



Timber Legality Risk Dashboard: Zambia

Drafted as of: September 2021

SUMMARY OF LEGALITY RISKS

Risk Score: 67.6 (Higher-Risk^a)¹

Conflict State: NO

Log Export Restriction in Effect: YES²

Import Regulation in Effect: NO

- Despite improvements to the legislative framework for forest management, particularly over the last decade, illegal logging is still reportedly widespread in Zambia.
- The majority of Zambia's timber trade is with China, where high proportions of logs and sawnwood are exported illegally without valid harvest/sawmill licenses.
- Intermittent harvest moratoria and export bans for some species have been announced publicly in recent years, without written legislation which has undermined enforcement.
- Corruption in the forest sector has been tied to the highest-level political actors.
- Regional trafficking of illegal timber remains a problem and is linked with the illegal wildlife trade.
- Enforcement remains weak and continues to undermine harvest and export bans.

TRADE PROFILE OF FOREST PRODUCTS^{b, c, 3, 4}

Total Imports (2019): \$118.24 million

Total Exports (2019): \$50.86 million.

\$178 thousand (0.3%) exported to "regulated markets"^d

SUMMARY OF HIGHEST PRODUCT-LEVEL RISKS

**Exports - Top Products Exported to the US by 2012-2019
Combined Value⁵**

- Sawnwood (HS4407)
- Veneer (HS4408)
- Marquetry (HS4420)
- Wood Furniture - Other (HS940360)
- Tableware & Kitchenware (HS4419)
- Wood Furniture - Seating (HS940169)
- Wood Furniture - Kitchen (HS940340)

Since 1997^{5, 6} Zambia has banned the export of all charcoal,⁷ peelers and saw logs of any species, and non-finished timber products from natural forests. Generally, only forest products allowed for export are sawnwood, railway sleepers, poles from planted species, finished timber products, and plantation trees, although additional exceptions can be made by the Director of Forestry.^f This legislation also establishes export standards for sawnwood, prohibits the production of sleepers of certain species, and bans individual forest concession holders from exporting more than 75 percent of their annual timber production (except when sourced from plantation species or when exported as finished timber products).⁸

Summary of Highest Product-Level Risks (continued)

These restrictions were reaffirmed by the Forests (Export of Timber) Regulations of 2015,⁹ which in turn became the basis for Zambia's 2017 comprehensive ban on the export of all log^{10,11,12} which remains in force. In 2017, Zambia also banned the transit of logs of indigenous tree species from other countries through Zambia.¹³

Zambia has also alternately imposed and lifted bans on the harvesting and export of mukula (*Pterocarpus tinctorius*) since 2013, with the most recent iteration commencing in early 2017 and prohibiting "mukula timber harvesting and movement."¹⁴ This policy is presumed to remain in force.¹⁵ However, many of the bans on mukula harvesting and trade since 2013 were never supported by written legislation, and were instead only ever disseminated through ministerial press releases and radio broadcasts.^{16,17} As a result, there has been widespread legal ambiguity on the legality of the mukula trade which persists today.¹⁸

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 Zambia.

CITES-Listed Species:

Appendix II:

- **Mukula** (*Pterocarpus tinctorius*)¹⁹
- **African Cherry** (*Prunus africana*)²⁰
- **Rosewood** (*Dalbergia* spp.) including *Dalbergia melanoxylon*

Banned from harvest:

- **Mukula** (*Pterocarpus tinctorius*)^{21,22}
- **Zambezi Teak** (*Baikiaea plurijuga*)²³

Other species:

Natural forests:

- **Muchesa** (*Julbernardia paniculata*)
- **Zebrawood** (*Brachystegia spiciformis*)
- *Brachystegia boehmii*
- **Mopane** (*Colophospermum mopane*)
- **Mutondo** (*Isoberlinia angolensis*)
- **Horn pod tree, wild rubber** (*Diplorhynchus condylocarpon*)
- **Kudu berry** (*Pseudolachnostylis maprouneifolia*)
- **Mukwa** (*Pterocarpus angolensis*)
- **African blackwood** (*Erythrophleum africanum*)
- **Mbola** (*Parinari curatellifolia*)²⁴
- **African Rosewood** or **False Mopane** (*Guibourtia coleosperma*)²⁵
- **Afzelia** or **Doussie** (*Afzelia quanzensis*)²⁶
- **Mopane** (*Colophospermum mopane*)²⁷

Plantation species:

- **Pine** (*Pinus kesiya*, *Pinus oocarpa*, *Pinus devoniana*, synonym *Pinus michaocana*)^{28,29}
- **Eucalyptus** (*Eucalyptus grandis*, *Eucalyptus cloeziana*)³⁰

FORESTRY SECTOR

Forested Area: 544.81 million ha (69.6% protected)³¹

Deforestation Rate: 0.41% annually³²

Forest Ownership (as of 2015):³³

- 2.92 million ha privately-owned (6.4%)
- 12.00 million ha publicly-owned (26.2%)
- 30.84 million ha owned by local communities or states (67.4%)

