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Ed Pepke, Ph. D.

Jim Bowyer, Ph. D.
Jeff Howe, Ph. D.
Chuck Henderson
Richard A. Levins, Ph. D.
Harry Groot
Kathryn Fernholz



**DOVETAIL PARTNERS, INC.** 

# Impact of market forces and government policies on the tropical timber trade

### **Executive Summary**

Tropical timbers are valuable in many applications, which is why they have been traded internationally for centuries. Egyptian craftsmen imported tropical woods before 3000 BC (Wikipedia, 2017). Like temperate forests, tropical forests can be managed sustainably to produce a continuous array of wood and non-wood goods and services. But they are not universally managed sustainably, and the majority of the world's deforestation occurs between the Tropic of Cancer and the Tropic of Capricorn.

The rise in awareness of the extent of continuing deforestation and degradation has directly impacted the tropical timber trade. Government, industry, and non-governmental institutions and organizations working independently and in concert have taken steps to assure continued, sustainable and legal trade. Despite some positive results, problems remain. Governments have enacted policies to ensure legality and sustainability coupled with enforcement mechanisms and stiff penalties for non-compliance. Companies, in turn, have sought to exercise due diligence, seeking documented assurance of legality of shipments. Lacking such assurance, some tropical timber users have begun to substitute temperate species or non-wood products. Combined, these market reactions and government policies have had both positive and negative impacts on the tropical timber trade.

Tropical timber's attributes have driven demand and thus trade by consumers. Producers in tropical countries can gain economic benefits of exporting their wood resources, especially when processing and exporting value-added products. Social benefits of sustainable production and sustained markets can be realized for people living and working in forests through the transport, processing and exporting chain.

This report explains the value of tropical timber trade for producers and international consumers. It delves into the impacts of market forces and government policies which are intended to ensure legal and sustainable supply. And the report concludes with opportunities for producers and consumers to continue trading tropical wood and paper.

# Introduction

What is tropical timber? According to the International Tropical Timber Organization (ITTO), "tropical timber means tropical wood for industrial purposes which grows or is produced in the countries situated between the Tropic of Cancer and the Tropic of Capricorn" (ITTO, 2017). While the ITTO limits its definition to primary products to logs (roundwood), sawnwood (lumber), veneer sheets and plywood, tropical forests produce a wealth of other wood and non-wood resources. While acknowledging the importance of tropical non-wood forest products, this report focuses on the trade of tropical timber. Secondary-processed products include items such as wooden furniture, windows, doors, etc.

The value of global tropical wood products trade of primary- and secondary-processed products was US\$ 31.1 billion in 2016 (ITTO, Independent Market Monitoring, 2017). This was approximately 20 percent of the global timber trade. The interactions of substitution with temperate species' products because of appearance, technical attributes and price have direct influence on the strength of the tropical timber trade.

There are environmental, social and economic concerns about tropical timber use and trade. *Environmental concerns* are focused on tropical forests because the majority of the world's deforestation has occurred in the tropics over the past century (figure 1). There is some good news in this regard. According to the Food and Agricultural Organization (FAO), the global rate of

deforestation decreased from an average of 7.3 million hectares per year in 1990-2000, to 4.0 million from 2000-2010, to 3.3 million during the period 2010-2015. For tropical forests the rates of deforestation have been higher for these three periods: 9.5 million hectares, 7.2 million and 5.5 million respectively. Forest area is increasing substantially in China thanks to widespread plantation establishment. Elsewhere forest area is rising annually in the United States, Chile and Australia. Most countries have small change in forest area. But forest area is declining mainly in tropical countries. These statistics must be viewed with caution, however, since the methods of calculation of deforestation, afforestation and the definition of what constitutes a forest were changed by FAO after 1990, which contributed to the lower estimates of deforestation. Even though it appears that the rate of deforestation is falling, it is still too high in light of the environmental, social and economic concerns.

