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Article

Ambiguity in Timber Trade Regarding Efforts to Combat Illegal Logging: Potential Impacts on Trade between South-East Asia and Europe

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Abstract: Raised public concern in the European Union (EU) about the legality of its timber imports has pushed the European Commission to raise its standards and legality demands for wood imports. Combining literature reviews, structured interviews and trade data analyses, this study assesses the potential influence from Forest Law Enforcement Governance and Trade (FLEGT) (with its Voluntary Partnership Agreements (VPA) system and new legislation EU Timber Regulation (EUTR)), and third party verification schemes on the timber trade between tropical countries and Europe. These instruments have the potential to reduce the amount of illegally sourced timber being placed on the market, and they seem to have resulted in both increasing support of legality verification and certification uptake. However, there are signs of increased ambiguity in trade that could originate as a side effect of the transition towards a stricter regulation for tropical timber. Such ambiguity is explicitly taken into account here. Possible consequences from increased ambiguity are *substitution* of oak lumber for tropical hardwood lumber, and a *diversion* of exports of tropical timber to destinations with a less stringent regulatory framework than the EU. Evidence of these trade patterns in the literature reviews,

interviews, and trade data analyses seems to confirm that ambiguity in international trade markets has actually increased since the introduction of these instruments.

Keywords: FLEGT; EUTR; certification; illegal logging; ambiguity; timber trade

1. Introduction

1.1. Background

International policy mechanisms have the potential to alter timber trade flows either by influencing national and/or international forest policy and governance or by promoting sustainable forest management and nature conservation [1]. Illegal logging and its associated trade is a major problem for environmental, economic and social reasons, raising serious concerns about over-exploitation and poor forest management [2,3]. Hence, different non-governmental organizations (NGOs), conservation groups, international organizations, industries and governments have focused on promoting policies and incentives to address this issue [2]. These policy measures and incentives range from market-based incentives (certification) to regulatory/enforcement measures (*Forest Law Enforcement and Governance*) and measures that include both market and enforcement mechanisms (*Forest Law Enforcement, Governance and Trade*) [4].

In the forestry sector, a number of market-based instruments such as third-party verification schemes (which include certification) provide a way of defining sustainable forest management as well as offering a third party, independent verification that a timber source meets the definition of sustainability [5,6]. There are a number of international and national third party certification schemes, two of the most internationally recognized forest certification schemes being: the *Forest Stewardship Council* (FSC) and the *Programme for Endorsement of Forest Certification* (PEFC). Although in terms of certified forest area PEFC is the largest programme, it encompasses very few forest areas in the global south [7,8]. FSC is of greater relevance here since it represents the most broadly accepted sustainability standard in major timber markets [4] and has more certified forest area in tropical countries than any other scheme encompassing 11 countries in Africa, 13 countries in Asia and 17 countries in Latin America and the Caribbean [9].

Partly due to certification's initial limited effectiveness to reduce deforestation in tropical countries [10], various development agencies and governments in the EU began to focus on promoting capacity building and forest policy networks in order to help reinforce domestic policies [5,10]. Thus, legality verification came forth as a new leading policy instrument to combat forest degradation and illegal logging [10]. Accordingly, the EU's response to illegal logging came in 2003 with the *Forest Law Enforcement Governance and Trade* (FLEGT) action plan, acknowledging that the EU is an important export market for countries where levels of illegality and poor governance in the forest sector are high [11]

Voluntary Partnership Agreements (VPAs) and the *EU Timber Regulation* (EUTR) are two parts of the FLEGT action plan which are meant to reinforce each other. VPAs are bilateral trade agreements developed between the EU and timber producing partner countries that are initially engaged in the

process on a voluntary basis and afterwards, if ratified, become legally-binding [12]. The EUTR is a binding legislation that came into force on 3 March 2013. Under this regulation, the EU prohibits operators in Europe to place illegally sourced timber on the EU market. Operators in Europe must exercise "due diligence", meaning that they must minimize the risk of illegal timber in the supply chain and access information on the origin of their imports [13].

Certification and trade related policies are both dealing with combating illegal logging, and should thus have some degree of impact on international trade. FSC sets criteria based on an international set of standards for sustainable forest management [5]. Legality is part of the sustainability definition and therefore, forest certification schemes can provide evidence of legal and sustainable timber [6]. The main objective of FLEGT and its VPA system was to ensure that only timber coming from legal sources enters the EU market, whereas EUTR further reinforces these endeavors by requiring importers to demonstrate "due diligence" and prohibits timber imports if not covered by FLEGT or CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) permits [13].