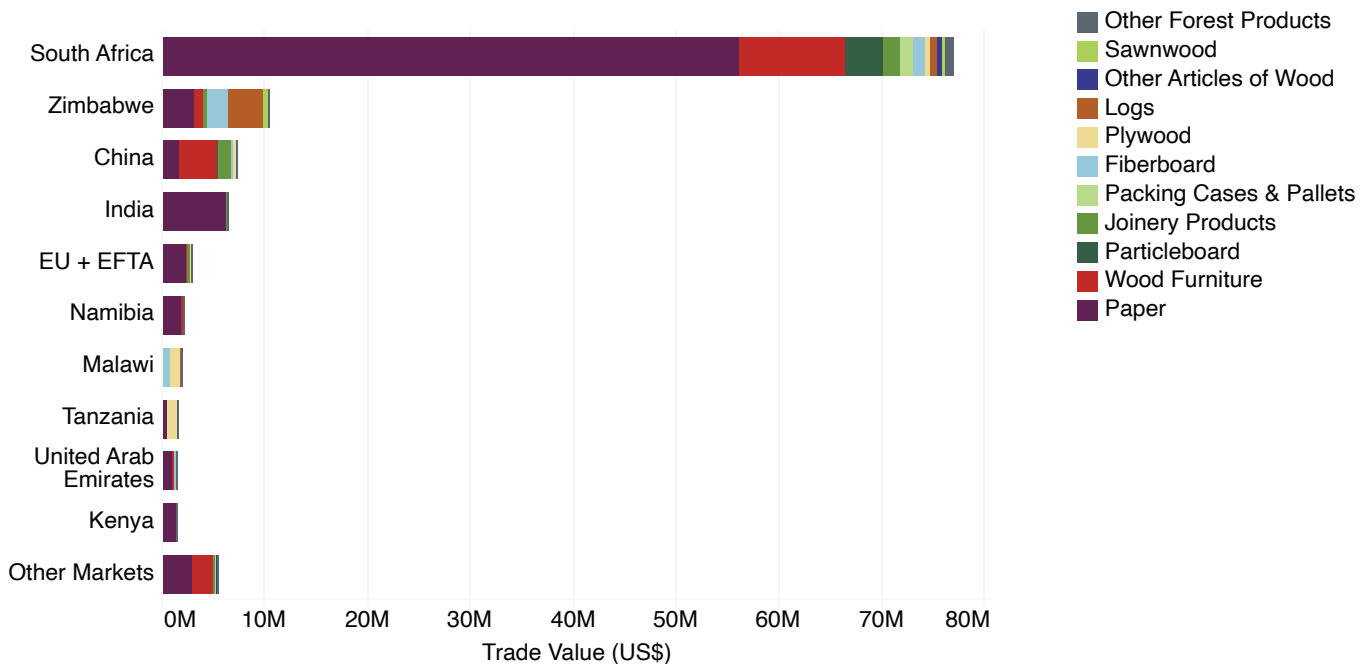
Certified Forests:

- As of September 2021, FSC reports 17,000 hectares of certified forest)³⁴

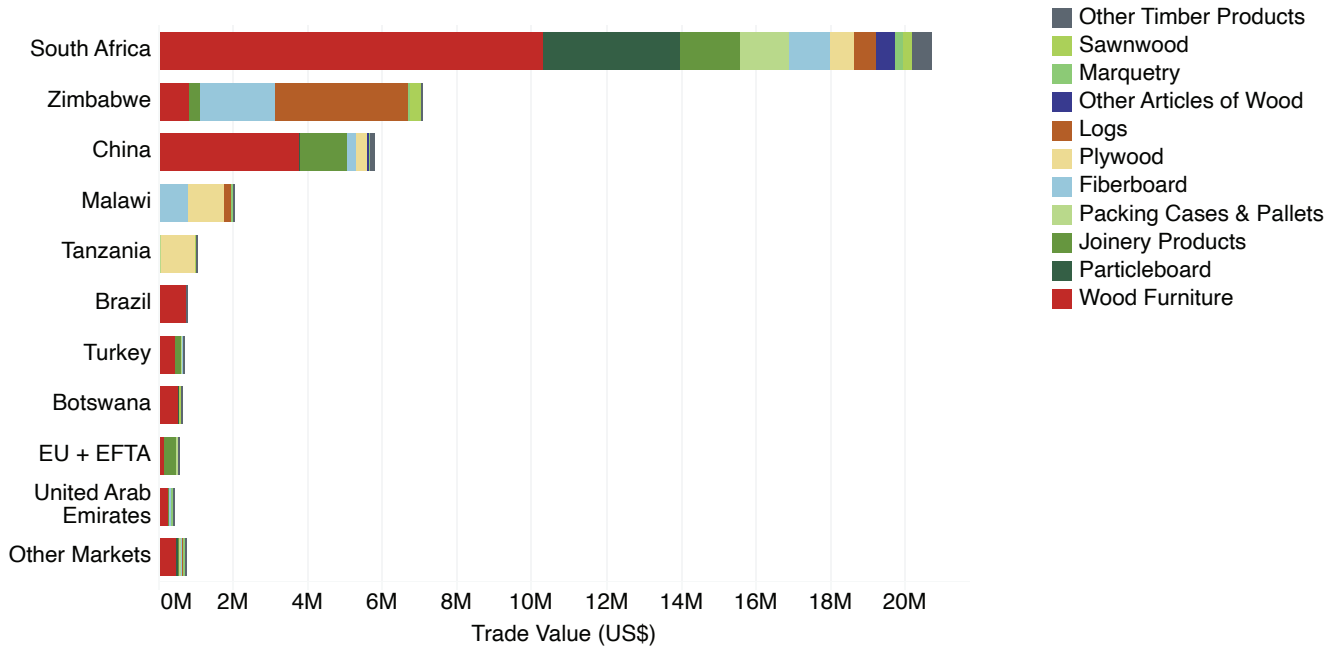
Domestic Production:³⁵

- Wood Fuel: 23.03 million m³ (2019)
- Logs: 2.69 million m³ (2019)
- Charcoal: 1.30 million tonnes (2019)
- Wood Chips: 201 thousand m³ (2019)
- Sawnwood: 190 thousand m³ (2019)
- Wood Pellets: 46 thousand tonnes (2019)
- Particleboard: 16 thousand m³ (2019)
- Plywood: 5 thousand m³ (2019)
- Veneer: 4 thousand m³ (2019)
- Paper: 2 thousand tonnes (2019)