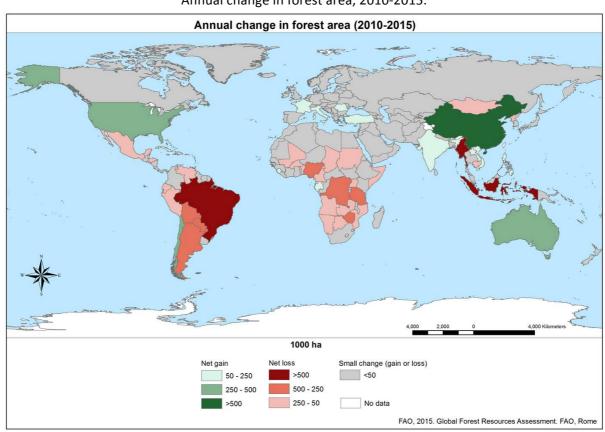


Figure 1
Annual change in forest area, 2010-2015.

Source: FAO, 2017.

The causes and effects of tropical deforestation are many, but one significant driver is the demand for tropical timber. Since the advent of certification of sustainable forest management in the 1990s, it has been possible to ensure the responsible production and trade of timber, both tropical and temperate, through third-party verified certification programs. Tropical deforestation was a main driver for the original establishment of international certification systems. But internationally recognized certification systems have not succeeded as envisioned in the tropics. Most certified forestland, 87 percent, is in the northern hemisphere, i.e. temperate forests. Only 13 percent of tropical forests are certified even though together they represent 60 percent (2.4 billion hectares) of global forests (UNECE/FAO, 2017).

*Social concerns*. Tropical forests are home to millions of people. Many of them are dependent on forests for basic necessities such as shelter and food. They also depend upon them for their livelihood. In some tropical countries the rights of forest-dwelling, indigenous peoples are not

respected. As human populations continue to grow, the demand for forest resources, wood and non-wood, continues to grow. The fastest increase in population growth is often occurring in tropical countries (figure 2) (FAO, 2017a). The world's population is not only increasing because of births, but also because people live longer. Globally in 1990 there were 0.8 hectares of forest per person, but that decreased to 0.6 hectares by 2015 due to increasing population and loss of forestland (FAO, 2017b).

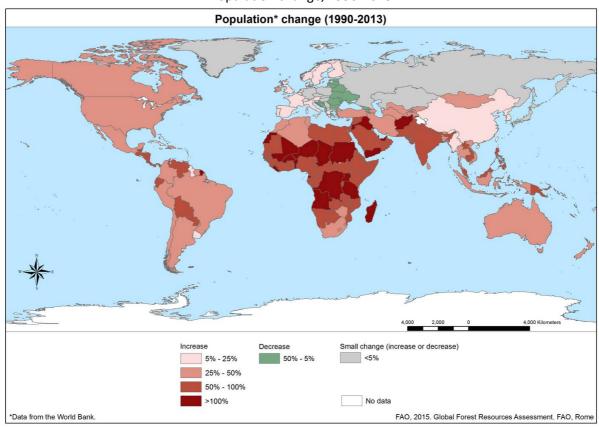


Figure 2 Population change, 1990-2013

Source: FAO, 2017.

Economic concerns. Obviously sustainable harvesting of timber is critical for long-term, economically viable forest products markets. A continuous supply of wood and non-wood forest resources is dependent on sustained production. Proper forest management perpetuates high growth rates of desired species. The harvesting, processing and marketing of forest resources is essential to many forest-rich tropical countries. Many developing tropical countries do not have adequate processing capacity to turn logs/roundwood into more value-added products such as lumber/sawnwood, veneer or panels. The export of logs can bring revenue to a country, but those countries which have developed processing chains to produce higher value wood products, such as furniture, or paper, achieve considerably higher revenues. Some tropical country governments have invoked log export bans to promote value-added processing. Governments benefit from taxes on incomes and profits, and sector development can occur when private and public gains are funneled back into the forest sector.

