

Drafted as of: October 2021

Ghana was one of the first countries to have signed a Voluntary Partnership Agreement (VPA) with the European Union (EU) in 2009. Twelve years later, Ghana is poised to become the first country in Africa to issue Forest Law Enforcement, Governance and Trade (FLEGT) timber licenses, thereby enabling all its licensed timber products to automatically meet EU Timber Regulation (EUTR) legality requirements, facilitating their entry into the EU market.

While Ghana has made significant efforts to develop a national system to track and verify legality and control illegal timber imported into the country, a December 2020 independent assessment of all aspects of Ghana's licensing system concluded that the system was not ready for FLEGT licensing,<sup>a</sup> and some corrective actions were required.<sup>1</sup>

Ghana will begin issuing FLEGT licenses when the timber legality assurance system has been successfully tested, and when Ghana and the EU are satisfied that it functions as described in the VPA. In Europe, a FLEGT licence denotes complete compliance with the EUTR for European importers, however, a FLEGT licence may not in and of itself guarantee compliance with timber import regulations in other jurisdictions, such as the U.S. Lacey Act in the United States. This dashboard summarizes currently available information on the legality risks associated with sourcing timber from Ghana.

## SUMMARY OF LEGALITY RISKS

**Risk Scores:** 

- Overall Country Governance Risk: 48.8 (Medium Risk<sup>b</sup>)<sup>2</sup>
- **Forestry-Related Risk:** Historically high,<sup>c,3</sup> but Ghana is developing a timber legality assurance system. If the system is robustly finalized and implemented, illegal timber exports may be expected to drop.

Conflict State: NO<sup>3</sup>

Log Export Restriction in Effect: YES<sup>5,6,d</sup>

Import Regulation in Effect: NO

- Ghana is in the process of developing a mandatory system to verify the legality of timber production and trade and is expected to become the first African nation to issue Forest Law Enforcement Governance and Trade (FLEGT) licenses.
- Illegal logging is reportedly declining but the illegal harvest and trade, particularly of high value species, continues to be reported.
- NGO reports have also documented concerns related to the illegal harvest and trade in kosso mainly destined for China and Southeast Asian markets even though there is a government directive banning the harvest of kosso.
- The illegal trade in high value species is reportedly facilitated by hierarchical corruption and weak enforcement of forest laws.
- Enforcement is improving with on the ground audits suggesting high levels of legal compliance by logging companies.

#### TRADE PROFILE OF FOREST PRODUCTS<sup>E,F,7,8</sup>

Total Imports (2019): \$323.69 million

**Total Exports (2019):** \$307.09 million. \$52.88 (17.2 percent) to "regulated markets"<sup>9</sup>

#### SUMMARY OF HIGHEST PRODUCT-LEVEL RISKS

#### Exports - Top Products Exported to the U.S. by 2019 Value<sup>9</sup>

- Sawnwood (HS4407)
- Veneer (HS4408)
- Marquetry (HS4420)
- Wood Furniture Other (HS940360)
- Flooring, Moulding & Strips (HS4409)

## Summary of Highest Product-Level Risks (continued)

- Wood Furniture Seating (HS940161 & HS940169)
- Paper (HS48)
- Tableware and Kitchenware (HS4419)
- Plywood (HS4412)
- Wood Furniture Bedroom (HS940350)

Ghana has intermittently banned the harvesting and export of kosso *(Pterocarpus erinaceus)* since 2014, with the most recent iteration of the ban passed in March 2019. This ban has recently been extended indefinitely.<sup>10,11</sup>

Ghana also banned export of round logs in the 1980s, except teak (*Tectonia grandis*) and afena (*Strombosia glaucesceus*) which are allowed to be exported in round logs.

## SUMMARY OF HIGHEST SPECIES-LEVEL RISKS

Illegal logging and trade affect many timber species, but highly valuable - often rare and endangered - species that are protected under harvest and/or trade regulations are a key target and at an elevated risk for illegality. The following species are either currently, or have recently, been protected in Ghana

## CITES-Listed Species:12,13

## Appendix II:

- Afrormosia (Pericopsis elata)
- **Kosso** (*Pterocarpus erinaceus*)

Species with Harvesting Restrictions:14

- African Mahogany (Khaya spp.)
- Bilinga, Opepe, Kusia (Nauclea diderichii)
- Edinam, Gedu-Nohor, Tiama (Entandrophragma anglolense)
- Iroko (Milicia excelsa, Milicia regia)

## FORESTRY SECTOR

Forested Area: 37.99 million ha (17.8% protected)<sup>18,19</sup>

**Deforestation Rate:** -0.05% annually (net reforestation)<sup>20</sup> **Forest Ownership:** 

- 7.88 million ha publicly-owned (100%)<sup>h,21</sup>
- Certified Forests:
- FSC Certification: 21,430 ha (2019)<sup>22</sup>

- Kosipo, Penkwa-akoa (Entandrophragma candollei)
- Makore, Baku (Tieghemella heckelii)
- **Ovangkol, Hyedua** (Guibourtia ehie)
- Sapele, Sapelli, Penkwa (Entandrophragma cylindricum)
- Sipo, Utile, Efobrodedwo (Entandrophragma utile)

## Plantation Species and Species Allowed for Export:

- Caribbean Pine (Pinus Caribaea)<sup>15</sup>
- Okoume (Aucoumea Klaineana)<sup>16</sup>
- Teak (Tectona grandis)<sup>17</sup>