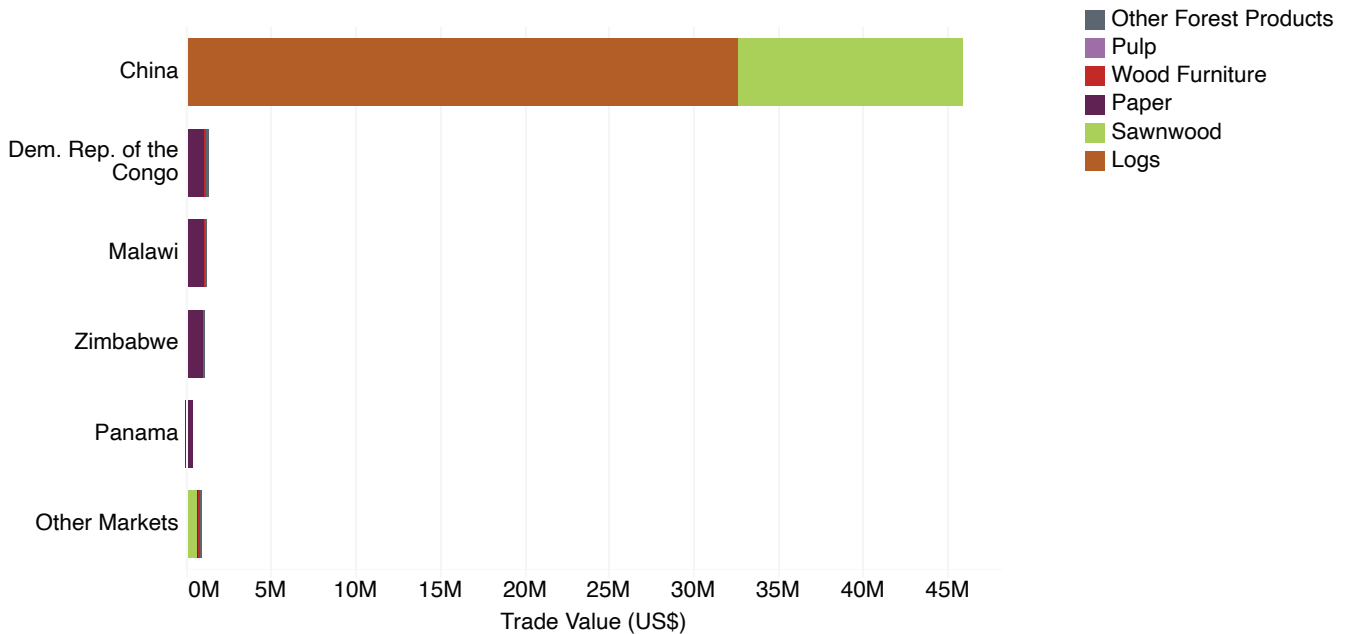
ZAMBIA'S TOP SOURCE MARKETS FOR FOREST PRODUCTS BY VALUE (2019)^{6,36}



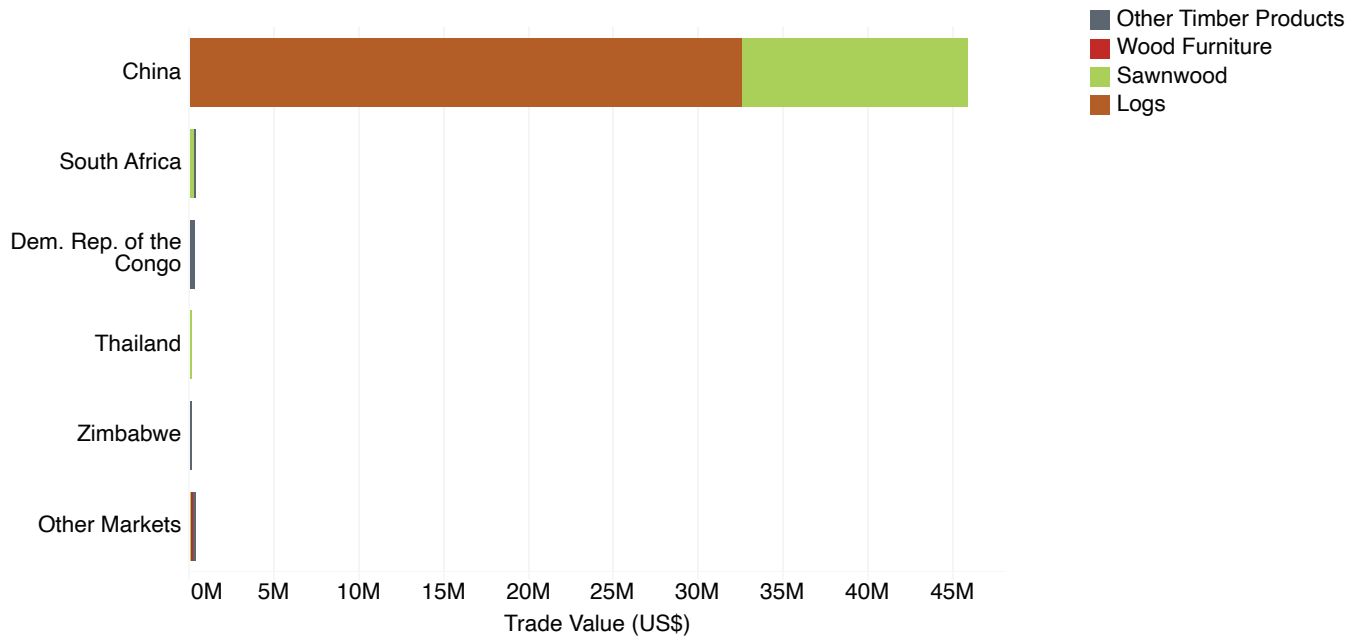
ZAMBIA'S TOP SOURCE MARKETS FOR TIMBER PRODUCTS BY VALUE (2019)³⁷



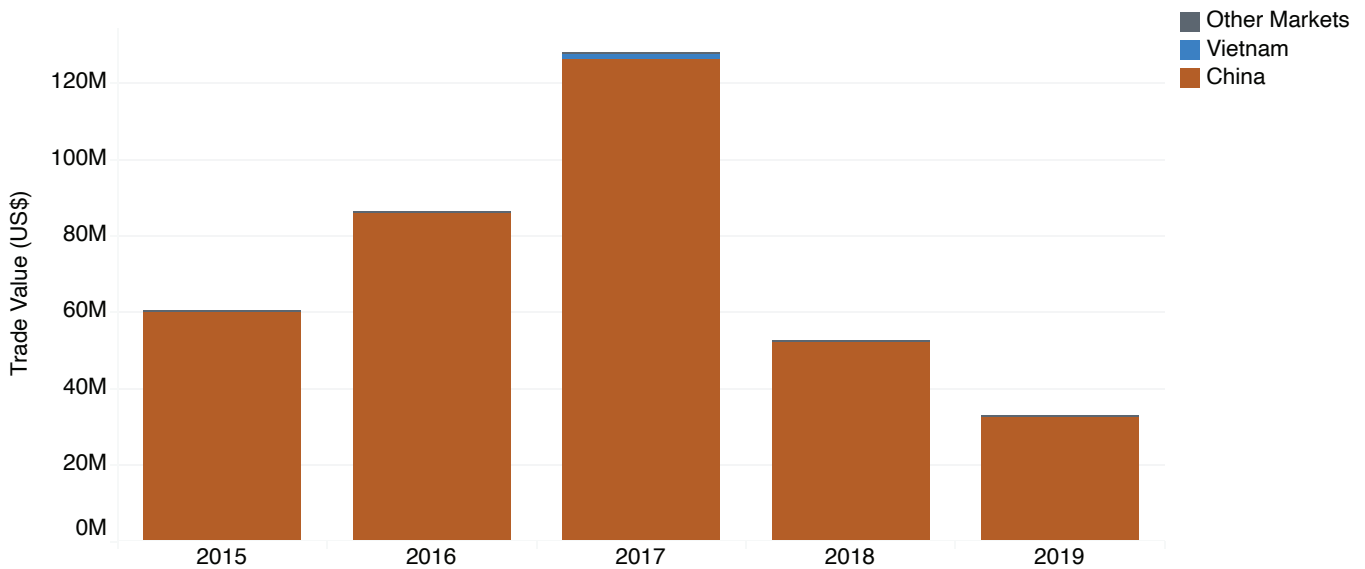
ZAMBIA'S TOP DESTINATION MARKETS FOR FOREST PRODUCTS BY VALUE (2019)³⁸



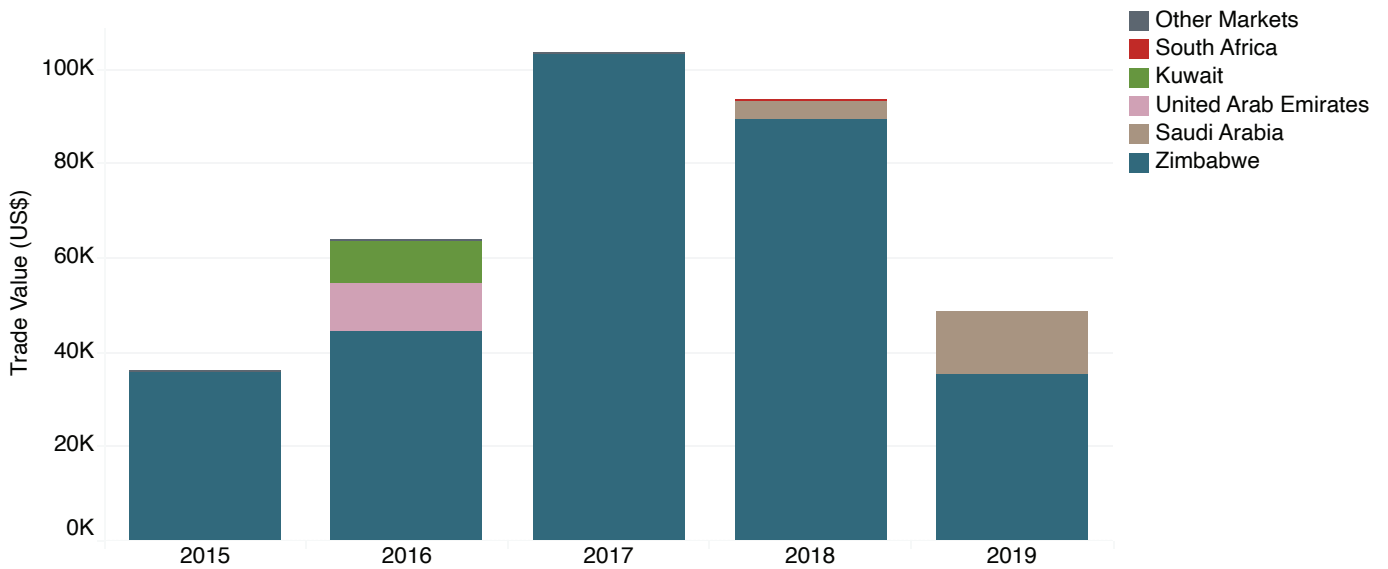
ZAMBIA'S TOP DESTINATION MARKETS FOR TIMBER PRODUCTS BY VALUE (2019)³⁹



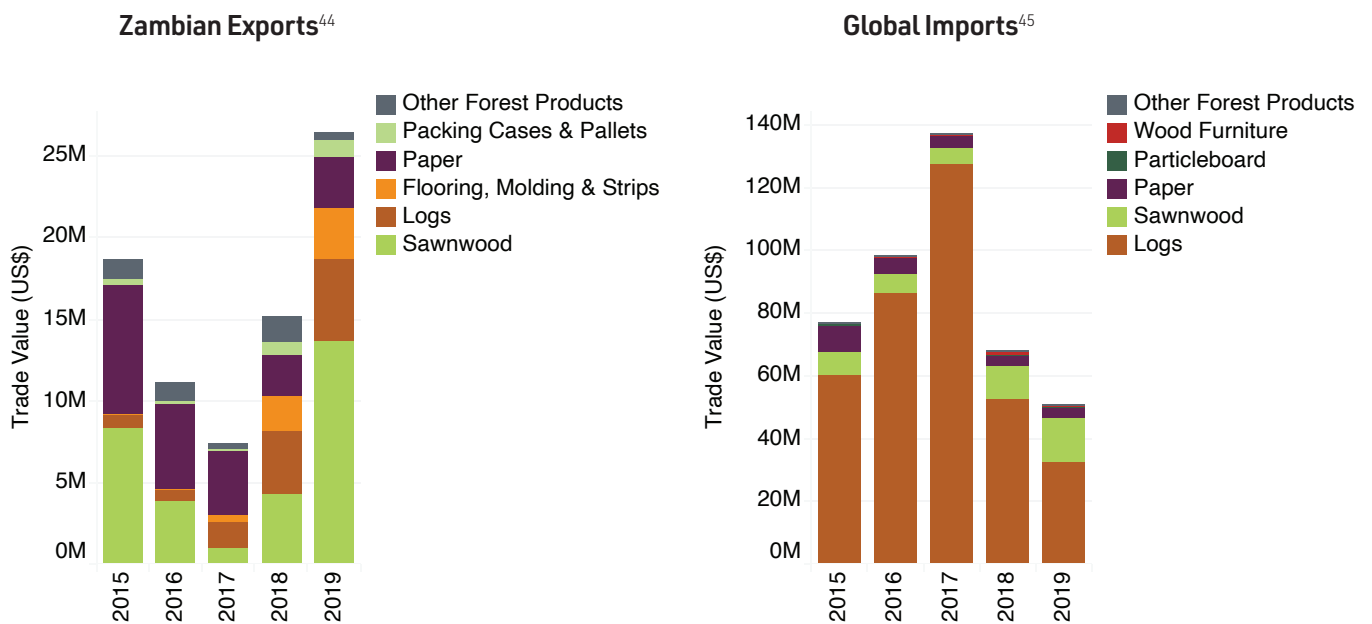
HIGH-RISK EXPORTS: LOG EXPORTS IN YEARS IN WHICH ZAMBIA HAD AN ACTIVE LOG EXPORT RESTRICTION⁴⁰ (2015 - 2019)⁴¹



HIGH-RISK EXPORTS: CHARCOAL EXPORTS IN YEARS IN WHICH ZAMBIA HAD AN ACTIVE CHARCOAL EXPORT RESTRICTION⁴² (2015 - 2019)⁴³



TRADE DISPARITIES: ZAMBIAN REPORTED EXPORTS AND GLOBAL IMPORTS FROM ZAMBIA (2015 - 2019)



- **Despite improvements to the legislative framework for forest management, particularly over the last decade, illegal logging is still reportedly widespread in Zambia.**

Zambia's forest area is estimated at 44.8 million hectares or 60 percent of the total land area.^{46,47} Natural forests account for 99.9 percent of the forest area and include open woodlands, such as Miombo, Kalahari, Mopani, and Munga forests. The main species growing in these natural forests include msasa (*Brachystegia spiciformis*), tonga (*Brachystegia longifolia*), muchesa (*Julbernardia paniculata*) and *Entandrophragma devevayi*.⁴⁸ Of the total estimated growing stock of timber in natural forests, around 12 percent is commercial.⁴⁹ However, exploitation by both domestic and international companies has focused on a handful of species considered under immense pressures, namely *Baikiaea plurijuga*, *Pterocarpus angolensis* (mukwa, or African teak) and *Guibourtia coleosperma* (African rosewood).⁵⁰