# Who is responsible for addressing the concerns about tropical timber?

Governments, both in the tropics and elsewhere are responsible for addressing issues regarding tropical forests and their responsible management. In many tropical countries the vast majority of forestland is government-owned. Obviously national governments must realize that sustainable forest resources are essential for the short-, medium- and long-term health of their country, both in terms of the environment, and the economic and physical health of citizens. Most tropical country governments have long-established departments of forestry, and they have developed forest management plans. But that does not mean that the plans are implemented and enforced. Too often there is uncontrolled cutting, frequently for inefficient fuelwood use and sometimes as a result of corruption linked to commercial logging. Globally the majority of roundwood is used for cooking and heating. Realizing that people need wood for heating and cooking, many governments turn a blind eye to the degradation of forests. Illegal cutting undermines any forest management practices (Dovetail, 2016). Realizing the contribution of a robust forest industry to forest retention, as well as advantages which increased development of the forest sector can bring through return of revenues and taxes, many governments promote value-added processing and trade. Many of these governments also realize their responsibility to ensure sustainable and legal trade. Their policies are discussed below.

International organizations become involved in sustainable and legal trade in tropical countries from a number of perspectives. Some are directly involved because of overall concerns about tropical forest loss and sustainability, for example the European Forest Institute (EFI), FAO and ITTO. Other organizations have programs dealing with tropical forests targeting legality of trade, e.g. the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) or social concerns. International negotiations under the UN Framework Convention on Climate Change (UNFCCC) created REDD+. Initially REDD was to "reduce emissions from deforestation and forest degradation" but the "+" was added in 2013 to expand to conservation of existing forest carbon stocks, sustainable forest management, and enhancement of forest carbon sinks. Many northern-hemisphere countries donate funding for REDD+ as part of their policies to protect tropical forests.

Trade associations and their industry members realize the value in promoting long-term legal timber supply. Illegality in timber trade not only taints the companies involved and their associations, but the entire forest sector. Consumers cannot be expected to distinguish between all sustainable and legal products, and sometimes choose non-wood substitutes.

Environmental non-governmental organizations (ENGOs) and NGOs are often at the forefront of tropical forest issues. Many tropical ENGOs seek protection of forest resources including flora and fauna and their ecosystems. Other tropical NGOs watch out for the well-being of forest dwellers as well as their country's environment. International ENGOs are vigilant and raise attention to unsustainable practices and illegality.

# Global tropical timber exports

The global tropical timber trade can be measured in volume (e.g. cubic meters or weight) or value (e.g. in US dollars) – but the results are not the same. Expressed in volume, ITTO's tropical timber products trade shows a declining trend over the last 25 years (figure 3) (ITTO, 2017). The graph is for exports that globally should equal imports since everything that is exported is imported. Earlier, logs dominated the volumes of timber traded, but their share declined to 40 percent in 2016, almost the same as lumber. This is in part due to tropical countries capturing value-added benefits, economic and social, by legislating log export bans.

Global export volume of primary tropical timber products, 1990-2016 50 40 Million m3 30 20 10 0 19901992199419961998200020022004200620082010201220142016 ■ Tropical logs
■ Tropical lumber
■ Tropical veneer
■ Tropical plywood

Figure 3

Note: ITTO primary products are only logs, lumber, veneer and plywood. Source: ITTO, 2017.

When the global tropical trade is measured in terms of value, the result is different and shows a strong recovery following the world's 2007 economic and crisis. The trade appears cyclical, as it has regained strength following major economic downturns. Trade peaked recently in 2014 and as in volume, logs constituted the majority at 37 percent (figure 4) (ITTO, 2017). How can measurement in value show more positive growth? Limited availability of some preferred, expensive species, such as rosewood, drive up the trade value. The deforestation and forest degradation mentioned above has also reduced supplies, often of desired, commonly-used species, resulting in higher prices.

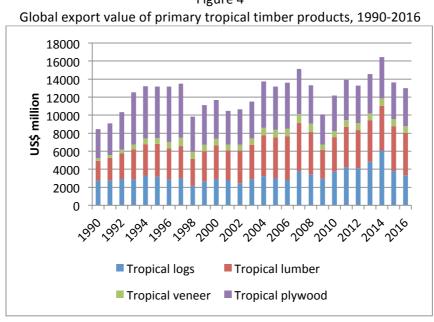


Figure 4

Source: ITTO, 2017.