## **Domestic Production:**<sup>23</sup>

- Wood Fuel: 47.64 million m<sup>3</sup> (2019)
- Logs: 2.21 million m<sup>3</sup> (2019)
- Sawnwood: 534 thousand m<sup>3</sup> (2019)
- Plywood: 180 thousand m<sup>3</sup> (2019)
- Veneer: 262 thousand m<sup>3</sup> (2019)
- Particleboard: 8 thousand m<sup>3</sup> (2019)
- Charcoal: 2.06 million metric tonnes (2019)
- Paper: 3 thousand metric tonnes (2019)





—— Page 3 of 14 ——





## GHANA'S TOP DESTINATION MARKETS FOR TIMBER PRODUCTS BY VALUE (2019)<sup>29</sup>





#### —— Page 5 of 14 ——



## TIMBER LEGALITY

Ghana's forest area is estimated at 8 million hectares or 35 percent of the total land area of the country.<sup>33</sup> Natural forests account for 96.2 percent of the forest area with the most widely growing species reported to be wawa (*Triplochiton scelroxylon*), esa (*Celtis mildbraedii*), dahoma (*Piptadeniastrum africanum*), onyina (*Ceiba pentandra*), ofram (*Terminalia superba*), esakoko (*Celtis zenkeri*), esia (*Petersianthus macrocarpus*), danta (*Nesogordonia papaverifera*), otie (*Psycanthus angolensis*) and kyenkyen (*Antiaris toxicaria*).<sup>34</sup> Plantations account for 297,100 hectares with the main species including teak (*Tectona grandis*), *Gmelina arborea* and *Broussonetia papyrifera*.<sup>35</sup>

Ghana has zoned the country's forest into management regimes (protection, production or selection, and conversion).<sup>36</sup> Production forest reserves constitute about 80 percent of total forest reserves, and are the management regime that is mainly exploited and used in the production of timber.<sup>37</sup> Timber production accounts for around 2.6 million hectares of forest reserves with an additional 2 million hectares of crop land also producing timber.<sup>38</sup>

## • Ghana is in the process of developing a mandatory system to verify the legality of timber production and trade and is expected to become the first African nation to issue Forest Law Enforcement Governance and Trade (FLEGT) licenses.

Ghana is expected to become the first African nation to issue Forest Law Enforcement, Governance and Trade (FLEGT) licenses under its Voluntary Partnership Agreement (VPA) with the European Union (EU).<sup>39</sup> The timber legality assurance system or TLAS is yet to be formally recognized as meeting the standards set by the European Union Timber Regulation (EUTR) and Ghana is therefore not currently issuing FLEGT licenses although significant progress has been made in implementing national reform processes that will make this possible in the future.

Among the important improvements in Ghana's forest sector in recent years has been the launch of a public portal of forest governance information.<sup>40</sup> The Timber Legality Transparency Portal, available at https://ghanatimbertransparency.info/#/ home, is designed to improve the transparency in the country's forest sector. In addition to information on valid logging permits, the portal has the capacity to provide details concerning timber logging companies and their areas of operation; information on timber exports from Ghana; and other periodic reports. The portal will also ensure the credibility of the Ghana

Wood Tracking System (GWTS). The GWTS, which follows timber from its point of origin to final point of sale, has been an important component of the timber legality assurance system, providing information relating to timber administration and legality verification.<sup>41</sup> It enables the government to control and supervise the flow of timber through the supply chain, from harvest to consumption or export, and the monitoring of revenue payments.<sup>42</sup> A digital GWTS was completed in 2019 following several decades of a paper based system. Chatham House reported that the paper-based system was not only laborious and time-consuming, but it was also subject to human error, fraud and corruption at almost every stage of the supply chain.<sup>43</sup> The new digital GWTS has reportedly resulted in more effective decision-making and better oversight by government officials although internet connectivity issues in Ghana have created difficulties with maintaining it online.<sup>44</sup> Consequently, illegal practices in the sector are reported to have declined since 2019.<sup>45</sup>

As part of the VPA process, an independent assessment of the timber legality assurance system was finalized in December 2020 which reviewed all aspects of Ghana's licensing system to determine whether it was fit for purpose and ultimately ready to issue FLEGT licenses guaranteeing the legality of the timber exported from Ghana. The assessment concluded that the system was not ready, and some corrective actions were required.<sup>46</sup> Specifically, areas assessed as requiring additional work included the long-standing issue of conversion of extant leases to Timber Utilization Contracts. Articles 268 (1) of the 1992 Constitution, the Timber Resources Management Act, 1998 (ACT 547) as amended by Timber Resources Management Act, 2002 (ACT 617) and the Timber Resources Management and Legality Licensing Regulation, 2017 (L.12254), requires that rights to commercial logging must be granted through the issuance of Timber Utilization Contracts (TUCs) which are signed on behalf of the President by the Minister responsible for Lands and Natural Resources and subject to parliamentary ratification and Salvage Permits among other types of license. There has been ongoing concern about the transparency of the process of allocating Special Permits due to concerns that allocation does not appropriately follow the procedures laid out in Act 547 and L.12254.<sup>47</sup>

Other gaps identified included the absence of forest management plans prepared by the Forestry Commission, and the effective resolution of non-compliances associated with the supply chain.<sup>48</sup> By July 2021, Ghana pledged to stop the use of Special Permits and had prepared 43 forest management plans with the remaining 98 in progress towards approval. The remaining leases and permits from the old system were to be brought before Parliament to be converted into TUCs. A notice to commence a civil case was filed by a civil society activist in July 2021 to ban Special Permits permanently.<sup>49</sup>