Forest plantations account for just 52,000 hectares or 0.1 percent of the forest area and have reportedly declined in area since 1990.⁵¹ The majority of the plantations occur in the Copperbelt Province, situated in the border region between northern Zambia and the southern Democratic Republic of the Congo (DRC), and are managed by the state-owned enterprise ZAFFICO.^{h,52} Roughly 80 percent of the plantations are growing pine (*Pinus* spp.) with 20 percent reportedly growing eucalyptus (*Eucalyptus* spp.).⁵³

The majority of the forest area in Zambia is designated for protection and conservation (70 percent).⁵⁴ This reflects changing policies regarding forest resources which date back to the colonial delineation of national and local forest resources during the 1940s.⁵⁵ At that time, commercial production of timber and charcoal was a priority and open areas of forests were not included in customary law even though the open areas included high-value timber and charcoal. Since then, there have been improvements to the legislative framework for forest management,⁵⁶ including requiring nationwide forest inventories (e.g. Forest Act No. 39 of 1973), sustainable forest resource management, and local community participation (e.g. Forest Policy of 1998), and a commitment to support sustainable harvesting, private sector participation, and valuation (e.g. Forest Policy of 2014). The current operating legal system falls under the Forests Act No 4 of 2015,⁵⁷ which has been lauded as a major opportunity for sustainable forest management, as the Act emphasizes participatory forest management, seen as particularly important in the context of low state capacity and large areas of forest under customary tenure (62 percent of Zambia's natural forests are under customary ownership).⁵⁸