Global tropical trade of primary- and secondary-processed products together peaked in 2014 at US\$ 35.0 billion before declining 9% in 2015 and a further 3% in 2016 (figure 5) (ITTO, 2017). The spike in 2014 was largely due to China's imports of logs. One species in particular, rosewood, has been fashionable, and expensive, thus driving up the trade value.

35 30 25 15 10 - 5 - 0 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

Figure 5
Global tropical timber trade of primary- and secondary-processed products, 2004-2016

Source: ITTO Independent Market Monitoring, 2017.

The total value of wood and paper products trade, tropical and temperate, was estimated to be \$173 billion in 2016 (personal communication with ITTO, 2017). This means that the tropical share of the timber trade in 2016 would have been approximately 20% of the global trade (figure 6).

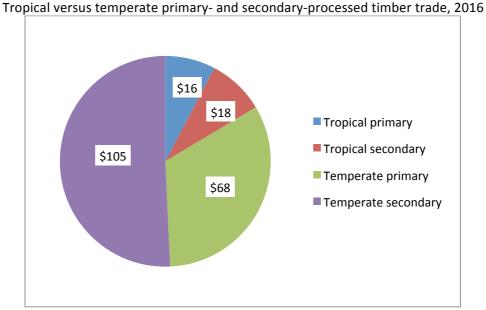


Figure 6
Tropical versus temperate primary- and secondary-processed timber trade. 2016

Note: Trade values in US\$ billion. Excludes paper and pulp trade. Source: Personal communication with ITTO, 2017.

At risk of casting uncertainty on the statistics, the difficulty in isolating the tropical timber trade value and volume merits explanation. It is evident that when a tropical timber country exports its own forest resources, and regardless of the commodity, that can be quantified as tropical timber exports. But some tropical countries, for example Vietnam, not only export their forests' products, but also import significant quantities of temperate species. Countries such as Vietnam have become processing hubs, importing temperate species (for example red oak from the United States), and tropical species too, and processing them into a variety of value-added products for reexport. In this situation, it is impossible to accurately separate exports of tropical timber-based products for export and temperate timber-based products for reexport. Some products, for example plywood and furniture, are often a mix of temperate and tropical woods. Products such as furniture are impossible to quantify in terms of cubic meters or board feet and some statistical sources provide weights for furniture. The best measure of their trade is in the value of exports which is in US dollars for this report. And the estimation of the 20 percent value of the tropical timber trade by the ITTO is the best estimate possible.

# Role of Government: Impact of EU regulations

Ever since some EU countries had colonies in tropical countries, there have been imports of tropical timber into Europe. Originally most imports were logs

# Independent Market Monitoring System

As an aside, the European Commission awarded a 5-year, multi-million euro contract to the ITTO to establish the Independent Market Monitoring (IMM) system in 2013. The IMM has a challenging mandate to monitor the development of timber licensed under Forest Law Enforcement Governance and Trade (FLEGT) (ITTO IMM, 2017). The overall objective of the IMM is to monitor how the EU and wider international market for FLEGT-licensed timber develops. In order to do so during the life of a VPA, the IMM is to improve the quality of timber trade statistics and the effectiveness of timber market development programs for FLEGT timber.

The IMM's specific objectives are to:

- 1. Collect, analyze report and disseminate information on the acceptance and trends of FLEGT-licensed timber on the EU market.
- Improve knowledge and understanding of the impacts of VPAs on timber prices, trade and market trends globally, especially with regard to the VPA partner countries
- Ensure VPA countries and the EC provide reliable statistics and information on FLEGT timber trade
- Respond to requests and inform decision by VPA countries by providing independent, timely and accurate information on market impact
- 5. Contribute to monitoring the impacts of the FLEGT Action Plan and to inform its implementation
- Develop a long-term strategy for sustaining the IMM in consultation with the EU and VPA partner countries (ITTO IMM, 2017).

