The term *conflict timber* refers to timber that has contributed to the outbreak, escalation, or continuation of armed conflict (Harwell, 2010, p. 16). In areas with weak state control, mafia-style and armed non-state groups often seize control of the timber trade. They use violence and intimidation to control timber access and extort fees from loggers operating within their territory. For instance, during the Séléka rebel rule in the Central African Republic, foreign timber companies reportedly paid at least €3.4 million in protection fees. These payments financed the rebel administration and supported criminal activities, including arms trafficking (Global Witness, 2015, p. 3).

### 4.4. Private Sector Actors

Private actors are typically local and international companies operating at various stages of the supply chain. Like foreign actors, their investments play a key role in job creation and infrastructure development. However, when these companies take part in the illegal timber trade, they risk undermining the very benefits they bring.

A four-year undercover investigation by EIA (2019a) exposed the illegal activities of the Deji Group—a conglomerate of affiliated companies controlled by the Chinese mogul Mr. Xu Gong De—which manages over 1.5 million hectares in Gabon and the Republic of the Congo. Investigators found that the group had bribed officials to obtain forest concessions and subsequently engaged in overharvesting, tax evasion, and the export of illegal timber worth US\$80 million. The group also contaminated global supply chains by distributing their finished products in US and European markets, both of which have strict bans on the importation of illegal timber.<sup>28</sup>

### 4.5. Criminal Networks

Unlike mafia-style groups that exert territorial control, criminal networks specialize in managing logistics and financial flows. They often collaborate with state officials and foreign partners to evade detection, and their elusive nature makes them difficult to track.

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<sup>26</sup> Mutala Yakubu (2019, 3 July). "Chinese 'Rosewood Queen' Helena Huang Deported." Prime News Ghana. <https://www.primenewsghana.com/general-news/chinese-rosewood-queen-helena-huang-deported.html>

<sup>27</sup> Timothy Ngenbe (2019, 25 April). "Aisha Huang Was Not Exchanged for Sinohydro Deal – Gov't." Graphic Online. <https://www.graphic.com.gh/news/general-news/ghana-news-aisha-huang-was-not-exchanged-for-synohydro-deal-gov-t.html>

<sup>28</sup> The United States enforces the Lacey Act, which prohibits the trade of illegally sourced plants and plant products, including timber.

Although little is known about such networks in Africa, similar operations have been documented elsewhere. The Patrones de Ucayali was a criminal network in Peru, led by a former police officer, that smuggled timber from the Amazon rainforest to supply both domestic and international black markets. The operation involved dozens of loggers, transporters, and intermediaries who moved timber downriver to the capital, Lima. Their activities were facilitated by corrupt government officials and financiers who 'legalised' the timber using falsified permits. Despite a comprehensive investigation, the group's leaders disappeared before they could be arrested by authorities.<sup>29</sup>

## 5. Mechanisms

The illegal timber trade often begins deep in remote forests, where logging operations can be hidden from authorities. Much of the harvesting takes place under the cover of darkness to reduce the risk of being caught.<sup>30</sup> While industrial companies may hold legal concessions, many violate the law by cutting protected species or harvesting outside their quota. Illegal artisanal loggers, by contrast, operate entirely outside the formal system. Without permits, they rely on informal networks to gain access to timber. This can mean bribing local officials, striking deals with armed groups, or selling directly to foreign buyers for modest sums of cash.

Once the trees are harvested, they are moved either as raw logs (roundwood) or processed into sawn planks and boards (sawn wood). The artisanal loggers typically carry out the processing directly at the site of harvest. This reduces the bulk for easier transport and removes identifying features like bark. In contrast, industrial operators often transport logs to sawmills where processing yields higher-quality timber. However, this stage also presents opportunities for mixing legal and illegal stock (Basel Institute, 2021).

Transportation is a critical phase in the illegal trade. The timber is moved from hidden forest stockpiles and sawmills to ports or border crossings. Formal operators may conceal illegal timber within their permitted quotas, while informal truck drivers rely on forged documents, bribery, and political connections to move the cargo.<sup>31</sup> This phase is marked by all kinds of deceptive practices, including misclassifying species to avoid taxes, underreporting volumes to reduce fees, and falsifying documents to disguise the timber's true origin (UNODC, 2025, p. 41).