However, trade related initiatives such as FLEGT and EUTR together with international certification schemes such as the FSC may have unintented implications for timber trade flows. Hence, when the effects and/or the requirement of these policy instruments are not fully understood/known, ambiguity arises. Ambiguity could in turn result in a reduction in trade in tropical timber between Europe and the tropics. The gap in timing between the introduction of EUTR and the supply of FLEGT licensed timber—first deliveries of fully FLEGT licensed timber are not expected at least until the end of 2013—could create further uncertainty in the market [14]. The recently introduced legislation EUTR also came at a time when European countries were still suffering from the economic downturn [14]. Thus, any potential detrimental effects of the ambiguity caused by the legislation could be worsened due to the unlucky timing of its introduction.

1.2. Reasoning and Objectives

Recently published studies on FLEGT focus on trade agreements between the EU and the Central African region, since the latter has the largest number of countries engaged in the regulation process [1]. Given Indonesia's fairly recent engagement with FLEGT's VPA system, different policy-analysis studies have approached the issue of legality interpretation between traders [12], or offered conceptual approaches to legality verification and certification [10]. Studies addressing the impacts of curbing illegal logging in general [2] or more specifically under the impact of FLEGT [3], model different scenarios for the wood product market, assuming that these policy initiatives are effective; further, they generally deal with timber species, types and assortments at an aggregated level. The current study, however, is concerned with the potential impacts from FLEGT and third party verification schemes on the trade in hardwood timber.

Starting from a theoretical setting characterized by ambiguity, we provide assessments of how the trade in tropical timber between Europe and tropical countries has been impacted by the abovementioned policy instruments. The focus of this study is on the hardwood lumber market, also referred to as sawnwood throughout the paper, and particular attention is paid to the trade in tropical lumber between Indonesia and the United Kingdom (UK).

Indonesia has a leading role on the international timber trade market [15]: acknowledging and trying to control the problem of illegal logging, Indonesia indeed became the first Asian country to start a VPA with the EU, by signing a memorandum in 2011 [4,12]. Furthermore, in order to meet the new requirements of EUTR, the Indonesian government launched a national *Timber Legality Verification Information System* (SVLK) [16]. On the demand side, the EU comprises some major tropical hardwood importers, notably the United Kingdom (UK) [15]. Predating the law enforcement efforts to combat illegal logging at EU level, networks of buyer groups within the UK were already raising efforts to reduce illegal logging imports and were committed to sustaining, promoting, and trading certified FSC wood [5].

2. Ambiguity: Theoretical Setting and Relevance for International Trade

We consider one representative trader, Indonesia, who is deciding whether or not to sell an unspecified quantity of tropical wood in Europe (in particular towards UK). The trade price is assumed to reflect the value v of the wood and the net direct/indirect costs c attributed to the exporter to obtain the required legal documentation. These costs will then be transmitted by the importer (the UK) on the secondary market to which he will sell the purchased wood.

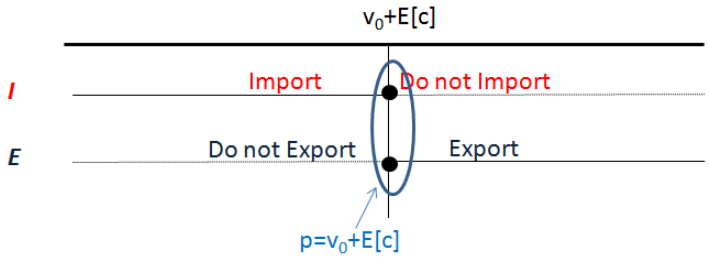
Since the purchased wood will be sold on the secondary market, its value v depends on the accuracy of proving its place of origin. While the exporter is fully aware of the origins of the wood he is offering, and, therefore, also of his real value v_0, the importer is not. However, he knows that the value lies in the interval $[v_*, v^*]$, that is, v_0 is in $[v_*, v^*]$. Finally both agents know that wood of quality between v_* and v^* could receive the required certification at a cost c between c_* and c^*.

As said above, the exporter knows the quality of his own wood, further, he also has the alternative to trade with an importer coming from a less regulated country, where no documentation is required (so that $c = 0$). Therefore, when deciding whether or not to trade with the European agent, he will focus only on the costs for providing the documentation. Similarly, the importer could alternatively trade oak worth v_0 with European partners. Therefore, since trading costs c are transmitted on the secondary market, they are not relevant, and, when deciding whether or not to trade with the exporter from the tropics, the importer will only evaluate the value of the wood he is about to purchase [17].