Zambia has roughly 700,000 hectares of concessions allocated for production.⁵⁹ Commercial harvesting is only permissible with a license.⁶⁰ The Forest Department under the Ministry of Land and Natural Resources (MLNR) oversees licenses and fees for concessions, production, sawmilling operations, and exports.^{i,61}

Government, NGO and World Bank reports indicate that illegal logging and trade is rife in Zambia. Most commercial forestry is informal, largely driven by exports and domestic demand for fuelwood, logs and sawnwood.⁶² The World Bank reports that the informality, defined as carrying out economic activities outside established control structures of the government, is mainly rooted in the gap between market demand and the lack of raw material from licensed sources (plantations and natural forest).⁶³ As such, the informal economy in Zambia, while operating outside government regulations, still produces and distributes a broad array of economically valuable goods and services through a network of unregistered entities.⁶⁴

- **The majority of Zambia's timber trade is with China, where high proportions of logs and sawnwood are exported illegally without valid harvest/sawmill licenses.**

While a high proportion of illegal timber (mainly log and charcoal/fuelwood) remains on the domestic market, valuable tree species are reportedly sourced without the appropriate licenses.⁶⁵ According to figures from Zambia's MLNR published by the World Bank, over 80 percent of roundwood, and almost all fuelwood is sourced without a valid harvest license.⁶⁶ Roughly 70 percent of the logs produced in Zambia are exported with estimates suggesting that as much as 90 percent of the trade is illegal, with the logs exported without a valid harvest license.⁶⁷