An investigation by The Africa Report uncovered how illegal timber harvested in the DRC is transported to Kenya via Uganda. The report revealed a troubling mix of corruption, negligence, and inadequate infrastructure. Investigators discovered that there were no scanners or weighing scales at the DRC-Uganda border post to check or weigh timber arriving or departing in trucks. Truck drivers routinely bribed officials to obtain fraudulent paperwork, such as fake certificates of origin or false cargo declarations, to reduce tax payments. These documents were later presented at the Uganda-Kenya border for customs clearance. To avoid detection under transport laws, excess timber was offloaded at private weigh stations before the remaining stock was moved on to Kenyan markets or exported to Asia.<sup>32</sup>

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<sup>29</sup> James Bargent (2020, 18 September). "Peru's Timber Thieves and Their Patrons." InSight Crime. <https://insightcrime.org/investigations/peru-patrones-patrons-timber/>

<sup>30</sup> Emily Kaldjian, Loretta Cheung, & Meaghan Parker-Forney (2015, 7 September). "4 Cutting-Edge Technologies to Catch Illegal Loggers." World Resources Institute. <https://www.wri.org/insights/4-cutting-edge-technologies-catch-illegal-loggers>

<sup>31</sup> Josiane Kouagheu and Madeleine Ngeunga (2023, 8 June). "How Illegal Wood Escapes Control Circuits in Cameroon." Pulitzer Center. <https://pulitzercenter.org/stories/how-illegal-wood-escapes-control-circuits-cameroon>

<sup>32</sup> Musinguzi Blanshe (2024, 3 April). "Timber hustling: Lia, a Thriving Hub for Congolese Mahogany Trafficked to Uganda, Kenya." The Africa Report. <https://www.theafricareport.com/341713/timber-hustling-lia-a-thriving-hub-for-congolese-mahogany-trafficked-to-uganda-kenya/>

Once illegal timber reaches its destination, it enters the global market where it is often sold alongside legally sourced wood. The illegal timber is typically hard to distinguish without the use of specialized testing methods. In many cases, international buyers fail to conduct proper due diligence, resulting in consumers unknowingly purchasing products linked to illegal logging.

## 6. Effects of the Illegal Timber Trade

Illegal logging has wide-ranging environmental, economic, and social impacts. These effects are often closely connected and reinforce one another. In some cases, illegal logging is the main source of harm, and in others, it worsens problems that already exist.

### 6.1. Social Effects

The illegal trade often acts as a catalyst for social division and unrest. The high value of timber creates intense competition between local communities, armed groups, and political actors. The interaction between the trade and existing socio-political dynamics can have devastating effects, particularly in areas already affected by conflict or political instability.

#### *Case Study: Conflict Timber in Casamance*

Senegal is often hailed as one of West Africa's most stable democracies. However, its southern Casamance region has been the site of a decades-long separatist conflict. Since 1982, the Movement of Democratic Forces of Casamance (MFDC) has waged an insurgency to gain independence for Casamance, citing cultural and ethnic differences from the rest of Senegal (Sakinatunnafsih et al., 2023). Casamance's rich rosewood reserves have become a key revenue source for rebel factions. Between 2012 and 2020, 1.6 million rosewood trees were illegally harvested and smuggled to The Gambia. Proceeds from this trade have funded weapons, recruitment, and territorial control (EIA, 2020, p.1).

Though relatively low in intensity compared to other regional conflicts, the war in Casamance has caused significant human suffering. An estimated 5,000 people have been killed and 70,000 displaced. Many have fled to The Gambia and Guinea-Bissau, where support remains limited (Bean, 2020, p. 6). Displaced families have sought refuge in safer areas and often settled in unfamiliar towns. Separated from their land and stripped of resources, many find themselves socially isolated and economically vulnerable. The ongoing displacement has further increased the demographic pressure on the regional capitals because many are unable to secure employment (Ngom & Sene, 2021).