A Joint Monitoring and Reporting Mechanism meeting is required to assess progress and judge whether FLEGT licenses can be issued.<sup>50</sup> In September 2021, Mr. Abu-Juam, Technical Director in charge of Forestry at the Ministry of Lands and Natural Resources, suggested that there are still some measures that needed to be implemented, including the conversion of extant leases and special permits to TUCs.<sup>51</sup>

Ghana will begin issuing FLEGT licenses when the timber legality assurance system has been successfully tested, and when Ghana and the EU are satisfied that it functions as described in the VPA.<sup>52</sup> In Europe, a FLEGT licence denotes complete compliance with the EUTR for European importers, however, a FLEGT licence may not in and of itself guarantee compliance with timber import regulations in other jurisdictions, such as the U.S. Lacey Act in the United States.

# • Illegal logging is reportedly declining but the illegal harvest and trade, particularly of high value species, continues to be reported.

Despite progress on many fronts, and Ghana's commitment to forest governance reform and the VPA process, challenges remain. A review of compliance with forest management in selected production forest reserves identified "major nonconformances regarding the practical implementation of harvesting standards enshrined in the Forest Commission's logging manual".<sup>53</sup> Infractions included excessively wide skid trails, lack of post-logging site treatments and absence of data to predict the harvestable amount of timber and inform the annual allowable cut. The problems were attributed to institutional weaknesses in the Forest Services Division including inadequate funding, shortage of personnel and lack of institutional commitment.<sup>54</sup>

A 2020 study exploring the drivers of deforestation and forest degradation in different forest management regimes in Ghana highlighted that the highest number of underlying drivers was recorded for illegal logging with the least recorded for illegal farming.<sup>55</sup> Illegal logging in protection management regimes reportedly results from chainsaw operators, TUC permit holders and other contractors straying into protected areas as well as permit holders who are legally approved to remove abandoned timber also illegally harvesting standing trees. Illegal loggers without any form of permit also reportedly "dash" into reserves to steal trees.<sup>56</sup> Though illegal logging in protection forest is on the decline according to the Forestry Commission, Ankomah et al found that economically rare and highly sought-after species were normally at an elevated risk for illegal logging in protection forest.<sup>57</sup>

## Timber Legality (continued)

Illegal logging in production forests appeared more complex possibly since logging is permitted in these regimes. Ankomah et al found that most of the actors are "insiders," i.e., stakeholders who have legal entitlement to the forest in one way or the other. The most frequently cited examples of illegal logging in production forest include TUC holders/lease holding timber contractors operating outside their yield limits. About 65 percent of offences in production forest were found to be a result of the logging company swapping out their allocated low-value species with unallocated high-value species or swapping allocated low-quality trees with unallocated high-quality ones of the same species.<sup>58</sup> Once again, highly valuable species such as odum (*Milicia excelsa*) and makore (*Tieghemela heckelii*) were cited as those most likely to be illegally logged in this fashion. Other ways in which illegal loggers operate reportedly include scrapping off stock numbers and burying stumps to conceal the yield and fell more trees than allocated.<sup>59</sup>

# • NGO reports have also documented concerns related to the illegal harvest and trade in kosso mainly destined for China and Southeast Asian markets even though there is a government directive banning the harvest of kosso.

In March 2019, the government of Ghana imposed a comprehensive ban on the harvesting and extraction of kosso (*Pterocarpus erinaceus*) sometime referred to as "rosewood" in the Ghanian context but *Pterocarpus erinaceus* is distinct from *Dalbergia* spp. and referred to as "kosso" in this dashboard. This followed several bans which were subject to intermittent suspensions to allow a few companies to "salvage" abandoned kosso logs, a system that was subject to abuse.<sup>60</sup> Reports suggest that logging of kosso actually increased during the periods when a ban was in place – with logging of kosso increasing from a monthly average of 7,496 m<sup>3</sup> pre-ban to 17,146 m<sup>3</sup> during a ban.<sup>61</sup> The Environmental Investigation Agency (EIA) reported in 2019 that over 540,000 tons of kosso were imported into China from Ghana during the earlier ban periods, the equivalent of 23,478 twenty-foot containers or approximately 6 million trees.<sup>62</sup> The comprehensive 2019 ban led to a reduction in illegal logging and trade. While Ghana's exports of kosso to China were 20,000 tons in March 2019, by October 2021 exports were down to less that 2,500 tons.<sup>63</sup> Given that the harvesting, transport and export of kosso is illegal, even the small volume of kosso exports highlights that there remains a risk of illegal trade in high-value species particularly to China and Southeast Asia.<sup>64</sup> As such there is a risk of mislabeling banned species and mixing logs of different species together to avoid detection, as well as document forgery related to species labels and export permits.<sup>65</sup>

# • The illegal trade in high value species is reportedly facilitated by hierarchical corruption and weak enforcement of forest laws.