The last objective relates to the life of the IMM that is scheduled to end in 2018.

as tropical countries lacked processing capacity. However, a disadvantage of logs is that they are seldom used in that form, thus the waste incurred during processing occurs in the importing country, and they are green/wet and heavy, thus costly to ship. Some EU companies have invested in processing facilities within the producing countries to enable exports of further-processed products. And tropical countries seeking the financial and employment advantages of value-added processing have encouraged that, e.g. via log export bans. Hence, the EU has been importing fewer and fewer logs in recent years (figure 7).

4500 4000 3500 3000 JS\$ million 2500 2000 1500 1000 500 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 ■ Tropical logs
■ Tropical sawnwood
■ Tropical veneer
■ Tropical plywood

Figure 7 EU tropical timber imports of logs, lumber, veneer and plywood, 1990-2016

Source: ITTO, 2017.

Tropical timber imports peaked in 2007 in the EU and worldwide, the year that the global economic and financial crisis began. The trade had not recovered as of 2016, in large part because the economies of the EU countries had not fully recovered.

The EU imports considerably more temperate than tropical timber (figure 8). As was the case in tropical timber imports, the EU's temperate timber imports peaked in 2007. In comparison to tropical timber imports, there has been an unsteady, but on-going recovery.

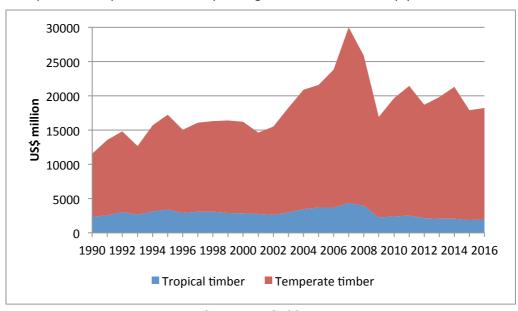


Figure 8 EU imports of temperate versus tropical logs, lumber, veneer and plywood, 1990-2016.

Source: ITTO, 2017.

# **EU imports from Voluntary Partnership Agreement countries**

The EU established the FLEGT Action Plan in 2003 with multiple objectives, one of which was to ensure that the imports of tropical timber are legal. The European Commission is mandated by the Council of the EU to negotiate Voluntary Partnership Agreements (VPAs) with tropical timber producing and exporting countries. A VPA is a legally binding agreement<sup>1</sup> to ensure that timber exported to the EU comes from legal sources. Currently in 2017 the EC has 15 VPAs in two different categories of development:

- 6 implementing signed agreements (Cameroon, Central African Republic, Ghana, Indonesia, Liberia and the Republic of Congo)
- 9 negotiating agreements (Côte d'Ivoire (Ivory Coast), Democratic Republic of Congo, Gabon, Guyana, Honduras, Laos, Malaysia, Thailand and Vietnam).

#### The seven measures of the FLEGT Action Plan are:

- 1. Support technically and financially timber-producing countries to address illegal logging
- 2. Promote trade in legal timber through the EU Timber Regulation (see below)
- 3. Promote environmentally and socially beneficial public procurement policies
- 4. Supporting private-sector initiatives to ensure supply chains are free of illegalities
- 5. Ensure financing and investment safeguards to limit negative social and environmental effects in the forest sector
- 6. Using existing legislation, or creating new legislation if lacking, to ensure the legality of domestically consumed or exported timber products
- 7. Address conflict timber, i.e. legal or illegal timber profits that fund domestic and international conflicts.

The second measure, promoting legal timber trade, got its strength in 2013 when the EU Timber Regulation (EUTR) came into effect. The regulation requires "operators" (the companies that first place timber on the EU market, i.e. importers) to exercise due diligence to ensure that the timber is completely legal.

According to the EUTR, the three key elements of a due diligence system are:

- Information: The operator must have access to information describing the timber and timber products, country of harvest, species, quantity, details of the supplier, and information on compliance with national legislation.
- Risk assessment: The operator should assess the risk of illegal timber in the supply chain involved based on the information identified above and taking into account criteria set out in the regulation.
- *Risk mitigation:* When the assessment shows that there is a risk of illegal timber in the supply chain that risk can be mitigated by requiring additional information and verification from the supplier.