The conflict has disrupted the lives of more than 150,000 people and left many dealing with psychological trauma. One former social worker captured the human cost of the conflict in Casamance when he recalled in an interview, 'One young student who used to be top of her class in high school is now completely withdrawn. She started isolating herself. She no longer participated during class and her scores plummeted. She had seen someone slit her father's throat'.<sup>33</sup>

A 2022 peace deal between the Senegalese government and one MFDC faction offered a glimmer of hope, but the situation remains fragile. Other rebel groups remain active, and sporadic clashes continue. Meanwhile, infrastructure lies in ruins, and the lingering threat of

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<sup>33</sup> ReliefWeb (2010, 20 May). "Senegal: Tackling Trauma in Casamance." <https://reliefweb.int/report/senegal/senegal-tackling-trauma-casamance>

landmines has devastated agriculture and tourism.<sup>34</sup> For the people of Casamance, the effects of prolonged conflict are still felt in every aspect of life, and stability remains a distant hope for many.

## 6.2. Political and Economic Effects

Africa's 'resource curse' is often associated with the mineral wealth of countries like the DRC, where diamonds, gold, and coltan have fuelled conflict, corruption, and chronic underdevelopment.<sup>35</sup> However, natural resource exploitation is not limited to the extractive industries. Madagascar is a clear example of how the illegal timber trade can undermine political stability and weaken economic systems.

### ***Case Study: Illegal Logging and Political Instability in Madagascar***

Known for its unique biodiversity and rich hardwood forests, Madagascar was plunged into turmoil following a change of political power. In March 2009, President Marc Ravalomanana was ousted in a military-backed coup led by opposition leader and Antananarivo mayor Andry Rajoelina. The takeover drew widespread international condemnation and led to the suspension of foreign aid to the country (Ploch & Cook, 2012). With an economic crisis looming and state authority in disarray, there was an outbreak of illegal logging in the country's northeastern region.

Protected forests, including those in the Masoala National Park, were quickly overrun by poor loggers looking for quick income. Thousands of rosewoods and ebony trees were cut down and transported by trucks or floated down rivers to ports in the coastal cities of Vohémar and Antalaha. Exporters then shipped the timber to China, where demand for Madagascar's exotic hardwoods was booming (Global Witness & Environmental Investigation Agency, 2010, p. 6). Over the next four years, the island country exported US\$250 to US\$300 million of illegal timber annually.<sup>36</sup> The wave of illegal logging shifted power and wealth into the hands of a few timber barons, who used their profits to acquire overseas assets while local communities suffered.

In December 2009, the transitional government—under growing international pressure to stop the uncontrolled logging—approved the sale of existing stockpiles, which effectively legalised previously harvested timber. Leaked documents revealed that over 500,000 logs valued at US\$5 billion had been approved for sale. Sources also alleged that Rajoelina planned to use the proceeds to fund his political party and secure military loyalty ahead of upcoming elections.<sup>37</sup>

The environmental destruction triggered by illegal logging in Madagascar had lasting consequences, not only for the country's ecosystems but also for its economy and international reputation. The uncontrolled logging also left the country's unique wildlife vulnerable to poachers. Together, these pressures caused the collapse of ecotourism, which had emerged as a key contributor to the national economy. In 2008, the ecotourism sector had generated nearly

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<sup>34</sup> ReliefWeb (2012, 27 December). "Casamance Recovers More Land Lost to Landmines."

<https://reliefweb.int/report/senegal/casamance-recovers-more-land-lost-landmines>

<sup>35</sup> The resource curse refers to the paradox where countries rich in natural resources often experience slower economic growth, weaker governance, and more conflict than resource-poor countries

<sup>36</sup> Khadija Sharife & Edward Maintikely (2018, 17 August). "The Fate of Madagascar's Endangered Rosewoods." Organized Crime and Corruption Reporting Project (OCCRP). <https://www.occrp.org/en/investigation/the-fate-of-madagascars-endangered-rosewoods>

<sup>37</sup> Environmental Investigation Agency (2013, 30 September). "Madagascar's Transitional President Threatens to Sell Illegal Wood Worth US\$5 Billion." <https://eia.org/press-releases/madagascars-transitional-president-threatens-to-sell-illegal-wood-worth-5-b/>

US\$390 million, but tourist arrivals dropped by as much as 60% in the aftermath of the 2009 crisis. The decline forced national parks to shut down and displaced thousands of workers, from local guides to hospitality staff.<sup>38</sup> The loss of tourism revenue, compounded by the suspension of donor aid, left conservation programmes financially crippled. Protected areas, once viewed as global models of community-based biodiversity management, became increasingly vulnerable to further exploitation. At the same time, the broader economy experienced a significant downturn. The rate of change in GDP fell from 7% in 2008 to -3.7% in 2009 (Ploch & Cook, 2012, p. 15). To keep the economy afloat, the government made deep budget cuts, which weakened public service delivery and stalled recovery. By 2013, almost three quarters of the population were living below the national poverty line (Dabire & Bi, 2014, p. 2).<sup>39</sup> Even though Madagascar had once been hailed as a leader in environmental conservation, poor governance of its natural resources undid years of progress.