Kansanga et al (2021) found that exports of kosso have been "facilitated by 'hierarchical corruption' involving the systematic bribing of institutional officials who are supposed to implement the [kosso] ban."<sup>66</sup> During fieldwork conducted in the months after the 2019 ban, community members described how they locate and cut down trees for the Chinese traders who came to the villages: "Most of us cannot rely on our farm produce to feed our families and meet other basic needs. It is the reason why we take the risk to deal in [kosso]. If you are part of a good [kosso] network, one load of [kosso] is enough to take you through a year [Community Member, Bulenga]." The community members observed the kosso trees "vanishing gradually without any development coming to us" and reportedly felt cheated by the government, so decided to also benefit from the kosso business.<sup>67</sup>

In 2019, EIA uncovered a system of corruption that implicated senior officials from the government and the Forestry Commission.<sup>68</sup> EIA reported that timber traffickers hired well-connected personnel that assist in forging necessary documents to move through transit barriers in-country in order to export the banned species out of the country.<sup>69</sup> Additionally, some traffickers had paid bribes directly to a high-level official in the Forestry Commission in order to get Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) documents for banned kosso logs.<sup>70</sup> More recent reports indicate that corruption continues. A traditional leader in Funsi shared that, "the former District Police Commander held some vehicles [referring to trucks loaded with kosso] at the district police station for some days. He had a call from Accra to release the [kosso] immediately if he wants to keep his job, so he had to release it".<sup>71</sup> Ghana Business News reported that, "when communities arrest and impound trucks loaded with [kosso], they [the criminals] simply go to the Forestry Commission to pay a fine and the trucks are released. Sometimes individuals with political influence step in and ask for their release".<sup>72</sup> Throughout 2020 there were repeated calls by civil society to end the continued issuance of Salvage Permits and to commit to fighting illegal kosso logging.<sup>73,74,75,76</sup>

## • Enforcement is improving with on the ground audits suggesting high levels of legal compliance by logging companies.

Issues of corruption, poor forest monitoring, and weak law enforcement have been widely reported in Ghana,<sup>77,78</sup> although improvements have been made in recent years, particularly linked to the digitization of the GWTS which has increased visibility of timber-related practices, resulting in higher exposure of illegalities.<sup>79</sup>

## Timber Legality (continued)

The GWTS is synchronized with the Forestry Commission's accounting system, enabling automatic detection and notification of companies that have outstanding debts for the payment of royalties or taxes.<sup>80</sup> The issuance of export permits is disabled when the amount due exceeds a threshold. The enforcement response of officials has also improved which has been enabled by the 'red flag' functionality that allows easy detection of inconsistencies in the data. In addition, the design of the system has reduced opportunities for corruption. Chatham House reports that directors of the Forestry Commission and certain managers have supervisory access to the GWTS database, which means they can identify the individuals responsible for red-flagged data, and all actions in the database are associated with a named individual, leaving an audit trail. This is backed up by the existence of penalties for staff who engage in misdemeanors.<sup>81</sup>

The Timber Validation Department (TVD) of the Forestry Commission also serves as auditor and routinely verifies the compliance to the legal standard in the field. The auditing team includes not just Forestry Commission staff but also third-party observers. These observers originate from different types of NGOs, ranging from small, local organizations to internationally oriented NGOs.<sup>82</sup> Official data suggests that company audits increased between 2015 and 2019. During this period, Chatham House reports that the number of 'corrective action requests' (CARs) applied to companies and to the local forest authority enforcement teams has also increased, but not at the same rate. This meant that the number of CARs per audit has declined since 2016. More recent studies found a generally high level of compliance.<sup>83</sup>

Forest crime statistics are not easily available. According to media reports, seizures of illegal timber include the following:

- In May 2019, the Northern Regional Police Command arrested a Chinese national for transporting four 20-footer containers of kosso out of the Northern Region, heading to the port city of Tema for possible onward export to China.<sup>84</sup>
- In September 2021 an investigation began on 13 impounded containers of kosso worth \$234,000 at the Port of Tema after being imported from Nigeria.<sup>85</sup>

## **REPORTS & ADDITIONAL RESOURCES**

A list of relevant reports and additional online tools to complement this country report are also available at the IDAT Risk website: https://www.forest-trends.org/fptf-idat-home/

## Key Reading:

- 1. Forest Law Enforcement, Governance and Trade Independent Market Monitor. N.d. "Ghana feels ready to start FLEGTlicensing-and shares experience with other VPA Partner Countries." Forest Law Enforcement, Governance and Trade Independent Market Monitor.
- 2. Forest Watch Ghana. n.d. "Homepage." http://forestwatchghana.org/
- 3. Forestry Commission. n.d. "Homepage." Forestry Commission (fcghana.org)
- 4. The Timber Trade Portal. 2016. "Ghana Country Profile." Last updated: July 30, 2020. Country profile Ghana (timbertradeportal.com)
- 5. Environmental Investigation Agency. 2019. "Ban-Boozled. How Corruption and Collusion Fuel Illegal Rosewood Trade in Ghana." Environmental Investigation Agency.
- 6. Environmental Investigation Agency. 2016. "Cycles of Destruction: Unsustainability, Illegality, and Violence in the Hongmu Trade." Environmental Investigation Agency