If the information in the three elements above is not sufficient to assess legality, then operators must request additional information or impose additional measures (e.g. certification of sustainable and legal forest management, third party verification of legality, and/or documentation of the harvest site, licensing, transport, processing, etc.).<sup>2</sup>

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For more information on VPAs see VPA Unpacked at www.vpaunpacked.org/

<sup>&</sup>lt;sup>2</sup> Further information on the EUTR may be found in the Dovetail report "Impacts of policies to eliminate illegal timber trade" published in 2015. See:

 $<sup>\</sup>underline{www.dovetailinc.org/reports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts+of+Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+to+Eliminate+Illegal+Timber+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-Policies+Trade\_n679?prefix=\%2Freports/Impacts-of-P$ 

Timber which meets the FLEGT Legality Assurance System requirements may attain the status of FLEGT-licensed. The first FLEGT-licensed timber appeared on the EU market in November 2016 from Indonesia. The other 5 VPA countries that are implementing their agreements are preparing to license FLEGT timber. FLEGT-licensed timber would meet due diligence requirements and have a green lane, i.e. without further customs controls, for EU imports.

While it is difficult to isolate the effect of the EUTR on the tropical timber trade, anecdotal evidence strongly suggests that EU importers have turned away from timber for which legality cannot be substantiated. This can mean importing the desired products and species from another country with better legality documentation, or switching to another more reliable species or source. The latter has supported substitution by temperate species which either naturally have, or which can be transformed, through heat and/or chemicals, to have equivalent properties of the formerly imported tropical timber.

After a peak in 2007, before the economic and financial crisis, trade between the EU and the 15 VPA countries has decreased throughout most of the following decade until reaching a low in 2014. Imports rose slightly in 2015 and again in 2016 (figure 9) (Comext, 2018).

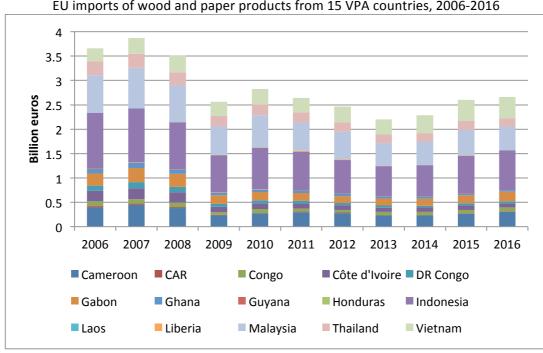


Figure 9
EU imports of wood and paper products from 15 VPA countries, 2006-2016

Source: Comext, 2018.

The exports of the VPA countries to the EU vary considerably depending on their level of processing capacity. For example, Indonesia exports significant volumes of wood pulp as opposed to countries such as Ghana which have no pulping capacity and thus are forced to import paper products.

### **US Lacey Act Amendment**<sup>3</sup>

In 2008, the US Lacey Act (LAA) of 1900 was amended to include timber and timber products. It became the premier legislation against illegal logging through banning imports of illegal timber and timber products. The LAA imposes uniform requirements throughout the US wood supply chain (timber importers, traders, processors, middlemen, wholesalers and retailers). This is a distinct

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<sup>&</sup>lt;sup>3</sup> This section from above-cited Dovetail report on "Impacts of policies to eliminate illegal timber trade".

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difference from the EUTR which only places the responsibility for legal imports on the first importer into the EU. The amendment resulted from a broad consensus between the timber industry, environmental organizations and the US government – all parties agreed that the law would benefit the legal timber trade.

The LAA prohibits any person from importing, exporting, selling, receiving, acquiring or purchasing any plant or plant product (e.g. wood or paper product), knowing that it was taken, possessed, transported or sold in violation of existing laws or regulations. The Act extends to operators abroad with the possibility for prosecuting non-US citizens. The LAA also prohibits false labeling of goods.

The LAA suggests that companies which trade, use and/or market timber apply "due care" to ensure compliance. This is different than EU and Australian legislation, where there are specific requirements for a "due diligence" system (explained below). Due care is a concept developed in the US legal system that means the degree of care that a reasonably prudent person would exercise under the circumstances. Therefore, it recognizes varying degrees of knowledge among different operators.