### 6.3. Environmental & Health Effects

Illegal logging causes severe environmental harm. It disrupts ecosystems, threatens species that depend on forest habitats, and accelerates soil erosion by removing tree cover. The removal of trees also reduces carbon dioxide absorption, leading to increased emissions that contribute to climate change. While these impacts are widely discussed, the effects on human health and daily life often receive less attention.

Loggers face serious health and safety risks, especially where safety measures are absent. Makeshift mills and high-powered chainsaws produce thick clouds of sawdust and fine particles, which can cause eye injuries.<sup>40</sup> Skin contact with certain tropical hardwoods can trigger allergic reactions or rashes (Demers, 2024). Although safety guidelines recommend helmets, ear protection, and cut-resistant clothing, many artisanal loggers in Africa cannot afford such equipment.

Prolonged exposure to wood dust is especially dangerous for respiratory health. The International Agency for Research on Cancer classifies wood dust as a Group 1 carcinogen.<sup>41</sup> Larger particles irritate the upper respiratory tract and can cause sinonasal cancer, while finer dust reaches deep into the lungs and increases the risk of chronic respiratory illness over time (Demers, 2024).

The loss of tree cover also leaves soil unprotected. Erosion strips away nutrient-rich topsoil and contributes to dust storms and desertification (Bashari et al., 2024). In dry and windy regions, the movement of dust over long distances can significantly reduce air quality. According to UNICEF (2019, p.4), deaths from outdoor air pollution in Africa rose by nearly 60% between 1990 and 2017. Children are especially at risk and can have their life expectancy reduced by up to two years.

As soil and air quality decline, communities face lower crop yields, higher medical costs, and increased school absenteeism due to illness. What begins as logging in the local area undermines public health, education, and economic growth on a national scale.

<sup>38</sup> Rhett Butler (2010, 4 January). "Madagascar's Political Chaos Threatens Conservation Gains." Yale Environment 360. [https://e360.yale.edu/features/madagascars\\_political\\_chaos\\_threatens\\_conservation\\_gains](https://e360.yale.edu/features/madagascars_political_chaos_threatens_conservation_gains)

<sup>39</sup> ReliefWeb (2011, 18 March). "Madagascar: A Poor Country Gets Poorer." <https://reliefweb.int/report/madagascar/madagascar-poor-country-gets-poorer>

<sup>40</sup> Judd Michael & Dr. Serap Gorucu (2024, 4 December). "The Dangers of Using Chainsaws." Penn State Extension. <https://extension.psu.edu/the-dangers-of-using-chainsaws>

<sup>41</sup> A carcinogen is any substance capable of causing cancer in living tissue. Group 1 carcinogens are those for which there is sufficient evidence of carcinogenicity in humans

## 7. Why The Illegal Trade Persists

### 7.1. Corruption

Corruption in Africa's timber trade does not stop with low-level inspectors at the border or forest officers. It often reaches the highest levels of government. When those entrusted to protect public resources are the ones exploiting them, the entire system becomes compromised.

#### ***Case Study: The Obiang Family and the Looting of Timber in Equatorial Guinea***

Equatorial Guinea is a tiny oil-rich nation in Central Africa and has one of the highest GDPs per capita on the continent.<sup>42</sup> Yet more than three-quarters of its population lives on less than US\$2 a day. Fewer than half have access to clean water, and one in twelve children dies before the age of five.<sup>43</sup> The country is run by President Teodoro Obiang Nguema Mbasogo, who has been in power since 1979. His regime has been a textbook example of how authoritarianism and elite plunder go hand in hand.