## **METHODOLOGY & TERMINOLOGY NOTES**

- <sup>a</sup> The independent assessment concluded that "The GhLAS [Ghana legality assurance system] includes the key elements necessary for assuring legality of timber production and trade i.e. the system itself, if fully implemented, has the technical capacity of fulfilling its function to demonstrate legal compliance of timber products. However, the GhLAS is not considered ready for FLEGT licensing because the amended system involves timber rights (e.g. plantation timber permits) that are not underpinned by the current legislation and timber sales are permitted without ensuring compliance with the system requirements." For more information see EU Forest Law Enforcement, Governance and Trade (FLEGT) Facility. 2021. "Ghana and EU finalise assessment of Ghana Timber Legality Assurance System." EU FLEGT Facility, European Forest Institute, February 12. https://www.euflegt.efi.int/in/vpa-africa-news/-/asset\_publisher/FWJBfN3Zu1f6/ content/ghana-and-eu-finalise-assessment-of-ghana-timber-legality-assurance-system.
- <sup>b</sup> The overall country governance risk scores reflect Forest Trends' 2021 updated assessment of national-level independent political, governance, business, economic and corruption indices which draw on a broad range of relevant underlying data from the World Bank, African Development Bank, Asian Development Bank, Inter-American Development Bank, International Fund for Agricultural Development's programming criteria, United Nations and governmental aggregated data, as well as independent surveys and other primary data to provide an average relative governance and corruption risk score for 211 countries globally. Countries scoring less than 25 are considered "Lower-Risk," countries scoring between 25 and 50 are "Medium-Risk" and countries scoring above 50 are "Higher-Risk." It is important to note that it is possible to source illegal wood from a well-governed, "Lower-Risk" state and it is also possible to source legal wood from a "Higher-Risk" country. As such, the risk scores can only give an indication of the likely level of illegal logging in a country and ultimately speaks to the risk that corruption and poor governance undermines rule of law in the forest sector.
- <sup>c</sup> A 2010 Chatham House assessment highlighted that the scale of illegal logging could be as much as two-thirds of Ghana's timber production. It was estimated that large-scale producers accounted for one-quarter of illegal production and chainsaw milling for the remainder (Hoare, 2014).
- <sup>d</sup> Timber export restrictions have primarily been related to the harvesting, processing and export of kosso, with new restrictions announced in 2021.
- <sup>e</sup> The term "forest products" is used to refer to timber products (including furniture) plus pulp and paper. It covers products classified in the Combined Nomenclature under Chapters 44, 47, 48 and furniture products under Chapter 94. While the term "forest products" is often used more broadly to cover non-timber and non-wood products such as mushrooms, botanicals, and wildlife, "forest products" is used to refer to timber products plus pulp and paper in this dashboard.
- <sup>f</sup> Except where otherwise specified, all trade statistics and chart data on Ghana's trade with China is sourced from the General Administration of Customs, P.R. China, compiled and analyzed by Forest Trends. All other data comes from UN Comtrade, compiled and analyzed by Forest Trends. In most cases, all data have been sourced from globally reported trade data with Ghana as reported by all other countries to UN Comtrade. In specific charts comparing Ghana's reported exports with a country's reported imports, Ghana's export data has been used as reported to UN Comtrade.
- <sup>9</sup> Regulated markets reflect countries and jurisdictions that have developed operational measures to restrict the import of illegal timber. As of 2021, this included the U.S., Member States of the European Union (as well as the United Kingdom, Iceland, Liechtenstein, Norway and Switzerland), Australia, Canada, Colombia, Indonesia, Japan, Malaysia, South Korea and Vietnam. Some measures are more comprehensive in scope, implementation, and enforcement than others.
- <sup>h</sup> Forest ownership as of 2015 according to FAO FRA, "Global Forest Resources Assessment, Ghana" published in 2020.
- <sup>i</sup> Forest Policy Export Restrictions (FPER) range from comprehensive bans on all raw or crudely processed forest products, to more narrow, partial restrictions targeting certain types of timber, specific tree species, or distinct regions of harvest. In some countries, the wording of the policies may be ambiguous or difficult to interpret. In some cases, government officials can grant exemptions under special circumstances. For this reason, it can be difficult to determine if the import of timber from a FPER country is illegal. Nevertheless, the presence of a FPER signals a need for additional risk assessment and mitigation actions to ensure that the import of certain products from these countries does not violate the specific laws and regulations of the source country. Ghana banned export of round logs in the 1980s, except teak (*Tectonia grandis*) and afena (*Strombosia glaucesceus*) which are allowed to be exported as round logs. Flitches (or timber cut to a minimum diameter) can be legally exported.
- <sup>1</sup> All references to "EU + EFTA" signify the 27 Member States of the European Union (as of 2021), as well as the United Kingdom, Iceland, Liechtenstein, Norway and Switzerland.