The Act has clear, progressive penalties. The severity of LAA penalties and sanctions vary according to an offender's awareness of the illegality of a given action. The value of the goods also affects the severity of punishment. Sanctions and penalties range from small fines and possible forfeiture of the goods, to a felony level fine of US\$ 500,000 (or twice the maximum gain or loss from the transaction), a possible prison sentence of up to five years, and forfeiture of the goods. The amount of the fine is determined based on the type of operator, with larger corporations facing the highest penalties.<sup>4</sup> Since its enactment, companies found to have been in possession of illegal timber have been penalized and their timber impounded.

# Impacts of EU policies and connections to US and other parts of the world

Despite the efforts of the EU to assist the VPA countries to improve legality and their exports to the EU, the other major importers of tropical wood and paper products have been gaining market share. Since gradual recovery in the main driver of US imports, housing, starting in 2011, tropical wood and paper products have been on the rise (figure 10) (UN Comtrade, 2017). The EU FLEGT Action Plan is a policy push, in part aimed at improved EU tropical timber trade, but market forces, specifically weak demand for wood and paper products for numerous reasons, are working against the Plan.



Figure 10 EU imports from VPA countries losing market share, 2006-2015

Source: UN Comtrade and author's interpretation, 2017.

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<sup>&</sup>lt;sup>4</sup> For additional discussion of the Lacey Act, see the Dovetail Report, "Understanding the Lacey Act" available at: <a href="http://www.dovetailinc.org/report\_pdfs/2013/dovetaillaceyact1113\_0.pdf">http://www.dovetailinc.org/report\_pdfs/2013/dovetaillaceyact1113\_0.pdf</a>

# Countries with legislation similar to LAA and EUTR to eliminate illegal timber (especially tropical) trade

The EU and the US are not the only countries which have timber legality assurance policies. Australia, Japan and South Korea also have policies. Australia's Illegal Logging Prohibition Act of 2012 promotes the trade of legally logged timber and timber products. The Act considers "intentionally, knowingly or recklessly" importing or processing illegally logged timber a criminal offense. In order to be in accordance with World Trade Organization rules, like the EUTR, the Australian Act covers timber harvested nationally and internationally. The legislation only places requirements on Australian businesses, and importers are required to practice and prove due diligence. Australian businesses must practice due diligence "to assess and manage the risk that the timber or timber products they are importing for processing has been illegally logged." The Australian Act is designed to complement EUTR and LAA.

The Japanese legislation specifically addresses illegal timber trade. The Japanese Government introduced a Green Purchasing Law in 2006 to ensure that domestic companies import legal and sustainably produced timber products. Japanese importers voluntarily certify, according to various methods, the legality and sustainability of wood and wood products (Goho-wood, 2017). Due to their voluntary nature, Japanese rules are viewed as weaker than those of the US, EU and Australia.

South Korea established in 2012 the Act on the Sustainable Use of Timber. The Act includes measures against illegal timber being traded and used in South Korea (Statutes of the Republic of Korea, 2017). A voluntary due diligence option is in development.

China is in the process of developing a legal verification policy which has been in a long experimental stage. Although some local industry associations have started to introduce their own verification programs, they lack resources, credibility, and transparency needed for wide acceptance by the marketplace, especially in international markets. The EU extends its FLEGT program objectives to assist countries such as China and India, which are major tropical timber importers, to ensure legal trade.

# How does certification of sustainable forest management, or the lack thereof, influence the tropical timber trade?

The lack of certification in most of the tropical forests means exclusion uncertified timber from some due diligence systems. According to the Independent Market Monitoring project (IMM), "the market interaction between FLEGT licensing and other verification systems is not only dependent on their relative geographic coverage, but also on their perceived level of assurance, both with respect to the credibility of auditing procedures and the content of standards" (ITTO IMM, 2017).