Zambia has a limited wood processing industry which accounts for low volumes of sawnwood exports. Estimates suggest that there are roughly 1,100 small scale chain sawing and pit sawing operations operating on small or casual licenses.⁶⁸ While small-scale sawmills primarily operate on plantation estates, pit saws reportedly process trees from natural forests. MLNR figures published by the World Bank suggest that 95 percent of Zambia's sawnwood is produced without licenses and that sawmills and pit saws frequently exceed their licensed volumes.⁶⁹ Most work with casual licenses identified for subsistence use timber but reportedly still sell to traders for domestic and international markets.⁷⁰

TABLE 1: LICENSED AND UNLICENSED PRODUCTION AND EXPORT OF ROUNDWOOD, POLES AND WOOD-FUEL IN 2015⁷¹

Forest produce	Licensed			Unlicensed		
	Production (m ³)	Exports (m ³)	(m ³) Exports (% of production)	Production (m ³)	Exports (m ³)	(m ³) Exports (% of production)
Indigenous (species) timber and poles	98,094	90,149	92%	4,660,003	2,527,921	54%
Exotic (species) timber and poles	838,861	229,694	27%			
Fuelwood and charcoal	223,809	26,767	12%	7,386,481	1,567,518	21%
Total	1,160,765	346,610	30%	12,046,484	4,095,440	34%

In all instances, as indicated by Table 1, timber of indigenous species from natural forests should be considered high risk. Based on MNLR figures, just 2.1 percent of timber of indigenous species from natural forests was harvested and 3.4 percent exported with a valid license in 2015. In contrast, timber of exotic, plantation species, tends to be harvested and exported, with a valid license.

A substantial volume of unlicensed timber originates from legal conversion of forests without subsequent formalization.⁷² The Forest Act allows trees on state and customary land to be felled and land cleared by the local community for agricultural or other use without any license. If the timber is sold, it would require corresponding licenses, but these are rarely requested by the producers and/or are rarely issued by Forest Department.⁷³ As such, desire by the end market and operators to buy timber as quickly and as cheaply as possible (not restrained by a stronger and more coherent forest governance regime) has led to the development of a de facto illegal process for accessing, producing and exporting the timber.⁷⁴

Export of logs increased over 6,000 percent by volume between 2010 and 2017 while sawnwood exports rose by roughly 380 percent between 2010 and 2019.⁷⁵ For both logs and sawnwood, 99 percent of exports are destined for China. Around 21 percent of fuelwood and charcoal produced is exported, mainly to neighboring countries like DRC, Malawi and Botswana.⁷⁶

- **Intermittent harvest moratoria and export bans for some species have been announced publicly in recent years, without written legislation which has undermined enforcement.**

Zambia is estimated to have lost over a million hectares of *Pterocarpus* species, a high value and rare “lookalike” rosewood species, between 2000 and 2014.⁷⁷ In response to the escalating logging rates, particularly of the rare rosewood species mukula (*Pterocarpus tinctorius*), the government banned logging for a few months in 2014 before lifting the ban in 2015.⁷⁸ A new ban on harvesting and transit was imposed in January 2016, which was also lifted and then reinstated.⁷⁹ In February 2017, the MLNR announced a ban on the export of logs of all tree species, although the announcement included the ability for the Minister, in consultation with the Director of Forestry, to “issue export permits for any timber if that is deemed necessary in the interest of the Republic”.^{80,81} An additional ban was placed on the movement of logs beyond 100 kilometers from the harvest zone, in order to promote value added processing and job creation in rural areas.⁸²

In April 2017, the Zambian Minister of Lands and Natural Resources, announced a new ban on all logs “in transit” on Zambian soil transported by foreigners. This ban was one of the few supported by a legally binding statutory instrument.⁸³ The transit ban resulted in hundreds of log trucks being blocked at the DRC and Tanzanian border.⁸⁴

The log export bans have reportedly not been successful in reducing the illegal timber trade as enforcement of the bans has been poor.⁸⁵ In issuing and lifting various regulations in rapid succession over the years, the Zambian government has reportedly left enforcement agencies on the ground unclear about what rules applied where and when.⁸⁶ This has reportedly facilitated corruption and played into the hands of the political elites.^{87,88}

- **Corruption in the forest sector has been tied to the highest-level political actors.**

The soaring illegal and unsustainable harvest of mukula and the illegal export of logs has been the subject of growing criticism from the public and leaders in Zambia. A recent report by the Zambian Auditor General on Sustainable Forest Management confirms the concerns of citizens and lawmakers, concluding that “Failure by the FD [Forest Department] to carry out

monitoring and control has led to illegal activities by concessionaires resulting in loss of revenue for the Government and the destruction of the forests due to the use of unsustainable harvesting practices.⁸⁹ Zambian Members of Parliament have repeatedly questioned the sustainability and legality of mukula harvest driven by Chinese demand. The true scale of mukula exports is difficult to assess, as Zambian and Chinese official customs' data are mismatched and the business is largely informal, operating outside the legal framework and with limited government oversight.⁹⁰ The Environmental Investigation Agency (EIA) report that at least 2,000 cubic meters of mukula was smuggled out of Zambia per month from June 2017 to May 2019, generating around \$7.5 million in bribes and "informal fees" per year.⁹¹ The International Institute for Environment and Development (IIED) report that the mukula trade generated revenue losses of about \$3.2 million, and estimated bribes paid to state officials of about \$1.7 million.⁹²

EIA report that the illegal harvest and export of mukula has been assisted by senior government officials, including the office of the former Zambian President and his family, MLNR⁹³ and, most recently, the Zambia Agency For Persons With Disabilities (ZAPD), the Ministry of Community and Social Services, the Ministry of Tourism and Arts, and the office of the vice president.⁹⁴ EIA investigators found that the illegal trade in mukula was made possible through the state-owned company Zambia Forestry and Forest Industries Corporation Limited (ZAFFICO) which has been able to export "thousands of freshly cut mukula logs, despite a ban in place".⁹⁵