## WORKS CITED

- <sup>1</sup> EU Forest Law Enforcement, Governance and Trade (FLEGT) Facility. 2021. "Ghana and EU finalise assessment of Ghana Timber Legality Assurance System." EU FLEGT Facility, European Forest Institute, February 12. https://www.euflegt.efi. int/in/vpa-africa-news/-/asset\_publisher/FWJBfN3Zu1f6/content/ghana-and-eu-finalise-assessment-of-ghanatimber-legality-assurance-system
- <sup>2</sup> Forest Trends. 2020. "Global Deforestation Logging and Associated Trade (IDAT) Risk Data Tool–Summary of Data and Methodology." Forest Trends. Accessed June 30, 2020. https://www.forest-trends.org/wp-content/uploads/2020/03/ Methodology-for-ILAT-Risk-Data-Tool-March-2020.pdf
- <sup>3</sup> Hoare, Alison. 2014. "Illegal Logging and Related Trade, the Response in Ghana A Chatham House Assessment." Chatham House, The Royal Institute of International Affairs. https://www.chathamhouse.org/sites/default/files/field/ field\_document/20141029IllegalLoggingGhanaHoareFinal.pdf
- <sup>4</sup> World Bank Group's Fragile, Conflict and Violence Group. 2020. "Harmonized List of Fragile Situations." World Bank Group's Fragile, Conflict and Violence Group. Accessed June 30, 2020. https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations
- <sup>5</sup> Forest Trends. 2020. "Known Forest Product Export Restrictions, FPER." Forest Trends. Accessed June 30, 2020. https:// www.forest-trends.org/known-log-export-bans/
- <sup>6</sup> Abugre Anyorigya, Daniel. 2021. "No more Rosewood exports from July 2- Lands Minister Orders." CNR, Citi Newsroom, July 1. Accessed October 25, 2021. https://citinewsroom.com/2021/07/no-more-rosewood-exports-from-july-2-landsminister-orders/
- <sup>7</sup> United Nations Statistics Division. 2020. "UN Comtrade." United Nations Statistics Division. Accessed December30, 2020. https://comtrade.un.org/data/
- <sup>8</sup> Government of the People's Republic of China. "Customs Statistics." General Administration of Customs. Accessed June 30, 2020. http://43.248.49.97/indexEn
- <sup>9</sup> UN Statistics Division, "UN Comtrade"; "Government of the People's Republic of China, "Custom Statistics."
- <sup>10</sup> Forest Trends, "FPER."
- <sup>11</sup> Larnyoh, Magdalene Teiko. 2020. "Ghanaian government extends ban on Rosewood export indefinitely." Pulse Ghana, February 17. Accessed June 30, 2020. https://www.pulse.com.gh/bi/strategy/ghanaian-government-extends-ban-onrosewood-export-indefinitely/14tpcrc
- <sup>12</sup> The Timber Trade Portal. 2016. "Ghana Country Profile." Last updated: July 30, 2020. https://www.timbertradeportal. com/countries/ghana/
- <sup>13</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora. 2017. "Appendices I, II and III." Convention on International Trade in Endangered Species of Wild Fauna and Flora. https://www.cites.org/eng/app/appendices.php
- <sup>14</sup> Government of Ghana. 1998. L.I. 1649 Timber Resources Management Regulations, 1998. November 10, 1998. http:// www.fcghana.org/library\_info. php?doc=46&publication:L.I.%201649%20-%20Timber%20Resources%20Management%20Regulations,%20 1998&id=15
- <sup>15</sup> Forest Legality Initiative. 2014. "Risk Tool Ghana." Forest Legality Initiative. Accessed August 22, 2019. https:// forestlegality.org/risk-tool/country/ghana#tab-resources
- <sup>16</sup> Forest Legality Initiative, "Risk Tool Ghana."
- <sup>17</sup> The Timber Trade Portal, "Ghana Country Profile."
- <sup>18</sup> FAO. 2020. "Global Forest Resources Assessment 2020." Food and Agriculture Organization of the United Nations. Accessed October 25, 2021. https://www.fao.org/3/ca9825en/ca9825en.pdf
- <sup>19</sup> FAO. 2020. "Global Forest Resources Assessment 2020, Ghana." Food and Agriculture Organization of the United Nations. Accessed October 25, 2021.
- <sup>20</sup> FAO, "Global Forest Resources Assessment 2020."
- <sup>21</sup> FAO, "Global Forest Resources Assessment 2020, Ghana."