# China's tropical timber trade

An analysis of tropical timber imports must include China, the single largest importing country of tropical timber, as well as many temperate wood and paper products. With its massive population growing in economic stature, China's production of wood and paper products goes first to fulfil domestic needs. The more lucrative export markets create demand for the value-added products processed in China. China's exports of wooden furniture at over one-third (35.7 percent) of the global exports, dwarf all other countries. In contrast to most of the rest of the world, China did not suffer as much during the global financial and economic crisis of 2007. China's imports of primary-processed wood products rocketed from 2009 through 2014 reaching a total of \$19.6 billion, of which two-thirds (66.7 percent) were tropical (figure 11) (ITTO, 2017).

Figure 11 China's imports of temperate versus tropical logs, lumber, veneer and plywood, 2000-2016

Source: ITTO, 2017.

#### **Conclusions**

Market forces alone will not drive sustainable and legal production. Demand for tropical, as well as temperate, timber is growing globally. According to FAO, the value of production of wood and paper products in 2016 finally recovered to levels before the 2007-2008 economic and financial crisis. Even if the volumes of tropical timber traded are declining, their value is increasing. While higher prices can mean higher revenues, if supply constraints are the basis for higher prices, then continued supply may be in jeopardy.

Deforestation and forest degradation have drawn the world's attention to the plight in the tropics. These not only have severe environmental consequences, but they also negatively impact countries' economies and populations. The attention has resulted in domestic and international policies to combat these issues. The "T" in FLEGT provided the ammunition to stop illegal trade coming from VPA countries. If FLEGT-licensed timber becomes available from more than the single country now licensed (Indonesia), and in sufficient quantities to meet the demand stemming from due diligence systems, it could encourage more VPAs. The increase in exports from VPA countries to the EU since 2013 is a positive sign of EU market confidence.

Countries and country groups which have established legislation to ensure imports of legal timber are taking the right policy-push steps to drive legal timber trade. To date those include Australia, the EU, Japan, South Korea and the US. While these countries together account for a major portion of timber imports, some key countries are not yet included, notably China and India. Together the EU and the four non-EU countries with EUTR-like legislation account for over half of China's exports, and a third of China's imports of wood and paper products. Therefore they constitute a significant force to require thorough proof of legality for sources of China's timber imports, as well as for China's exports to their countries. Governments at many levels can do their part to drive sustainable and legal trade via their purchasing policies. Trade associations have an obligatory role to play too, i.e. to ensure their membership abides by legal and sustainable practices and to report on developments in this arena. NGOs and ENGOs are critical to raise issues and create solutions to solve those problems.

#### The Bottom Line

Sustainable economic and social development in forested tropical countries is often heavily dependent on sustainable forest management and sustained forest products markets, both domestic and export. While deforestation appears to be slowing according to FAO, forest degradation continues where forest management plans are not followed. In many tropical countries the demand for wood fuel for heating and cooking is rising along with population growth due to increasing birthrates and longevity. Globally more roundwood is burned for energy, often inefficiently, than is used for higher value wood and paper products.

Countries' wood and non-wood forest resources must satisfy domestic demands, but when insufficient, these resources may be imported given sufficient economic strength. Exporting tropical wood and paper products can have substantial, long-term economic benefits when done in a sustainable manner. When domestic or export supplies do not meet demand, substitution occurs – one country loses market share to another or temperate timber is substituted for tropical or worse, non-wood-based products are substituted for wood and paper.

Although well-known, these problems need multifaceted solutions. Market demand alone is not sufficient to bolster tropical timber exports and producing countries' economies. Policy measures from tropical countries and their trading partners are needed to ensure legal and sustainable production and trade. Some importing countries have taken positive steps to not only ensure their imports are legal, but also to assist their trading partners. More countries need to adopt similar policies and enforce their laws to ensure legal and sustainable trade.

Dovetail Partners has followed these issues since its inception and will continue to provide timely updates. Related reports are listed in the footnote.<sup>5</sup>

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www.dovetailinc.org

528 Hennepin Ave., Suite 703 Minneapolis, MN 55403 USA

info@dovetailinc.org | **Phone:** +1 612-333-0430 | **Fax:** +1 612-333-0432

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