His son, Teodorin Nguema Obiang Mangué, is often seen on Instagram posing in private jets and luxury cars. In 1993, Teodorin was just 24 years old and reportedly a college dropout when he was gifted 25,000 hectares in forest concessions by his father. A few years later, he received 11,000 more. When his father appointed him Minister of Forestry in 1998, Teodorin Obiang seized total control of the country's timber industry and began using it for personal enrichment. He outsourced the physical logging operations to foreign companies while diverting the profits into his accounts. Exporters were also forced to pay a personal 'tax' directly to him.<sup>44</sup>

Between 2004 and 2011, Obiang is believed to have stolen over US\$115 million from timber operations alone.<sup>45</sup> The money was used to fund his extravagant lifestyle: mansions in Paris, luxury supercars, rare artwork, and high-end jewellery. In 2017, a French court handed him a suspended sentence for embezzlement and ordered the seizure of assets, including a €100 million mansion on Avenue Foch.<sup>46</sup> However, the scandal did little to affect his political career. Teodorin Obiang has held the position of vice president since 2016, and as the incumbent's son, he remains untouchable.

Obiang is just one of many high-ranking government officials who have been implicated in the trade. The Gambia's illegal rosewood exports peaked during the dictatorship of former leader Yahya Jammeh. Investigations later revealed that Jammeh had exploited the country's timber resources, avoided taxes, and used his company, Westwood Gambia, to directly fund MFDC rebels in the neighbouring Casamance region.<sup>47</sup> In Zambia, the 'Mukula-gate' scandal exposed how former President Edgar Lungu and his family allegedly used military and

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<sup>42</sup> International Monetary Fund (2025, April). "World Economic Outlook – GDP per capita, current prices." IMF Data Mapper. <https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD>

<sup>43</sup> Institute for Security Studies (2024, September). "Equatorial Guinea." African Futures. <https://futures.issafrica.org/geographic/countries/equatorial-guinea/#poverty>

<sup>44</sup> Ken Hurwitz (2011, 25 October). "U.S. Obiang Action Sends Message on Global Kleptocracy." Open Society Justice Initiative. <https://www.justiceinitiative.org/voices/us-obiang-action-sends-message-global-kleptocracy>

<sup>45</sup> Jason Burke (2017, 2 January). "French Trial Reveals Vast Wealth of Equatorial Guinean President's Son." The Guardian (UK Edition). <https://www.theguardian.com/world/2017/jan/02/french-trial-teodorin-obiang-wealth-equatorial-guinea>

<sup>46</sup> EG Justice (2017, 31 October). "Teodorin's Conviction: Landmark Victory in Fight Against Corruption." EG Justice. <https://egjustice.org/content/teodorins-conviction-landmark-victory-in-fight-against-corruption>

<sup>47</sup> Andrei Popoviciu (2024, 23 January). "Conflict timber: Gambian Traffickers Continue Rosewood Trade Despite Ban." Al Jazeera. <https://www.aljazeera.com/features/2024/1/23/conflict-tinder-gambian-traffickers-continue-timber-trade-despite-ban>

government vehicles to smuggle valuable rosewood logs under the guise of official state business (EIA, 2019c).

Corruption at the highest levels not only robs countries of revenue but also destroys public trust. When leaders and their families openly benefit from public resources with impunity, it implies that accountability does not apply at the top. This undermines the rule of law and encourages illegal behaviour at every level. Over time, the country's reputation is tarnished internationally, which deters investment and strains diplomatic ties

## 7.2. Weak Law Enforcement

Illegal logging thrives in Africa not because laws are absent, but because institutions are too weak or compromised to enforce them. Forestry ministries, environmental agencies, and courts of law often bend under the weight of political interference and financial influence. In such an environment, they rarely uphold the law or punish offenders.

In 2021, a Kenyan court ordered the release of US\$13 million worth of rosewood to suspected traffickers, despite clear evidence that the timber had been illegally exported from Madagascar. The shipment, which was seized in Mombasa en route to Hong Kong, was protected under both Kenyan and CITES law. Yet the court disregarded expert testimony and ruled that CITES restrictions did not apply at the time of seizure. Civil society groups argued that the ruling reflected deeper patterns of corruption and political protection, which routinely shield traffickers from prosecution.<sup>48</sup>

In many African countries, forestry laws are progressive on paper but rarely upheld in practice. Enforcement is often shaped by informal power structures. Illegal traders know that penalties can be reversed through political pressure or legal tactics. Even when governments announce tough measures, the follow-through is very weak. This signals to both local and foreign actors that legal compliance is negotiable and that influence matters more than law.