ZAFFICO's role in the trade of mukula is complex. In June 2017, the government appointed ZAFFICO to export seized illegal mukula stockpiles that had been confiscated during the periods in which a harvest ban had been in place. The Minister of Lands and Natural Resources informed the Zambian Parliament that this sale of illegal mukula had generated \$4.3 million from August 2017 to November 2018.⁹⁶ Logs confiscated by the government and officially cleared by relevant institutions were allowed to be exported by ZAFFICO. In order to "legalize" these exports, ZAFFICO issued so-called "special permits" for the confiscated timber to companies, but EIA report that these special permits have ultimately facilitated the transport and export of all mukula, including newly harvested mukula that had not been confiscated from illegal loggers.⁹⁷ ZAFFICO-issued special permits specify the means of transport and the port of loading for export (reportedly often Durban in South Africa in recent years). Based on the ZAFFICO special permit, the army, security and police issue the export permit and required transportation documents for the shipment to Durban through Zambia. These documents are also reportedly used to facilitate the customs clearance when the timber is shipped out of South Africa.⁹⁸ New findings, published by EIA in September 2021, suggest that illegal exploitation and trade in mukula persists unabated, benefitting a small number of well-connected and wealthy individuals.⁹⁹

According to EIA's research, corruption is a key enabler of these trafficking operations, with special permits to export mukula logs reportedly granted in exchange for votes and other political favors.¹⁰⁰ While Zambia has passed an Anti-Corruption Act which prohibits corruption, extortion, bribery of a foreign public official, abuse of office and money laundering, Zambia's legislation does not address facilitation payments and the maximum allowable value of gifts or hospitality is not clearly regulated.¹⁰¹ Furthermore, enforcement of Zambia's anti-corruption legislation is considered to be lacking.¹⁰² Red tape, low salaries of public officials, challenging regulations, and overall lack of transparency and accountability provide both incentives and opportunities for corruption, particularly in the police and public sector. Extorting bribes at roadblocks is common practice, as is asking for favors or illegal payments for performing regular police functions.¹⁰³

In 2019, species including mukula (*Pterocarpus tinctorius*) were added to Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), with the new restrictions coming into effect on November 26, 2019.¹⁰⁴

- **Regional trafficking of illegal timber remains a problem and is linked with the illegal wildlife trade.**

The rapidly increasing demand from China in recent years for "lookalike" rosewood species like mukula has had a marked impact on east and southern Africa. As these species have become less available, through stricter conservation measures and/or enforcement of logging and export bans, the trade has shifted to alternate species as replacements, particularly in the *Pterocarpus* genus.¹⁰⁵ Primary areas for sourcing/extracting mukula located in southern DRC (Katanga Plateau) and Zambia (Mamba region and Northwest region) are ultimately located in landlocked forests, meaning that traffickers must pass through several countries to reach a port from where the timber can be shipped internationally.^{106,107} The "boom-bust" and "ban-lift ban" cycles in Zambia, but also in neighboring countries in the region, have further incentivized regional, cross border movement of logs to disguise where they were harvested.¹⁰⁸ Zambia's Financial Intelligence Centre reports that the lack of a ban on the harvest, transport and export of mukula in the DRC is being exploited to allow Zambian mukula to be exported with DRC as the country of origin.¹⁰⁹

According to EIA, mukula logs have been shipped out of Africa via three different routes: the Eastern Route to the port of Dar es-Salaam in Tanzania, the Western Route to Walvis Bay port in Namibia, and the increasingly used Southern Route to Durban in South Africa.¹¹⁰ Other reports indicate that Zambian harvested mukula can be shipped from at least five African countries including Kenya, Tanzania, Mozambique, South Africa and Namibia. From these countries of export, the mukula may be transited or transhipped through Madagascar, India, the Philippines and Vietnam where it may be mixed with other species.¹¹¹ This means that there is a risk that illegally harvested Zambian mukula may be exported from other countries in the region/ with other countries listed as the country of origin or listed as another species.^{k,112}

EIA report that, as with other rosewood species, the illegal mukula trade appears to be linked to illegal trade in endangered animal parts, and there are indications that routes used by wildlife traffickers to supply Asian markets are the same for animal and timber products.¹¹³ Zambia is particularly vulnerable to the illicit trade in ivory due to largely unprotected border with countries that are sources for ivory such as Angola, DRC, Mozambique, Tanzania.¹¹⁴

- **Enforcement remains weak and continues to undermine harvest and export bans.**

The Forest Department is responsible for enforcement, overseeing an area equivalent to twice the size of the United Kingdom which is largely inaccessible without significant resource allocation as well as monitoring and enforcing the legal requirements covering small-scale loggers and companies operating across the country.¹¹⁵ All this is to be done with an estimated 655 staff (including administrative staff) stationed at either their headquarters in the capital, Lusaka, and in the country's 10 provinces and 104 Districts. These are run by District Forestry Officers (DFO) who must carry out all district level functions including extension services to local communities, enforcement of regulations through licensing and patrols, managing protected forests, collecting revenues from the sale of forest products, and managing forest woodlots and plantations.¹¹⁶

Reports indicate that the Forest Department's ability to enforce and take action against illegal activities is challenged by power struggles with other government departments which are often reportedly competing for priority funds.¹¹⁷ As a result, inadequate capacity and funds have weakened the ability for the Forest Department to monitor and enforce in production areas.¹¹⁸ For example, between 2012 and 2015, the government budgeted on average about \$5.5 million per year for the Forest Department. Yet the Forest Department actually only received on average about 33 percent of the allocation, with the disbursement-to-allocation ratio reaching about 19 percent in 2014.¹¹⁹ Capacities for law enforcement and monitoring are weak even in protected areas, and largely overstretched.¹²⁰ As such, law enforcement is restricted to roadblocks on timber transport roads and collection of conveyance fees as a condition of passage.¹²¹