- <sup>22</sup> Forest Stewardship Council. 2019. "FSC Facts & Figures December 4 2019." Forest Stewardship Council. Accessed June 30, 2020. https://fsc.org/sites/fsc.org/files/2019-12/Facts\_and\_Figures\_2019-12-04.pdf
- <sup>23</sup> FAO. 2021. "FAOSTAT." Food and Agriculture Organization of the United Nations. Accessed Octoer 25, 2021. http://www. fao.org/faostat/en/#data/RF
- <sup>24</sup> Forest Trends, "FPER.".
- <sup>25</sup> UN Statistics Division "UN Comtrade"; Government of the People's Republic of China, 'Custom Statistics."
- <sup>26</sup> UN Statistics Division "UN Comtrade"; Government of the People's Republic of China, 'Custom Statistics.".
- <sup>27</sup> UN Statistics Division "UN Comtrade"; Government of the People's Republic of China, 'Custom Statistics.".
- <sup>28</sup> UN Statistics Division "UN Comtrade" ; Government of the People's Republic of China, 'Custom Statistics."
- <sup>29</sup> UN Statistics Division "UN Comtrade"; Government of the People's Republic of China, 'Custom Statistics.".
- <sup>30</sup> UN Statistics Division "UN Comtrade".
- <sup>31</sup> Government of the People's Republic of China, 'Custom Statistics.
- <sup>32</sup> UN Statistics Division "UN Comtrade".
- <sup>33</sup> FAO, "Global Forest Resources Assessment 2020, Ghana."
- <sup>34</sup> FAO, "Global Forest Resources Assessment 2020, Ghana."
- <sup>35</sup> FAO, "Global Forest Resources Assessment 2020, Ghana."
- <sup>36</sup> Ankomah, Frank, Boateng Kyere, Michael Ansong and Winston Asante. 2020. "Forest Management Regimes and Drivers of Forest Cover Loss in Forest Reserves in the High Forest Zone in Ghana." International Journal of Forestry Research, Vol. 2020. https://www.hindawi.com/journals/ijfr/2020/8865936/
- <sup>37</sup> Amoah, Anthony and Kofi Korle. 2020. "Forest depletion in Ghana: the empirical evidence and associated driver intensities." Forest Economics Review, ISSN: 2631-3030. Forest depletion in Ghana: the empirical evidence and associated driver intensities | Emerald Insight
- <sup>38</sup> EU FLEGT Facility. 2018. "Ghana All about the Ghana-EU Voluntary Partnership Agreement." EU FLEGT Facility. Accessed November 7, 2019. http://www.euflegt.efi.int/ghana
- <sup>39</sup> Forest Law Enforcement, Governance and Trade Independent Market Monitor. N.d. "Ghana feels ready to start FLEGTlicensing-and shares experience with other VPA Partner Countries." Forest Law Enforcement, Governance and Trade Independent Market Monitor. Accessed August 22, 2019. http://www.flegtimm.eu/index.php/newsletter/flegt-policynews/91-ghana-feels-ready-to-start-flegt-licensing-and-shares-experience-with-other-vpa-partner-countries
- <sup>40</sup> Government of Ghana, Forestry Commission. N.d. "Timber Legality Transparency Portal." Government of Ghana, Forestry Commission. Accessed August 22, 2019. https://www.ghanatimbertransparency.info/#!/home
- <sup>41</sup> FAO. 2018. "Transparency in Ghana's timber sector improved through public information portal." FAO. Accessed August 22, 2019. http://www.fao.org/in-action/eu-fao-flegt-programme/news-events/news-details/en/c/1114430/
- <sup>42</sup> Hoare, Alison, David Young, Thiago Uehara, Mustapha Kaluwe Seidu, et al. 2020. "Forest Sector Accountability in Cameroon and Ghana, Exploring the Impact of Transparency and Participation." Chatham House. Forest Sector Accountability in Cameroon and Ghana | Chatham House – International Affairs Think Tank
- <sup>43</sup> Hoare, et al., "Forest Sector Accountability in Cameroon and Ghana."
- <sup>44</sup> Arts, Bas, Bas Heukels, Esther Turnhout. 2021. "Tracing timber legality in practice: The case Ghana and the EU." Forest Policy and Economics 130 (2021). Tracing timber legality in practice: The case of Ghana and the EU (wur.nl)
- <sup>45</sup> Hoare, et al., "Forest Sector Accountability in Cameroon and Ghana."
- <sup>46</sup> EU FLEGT Facility, "Ghana and EU finalise assessment of Ghana Timber Legality Assurance System."
- <sup>47</sup> EU FLEGT Facility, "Ghana and EU finalise assessment of Ghana Timber Legality Assurance System."
- <sup>48</sup> EU FLEGT Facility, "Ghana and EU finalise assessment of Ghana Timber Legality Assurance System."
- <sup>49</sup> Forest Watch Ghana. 2021. "Government Dragged to Court Over Issuance of 'Special Permits' as Timber Rights." Forest Watch Ghana. Government Dragged to Court Over Issuance of 'Special Permits' as Timber Rights – Forest Watch Ghana
- <sup>50</sup> Fern. 2021. "Ghana: A New Minister has Boosted Momentum for FLEGT Licensing." Fern, July 14. https://www.fern.org/

publications-insight/ghana-a-new-minister-has-boosted-momentum-for-flegt-licensing-2369/