## 7.3. Economic Incentives

Most discussions about illegal logging in Africa focus on the high-profile cases of politicians making millions from the trade. But behind every truckload of timber are hundreds of people taking risks for a small share of the profit.

In Cameroon, systemic underpayment among forestry officials has created fertile ground for bribery. Chainsaw millers routinely pay informal fees of 100 to 200 CFA francs (€0.15–0.30) per plank, and a single truckload of timber can generate up to 40,000 CFA francs (€60) in bribes. For an officer earning just 100,000 CFA francs (€150) per month, these rates represent a strong financial incentive to overlook illegal activity.<sup>49</sup> Local communities are also drawn into the trade, largely due to structural exclusion from the benefits of legal logging activities on their land. Despite laws mandating the distribution of royalties, revenue from licensed operations rarely reaches the community. In response, chiefs and village members often engage directly with illegal loggers who offer immediate cash payments. These payments can be anywhere from 25,000 to 250,000 CFA francs (€38 - 375) per logging operation and, in some areas, have totalled

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<sup>48</sup> Willis Okumu (2022, 26 September). "Smugglers Carve a Niche in Africa's Rare Rosewood." Institute for Security Studies (ISS Today). <https://issafrica.org/iss-today/smugglers-carve-a-niche-in-africas-rare-rosewood>

<sup>49</sup> Charlie Pye-Smith (CIFOR) (2011, 11 April). "Illegal Logging Funds Public Services in Cameroon." CIFOR Forests News. <https://forestsnews.cifor.org/2441/illegal-logging-funding-public-services?fnl=en>

as much as 13 million CFA francs (€19,500). The funds are frequently used to support local development, including the construction of schools, roads, and community facilities.<sup>50</sup>

The profit potential of illegal logging has lured many away from traditional livelihoods. In rural Zambia, former charcoal vendor Steven Nyambose abandoned his trade after discovering the market value of rosewood: ‘We used to see this tree and think it was just like any other—not knowing it was a gold mine’. Field investigations confirm that loggers can earn between US\$5 and US\$10 per log, which can exceed Zambia’s average monthly household income of K3,442.90 (around US\$164) for just a few days of work (Zambia Statistics Agency, 2022, p. 106).<sup>51</sup> In regions where the formal economy remains inaccessible or fails to meet local needs, illegal logging becomes one of the few viable strategies for economic survival.

## 8. Proposals for Reform

### 8.1. Establishing Export Standards

One of the reasons African countries have had problems implementing the EU Voluntary Partnership Agreements (VPAs) is because timber-producing countries prefer to export to markets with high demand and minimal import restrictions. So long as some countries continue to import timber without strict due diligence mechanisms, illegal logging will persist. The presence of willing buyers will always reduce the incentive for exporters to follow sustainable practices.

To address this, African countries must establish and enforce their own export standards to stop the illegal trade at its source. These standards should be clear, mandatory, and supported by robust verification systems. A key tool in this process is a Chain of Custody (CoC) system, which tracks timber from harvest to processing and export.<sup>52</sup> This system prevents document falsification and the mixing of legal and illegal timber in the supply chain. Importantly, all timber exports, regardless of destination, should comply with these domestic standards.

The need for internal controls is highlighted by an EIA (2019c, p. 7) report, which revealed that Zambian rosewood was illegally harvested and smuggled through neighbouring countries before reaching international markets. These diversion routes were often based on port access, weak border enforcement, and personal networks in transit states. To counter this, African countries must invest in real-time data sharing and coordinated cross-border enforcement. Non-compliance should result in meaningful consequences, such as cargo and vehicle seizures, blacklisting of complicit shipping firms, and harmonised penalties across the region to ensure consistent enforcement.