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. Cerutti, Paolo O., Davison J. Gumbo, Kaala B. Moombe, G. C. Schoneveld, Robert Nasi, N. Borchard, and Xiaoxue Weng. 2018. "Mukula (rosewood) trade between China and Zambia." Vol. 211. CIFOR. <https://doi.org/10.17528/cifor/006880>
2. Environmental Investigation Agency and Protection des écorégions de miombo au Congo. 2019. "Scheduled Extinction: Our Last Chance to Protect Threatened African Mukula Trees." EIA and PREMICONGO. https://content.eia-global.org/posts/documents/000/000/923/original/EIA_Scheduled_Extinction.pdf?1565971047t
3. The World Bank. 2019. "Country Forest Note: Zambia. Towards a Sustainable Way of Managing Forest." World Bank. <https://documents1.worldbank.org/curated/en/571651580133910005/pdf/Zambia-Country-Forest-Note-Towards-a-Sustainable-Way-of-Managing-Forest.pdf>
4. Cerutti, Paolo Omar, Davison Gumbo, Kaala Moombe, George Schoneveld, Robert Nasi, Nils Bourland and Xiaoxue Weng. 2018. "Informality, global capital, rural development and the environment: Mukula (rosewood) trade between China and Zambia." IIED, London and CIFOR, Lusaka. <https://pubs.iied.org/sites/default/files/pdfs/migrate/13603IIED.pdf>

- ^a Risk scores reflect Preferred by Nature's Timber Risk Assessment which measures the risk of illegality occurring in 21 areas of law relevant to timber legality, as well as Forest Trends' national governance scores which provides an average relative governance and corruption risk score for 211 countries globally. Preferred by Nature's scores have been flipped to ensure compatibility with Forest Trends' national governance scores, where higher scores are associated with greater governance and corruption challenges. An average of both the Preferred by Nature and Forest Trends scores has been calculated for 66 countries where both are available as of 2021. For all other countries, the risk score reflects Forest Trends' national governance scores. 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.
- ^b 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.
- ^c Except where otherwise specified, all trade statistics and chart data on Zambia's trade with China is sourced from the General Administration of Customs, P.R. China, compiled and analyzed by Forest Trends, and all other trade data comes from UN Comtrade, compiled and analyzed by Forest Trends. Except where otherwise specified, the charts and statistics in this dashboard are derived from globally-reported data (i.e. global imports are utilized as a proxy for Zambian exports, and global exports are utilized as a proxy for Zambian imports).
- ^d 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.
- ^e The level of trade between the US and Zambia is minimal, amounting to \$150 thousand from 2012-2018.
- ^f The legislation remains open to interpretation, and it is not clear which HS Codes are covered by these restrictions. In particular, the dichotomy between "peelers and saw logs of any species" being banned from export and "poles from planted species" and "plantation trees" being permitted for export creates an uncertain regulatory landscape for importers of Zambian logs.
- ^g All references to "EU + EFTA" signify the 27 Member States of the European Union, as well as the United Kingdom, Iceland, Liechtenstein, Norway and Switzerland.
- ^h There are a variety of figures reported for plantation extent. This dashboard uses government of Zambia reported figures as part of the national report for the 2020 Global Forest Resources Assessment. Other figures have been published by the World Bank in 2019 which indicate that Zambia has 59,000 hectares of timber plantations, of which 50,000 ha (85 percent) are managed by the state-owned enterprise ZAFFICO.
- ⁱ Under the Forest Act 2015, licenses are needed from the Forestry Department to harvest any forest produce from any state or customary land. The license includes the physical location of the harvest area and trees, species, estimated volume, expected revenues, and a list of possible offenses, penalties, and forfeitures. There are two main types of licenses including a sawmill license and a forest concession license. A sawmill license permits a sawmill owner to process timber using sawmills or similar processing equipment and costs \$52. A forest concession license permits a citizen to cut, fell, or process timber in an exact location and can cost up to \$1,000. Both licenses are provided for a specified period of time not to exceed five years and while sawmills licenses cover areas up to 1,000 hectares, forest concession licenses cover areas up to 7,000 hectares. A forest concession license may be issued to a person, company, community group, or cooperative and are issued according to production capacity: small- (20 to 100m³), medium- (101-200m³), and large-scale (201-400m³) per month. Actual harvested volumes must be reported monthly. Once harvesting begins, a forest officer is required to be present to mark the stump and log with a unique forest hammer. To move logs, a conveyance permit is issued and is valid for two weeks. For timber exportation, an export permit must be authorized by the Director of Forestry under the Forest Timber Export Regulations of 2015. The regulations also specify the species, quantity, and type of timber to be exported;

round logs cannot be exported. A forest officer, police officer, or inspector must clear the export and the exporter must acquire a Customs Export Declaration with permissions obtained from the Zambia Bureau of Standards, Plant Quarantine and Phytosanitary Services, Zambia Revenue Authority, and the Forest Department.

^j The International Institute for Environment and Development (IIED) report from interviewing Chinese buyers that the initial boom in mukula (around 2010–2012) was actually a boom in a fake rosewood market, as mukula was shipped through various ports and ‘Chinese businessmen in India’, mainly to Vietnam and the Philippines, where it was eventually mixed with *Pterocarpus santalinus* (red sandalwood) and then processed and sold as such on the furniture market in China. Over the years, however, as mukula became a recognized species, at least within traders and final importers on the Chinese market, such trends seem to have decreased, and shipments now occur also directly to China.

^k EIA report from interviews with traffickers of mukula that increased control and enforcement in Tanzania in recent years has meant that the only way to export from Tanzania nowadays is to mis-declare the smuggled mukula logs as something else, with an example provided that officials in Tanzania could then issue permits, declaring the mukula as Zambian teak (*Baikiaea plurijuga*). EIA also report that traffickers seeking to export out of Namibia have sought to work around transit bans on mukula by mis-declaring the logs as lookalike rosewood species *Guibourtia coleosperma*, also known as “African timber” in Zambia. See EIA’s Mukula Cartel, 2019 for additional information.

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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.

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