- <sup>51</sup> Forest Watch Ghana. 2021. "Stop the Issuance of Special Permits MLNR Instructs FC." Forest Watch Ghana September 8. http://forestwatchghana.org/news/stop-the-issuance-of-special-permits-mlnr-instructs-fc/
- <sup>52</sup> EU FLEGT Facility, "Ghana and EU finalise assessment of Ghana Timber Legality Assurance System."
- <sup>53</sup> Ankomah, Frank, Kyereh Boateng, Winston Asante and Michael Ansong. 2021. "Implementation gaps in forest management prescriptions and noncompliance in forest regulations in Ghana: Case study of four forest reserves." Environment, Development and Sustainability (2021). https://link.springer.com/content/pdf/10.1007/s10668-021-01828-9.pdf
- <sup>54</sup> Ankomah, et al., "Implementation gaps in forest management prescriptions and noncompliance in forest regulations in Ghana."
- <sup>55</sup> Ankomah, Frank, Boateng Kyereh, Michael Ansong, and Winston Asante. 2020. "Forest Management Regimes and Drivers of Forest Cover Loss in Forest Reserves in the High Forest Zone of Ghana." International Journal of Forestry Research, Vol. 2020. Forest Management Regimes and Drivers of Forest Cover Loss in Forest Reserves in the High Forest Zone of Ghana (hindawi.com)
- <sup>56</sup> Ankomah, et al. "Forest Management régimes and Drivers of Forest Cover Loss."
- <sup>57</sup> Ankomah, et al. "Forest Management régimes and Drivers of Forest Cover Loss."
- <sup>58</sup> Ankomah, et al. "Forest Management régimes and Drivers of Forest Cover Loss."
- <sup>59</sup> Ankomah, et al. "Forest Management régimes and Drivers of Forest Cover Loss."
- <sup>60</sup> Dumenu, William Kwadwo. 2019. "Assessing the impact of felling/export ban and CITES designation on exploitation of African rosewood (Pterocarpus erinaceus)." Biological Conservation 236 (2019): 124-133.
- <sup>61</sup> Dumenu, "Assessing the impact of felling/export ban and CITES designation on exploitation of African rosewood."
- <sup>62</sup> Environmental Investigation Agency. 2019. "Ban-Boozled. How Corruption and Collusion Fuel Illegal Rosewood Trade in Ghana." EIA. Accessed August 22, 2019. https://content.eia-global.org/posts/documents/000/000/906/original/BAN\_ Boozled\_Rosewood\_Ghana.pdf?1564513559
- <sup>63</sup> Environmental Investigation Agency. 2021. "Rosewood Revealed." EIA. https://www.rosewoodrevealed.org/
- <sup>64</sup> EIA, "Rosewood Revealed."
- <sup>65</sup> EIA, "Ban Boozled."
- <sup>66</sup> Kansanga, Moses Mosonsieyiri, Dinko Hanaan Dinko, Hanson Nyantakyi-Frimpong, Godwin Arku, and Isaac Luginaah. 2021. "Scalar politics and black markets: The political ecology of illegal rosewood logging in Ghana." Geoforum 119 (2021): 83-93. https://www.sciencedirect.com/science/article/pii/S0016718520303043
- <sup>67</sup> Kasanga, "Scalar politics and black markets."
- <sup>68</sup> EIA, "Ban Boozled."
- <sup>69</sup> EIA, "Ban Boozled."
- <sup>70</sup> EIA, "Ban Boozled."
- <sup>71</sup> Kansanga, et al., "Scalar politics and black markets."
- <sup>72</sup> Dogbevi, Emmanuel K. 2020. "Ghana and the rosewood curse. Ghana Business News, February 6. Accessed February 2020. Ghana and the rosewood curse - Ghana Business News
- <sup>73</sup> Ghana Business News. 2020. "Ghana government blamed for continued illegal logging of rosewood." Ghana Business News, August 15. https://www.ghanabusinessnews.com/2020/08/15/ghana-government-blamed-for-continuedillegal-logging-of-rosewood/
- <sup>74</sup> Ghana Business News. 2020. "Rosewood harvesting, an organized crime agains northern Ghana CIKOD." Ghana Business News, October 31. https://www.ghanabusinessnews.com/2020/10/31/rosewood-harvesting-an-organisedcrime-against-northern-ghana-cikod/
- <sup>75</sup> Dogbevi, Emmanuel K. 2021. "He was Minister when Ghana rosewood was logged and exported to China, now appointed Ambassador to that country." Ghana Business News, March 7. https://www.ghanabusinessnews.com/2021/03/07/ he-was-minister-when-ghana-rosewood-was-logged-and-exported-to-china-now-appointed-ambassador-to-thatcountry/

- <sup>76</sup> Ghana Business News. 2020. "Name and shame big-wigs behind rosewood logging Participants." Ghana Business News, October 29. https://www.ghanabusinessnews.com/2020/10/29/name-and-shame-big-wigs-behind-rosewoodlogging-participants/
- <sup>77</sup> J. Boakye, "Understanding motivations for violation of timber harvesting regulation: the case of chainsaw operators in Ghana," Forest Policy and Economics, vol. 87, pp. 85–92, 2017.
- <sup>78</sup> Ankomah, et al. "Forest Management régimes and Drivers of Forest Cover Loss."
- <sup>79</sup> Arts, Bas, Bas Heukels, and Esther Turnhout. 2021. "Tracing timber legality in practice: The case of Ghana and the EU." Forest Policy and Economics 130 (2021): 102532. Tracing timber legality in practice: The case of Ghana and the EU (wur. nl)
- <sup>80</sup> Hoare, et al., "Forest Sector Accountability in Cameroon and Ghana."
- <sup>81</sup> Hoare, et al., "Forest Sector Accountability in Cameroon and Ghana."
- <sup>82</sup> Arts, et al., "Tracing timber legality in practice."
- <sup>83</sup> Arts, et al., "Tracing timber legality in practice."
- <sup>84</sup> Alhassan, Ibrahim. 2019. "Ghana: Illegal logging of Rosewood and the Chinese touch." Africa Feeds, June 16. https:// africafeeds.com/2019/06/16/ghana-illegal-logging-of-rosewood-and-the-chinese-touch/
- <sup>85</sup> Ghana Web. 2021. "13 containers of imported rosewood impounded at Tema Port." Ghana Web, August 28. https://www. ghanaweb.com/GhanaHomePage/NewsArchive/13-containers-of-imported-rosewood-impounded-at-Tema-Port-1343170

This Timber Legality Country Risk Dashboard (Dashboard) was drafted by Forest Trends and funded by a grant from the United States Department of State, Bureau of Oceans and International Environmental and Scientific Affairs. The opinions, findings, and conclusions stated herein are those of the authors and do not necessarily reflect those of the United States Department of State or any other party. The United States supports efforts to raise awareness of and combat global illegal logging and associated trade. This dashboard contributes to these ongoing efforts.

The Dashboards have been compiled from publicly available information sources to support risk assessments on the legality of timber products entering international supply chains. The Dashboards are for educational and informational purposes only. The Dashboards have been drafted with input from the Environmental Investigation Agency (EIA) and are subject to external peer review. The Dashboards will be updated periodically based on newly available information.

Forest Trends shall not be liable for any indirect, incidental, consequential, special, punitive or other similar damages, including but not limited to loss of revenues, lost profits, lost data or business interruption or other intangible losses (however such losses are qualified), arising out of or relating in any way to any party's reliance on the information contained in the Dashboards.