### 8.2. Tracking & Traceability Technology

Establishing legal standards for timber exports is a necessary first step, but without the ability to verify compliance, such standards remain impractical. Effective traceability systems must

<sup>50</sup> Josiane Kouagheu, David Akana and Madeleine Ngeunga (2023, 13 June). “Forest Communities’ Complicity with Illegal Loggers.” Pulitzer Center.  
<https://pulitzercenter.org/stories/forest-communities-complicity-illegal-loggers>

<sup>51</sup> Piliro Phiri (2014, 19 September). “Rare Zambian Tree Faces Exploitation Because of Legal Loophole.” Inter Press Service (IPS News).  
<https://www.ipsnews.net/2014/09/rare-zambian-tree-faces-exploitation-because-of-legal-loophole/>

<sup>52</sup> David J. Cord (2022, 4 May). “What is Chain of Custody and How Can It Protect Our Forests?” UPM Specialty Papers.  
<https://www.upmspecialtypapers.com/articles/specialty-papers/22/what-is-chain-of-custody-and-how-can-it-protect-our-forests/>

confirm the origin, species, and legality of timber at every stage prior to export. This pre-export verification should ideally be conducted by independent, third-party certifiers to ensure credibility and reduce the risk of interference.

Technology plays a critical role in enabling real-time monitoring of timber supply chains. A centralised digital platform such as a single-window system can be developed to consolidate documentation, licences, and transaction records. Incorporating blockchain into this system offers additional safeguards by creating immutable records that flag any alterations.

Radio Frequency Identification (RFID) is among the most effective tools currently available for physical timber tracking. RFID involves attaching microchipped tags to individual logs at the point of harvest. These tags store unique identifiers that can be scanned wirelessly, even without a direct line of sight (Forsythe & Carey, 2017). RFID systems also allow for bulk scanning during transport and storage, reducing manual oversight while increasing traceability. RFID tags are linked to a secure database that holds key information, such as the timber's species, harvest location, and permit details. Together, they provide a tamper-resistant way to verify legality as the timber moves through the supply chain (Dykstra et al., 2002). The RFID tags can be physically removed but some tags are designed to be tamper-evident or difficult to extract without causing noticeable damage.

Additional scientific tools are emerging to support species and origin verification. Stable Isotope Ratio Analysis (SIRA) is used in forensic investigations to determine the geographic origin of timber by analysing naturally occurring isotopes absorbed by trees from the local environment. These chemical signatures vary by region and can be matched to geospatial reference databases to confirm whether a log was harvested from a licensed concession or legal area (Truszkowski et al., 2025).

DNA testing, by contrast, focuses on genetic material to accurately determine timber species even in processed wood. This method helps stop misdeclaration, which is one of the most common forms of fraud in the timber trade. It allows authorities to verify whether the species declared on export documents matches the physical shipment. (Degen & Fladung, 2008).

The implementation of these technologies requires substantial investment in infrastructure, training, and data collection. Each method also has its limitations when applied in isolation. For example, isotope analysis requires extensive reference databases to work effectively (NEPCon, 2017). However, when deployed together, these tools can form a complementary, multi-layered verification system that significantly strengthens the traceability and legality of timber exports.

### 8.3. Build Local Processing Capacity

One of the main drivers of Africa's illegal timber trade is the region's limited capacity to process wood locally. Most of the timber from Africa is exported as raw because value addition, although increasing, is still underdeveloped compared to other timber-producing areas.<sup>53</sup> Meanwhile, artisanal loggers, who supply much of the local market, remain outside the formal economy. Despite being well-organised, they lack legal recognition and protection. This has left them vulnerable to unstable incomes and frequent harassment from authorities.<sup>54</sup>

Governments can begin to fix this by integrating informal workers into the legal system and investing in local processing. That means making permits affordable, expanding skills training,

<sup>53</sup> Patrol (2024, 6 March). "Timber Production in Africa." <https://www.patrolling.org/timber-production-in-africa/>

<sup>54</sup> Ahtziri Gonzalez and Arnauld Ulrich Chyngwa (2020, 8 May). "Formalizing Artisanal Logging in Central Africa." Forests News. <https://forestsnews.cifor.org/65406/formalizing-artisanal-logging-in-central-africa?fnl=en>

and restricting raw log exports. Financial tools like tax breaks, subsidies, or low-interest loans can also support small and medium-sized enterprises.

Gabon is a strong example of how industrial policy and regulation can support both economic and environmental goals. In 2010, it banned raw log exports and launched the Nkok Special Economic Zone to promote local processing. Between 2016 and 2023, revenues from the sector quadrupled. Forestry now contributes 3.2% of GDP, accounts for 6% of exports, and directly employs nearly 15,000 people.<sup>55</sup>

Gabon's experience shows that economic growth and environmental enforcement are not mutually exclusive. With smart reforms, countries can reduce illegal logging while boosting jobs, revenue, and long-term development.

## 9. Who Is Responsible for Change?

The responsibility for stopping the illegal timber trade primarily rests with the exporting state and its institutions. However, the role of importing and transit states is equally important. In cases where the timber passes through multiple countries, particularly when exported from landlocked producers, both transit and destination countries should require all persons responsible for the customs declaration to provide the certificate of verification from the country of origin. This certificate would confirm that the timber was legally harvested and complied with all export standards.

State institutions must ensure there is transparency and accountability within the sector. For the institutions to perform their duties effectively, they need adequate funding, modern infrastructure, and a trained workforce. Without these resources, even the best policies will fail. An example is the Zambia Revenue Authority (ZRA), which monitors customs and trade. The ZRA has publicly recognised its challenges in monitoring the mining sector, attributing these issues to a shortage of personnel skilled in conducting tax audits.<sup>56</sup> This has resulted in widespread tax evasion and underreporting. If similar capacity gaps exist in the timber sector, illegal exports will continue to go unchecked.

Institutions must also be empowered to act independently and be free from political interference. Banks and other financial institutions should be equipped to flag suspicious transactions linked to timber exports and report potential money laundering activities without fear of retaliation. Enhanced scrutiny of cash flows, company ownership, and cross-border payments could expose individuals profiting from illegal logging. Strengthening internal oversight and ensuring legal protections for whistleblowers can further safeguard the integrity of these institutions. When banks and government agencies are allowed to fulfil their mandates without obstruction, they become essential to disrupting the IFFs that sustain illegal logging networks.

Weak national implementation also undermines broader regional efforts. In 2022, the Central African Economic and Monetary Community (CEMAC) adopted a regional ban on raw timber exports. However, only Gabon and the Republic of Congo have enforced it meaningfully. Cameroon and other member states delayed action, citing fears of lost revenue and limited domestic processing capacity.<sup>57</sup> This situation illustrates that regional cooperation cannot

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<sup>55</sup> World Bank (2024, 14 October). "Gabon Economic Update 2024: Designing Fiscal Policies for Sustainable Forestry." World Bank. <https://www.worldbank.org/en/country/gabon/publication/gabon-economic-update-2024-designing-fiscal-policies-for-sustainable-forestry>

<sup>56</sup> Barnabas Zulu (2024, 23 February). "ZRA Workers Have No Capacity to Audit Mines – Chanda." News Diggers! <https://diggers.news/business/2024/02/23/zra-workers-have-no-capacity-to-audit-mines-chanda/>

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succeed when national institutions are either unable or unwilling to fulfil their commitments. In the absence of strong enforcement at the national level, regional policies are mostly ineffective.

The African Union (AU) can play a central role in cultivating regional cooperation and policy alignment across the continent's timber sector. One of its flagship initiatives, the African Continental Free Trade Area (AfCFTA), aims to create a single market for goods and services and facilitate the free movement of people. Although its implementation has been slow, the agreement has shown significant promise for Africa's economic future.<sup>58</sup> As it evolves, it can complement national efforts by promoting minimum standards for timber certification and create positive pressure for reforms among member states.

## 10. Conclusion

Efforts to end the illegal trade should prioritise confronting the financial incentives and structural exclusions that have allowed the trade to persist. This means treating forest governance not as an isolated sector but as part of a larger struggle for equity and economic justice. Reforms should create pathways for legal and accessible alternatives, especially for artisanal loggers and forest-dependent communities who are excluded from the formal economy. Without this consideration, proposed solutions will only deepen inequality and push the trade further underground.

Any structural reform must also go hand in hand with integrity and accountability. So long as those in power profit from illegality, policies will not carry any weight, and institutions will not function as intended. By addressing socio-economic challenges, Africa can transform from a supplier of raw timber to a competitive exporter of finished wood products.

## Award information

Maunga Mulomba is an independent researcher and writer. This paper was awarded joint first place in the Eleventh Annual Amartya Sen Essay Prize Competition 2024. The Amartya Sen Prize is awarded to the best original essays that examine a specific component of illicit financial flows, the resulting harms, and potential avenues for reform. The prize is awarded by Academics Stand Against Poverty, in partnership with Global Financial Integrity and Yale's Global Justice Program. The presentation of the paper is available on the official Yale Global Justice Program YouTube channel: <https://youtu.be/F4cHNupRzng>

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