2.1. No-Ambiguity

When facing economic risk, rational agents are assumed to be able, given the available information, to correctly (and uniquely) derive the expected values $E[\ ]$ of the variables they are interested in. In the context of the framework outlined above, this implies that the importer is able to assess the value of the wood v_0, and the expected value of costs $E[c]$ [18]. Therefore, he will be willing to trade for prices equal or lower than $v_0 + E[c]$. In a similar way, the exporter assesses the costs of the certification to $E[c]$ and will be willing to trade for prices equal or higher than $v_0 + E[c]$. Hence, trade will occur exactly at the price $p = v_0 + E[c]$ (see Figure 1)

Figure 1. Absence of ambiguity: trade occurs exactly at the price $p=v_0+E[c]$.

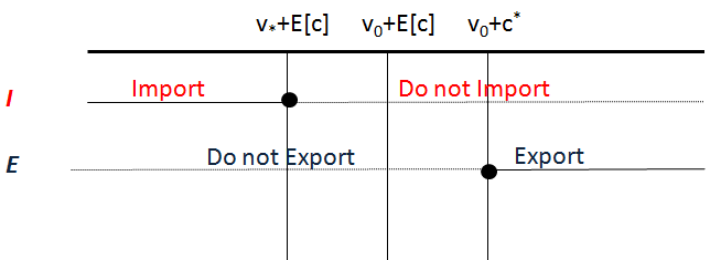


2.2. Ambiguity

When the effects and/or the requirement of the regulation are not fully understood/known, ambiguity arises (It is beyond the scope of this paper to provide an accurate treatment of preferences incorporating ambiguity. Suffice to say that Knight [19] describes "ambiguous" as an economic context wherein the lack of accurate information prevents agent to uniquely derive a probability distribution over the reference state space, so that also the expected values of the variables under consideration are compatible with more than one probability distribution). Empirical evidence in the economic literature shows that agents normally display aversion to ambiguity so that, when taking economic decisions, they tend to focus on worst case scenarios [20–22]. Under these circumstances, the importer would assess the value of the wood he is about to purchase to $\boldsymbol{v_*}$, and he would be willing to trade only for prices lower or equal to $\boldsymbol{v_* + E[c]}$. The exporter, instead, would consider only the highest costs scenario, and he would be willing to trade for prices equal or higher than $\boldsymbol{v_0 + c^*}$ (Even if we are not interested in accurately modelling traders' preferences, our framework is compatible with a particular class of ambiguity averse preferences called CEU-preferences. We refer the reader to Schmeidler [23] for a derivation of CEU-preferences and to Dow and Werlang [24] for a concrete application of CEU preferences to a pricing problem).

Thus, trade between the two agents would collapse as the two trading intervals never overlap since the highest price at which the importer is willing to buy ($\boldsymbol{v_* + E[c]}$) is lower than the lowest price at which the exporter is willing to sell ($\boldsymbol{v_0 + c^*}$), as shown in Figure 2:

Figure 2. Ambiguity case: trade between the two agents breaks down.



In our theoretical setting we have implicitly assumed that the exporter is not able to assess the cost to be sustained in order to provide the required documentation. This hypothesis seems to find confirmation in actual international markets, wherein the lack of previous experiences analogous to FLEGT and/or FSC could prevent traders to univocally assess the direct/indirect costs to be undertaken in order to satisfy the various legal requirements. As a consequence, exporters of tropical timber,

uncertain about the costs of complying with legal requirements, could opt to trade with partners with less stringent legislation.

In addition, even the general interpretation of such requirements is not unique: for example, at the beginning of 2013 there was a lack of fully FLEGT licensed timber on the market [14]. Analogously to the theoretical importer considered above, potential importers willing to trade were therefore not able to fully trace the origins and/or the quality of the traded timber. Doubting the legality of the wood they were about to purchase, and hence of its real value, they could have possibly decided to trade with other partners coming from countries with reliable regulations. As a result, international wood markets seem to have been affected by a high degree of ambiguity, with potentially detrimental effects on trade in line with the prediction of theory.

3. Materials and Methods

The study builds on literature review, analysis of trade data as well as complementary primary data collection and analysis. Scientific papers, trade papers, official statistics, government reports and studies regarding policy developments and trade are reviewed. Given the ambiguity framework, we assess the potential influence of FLEGT and certification schemes on the timber trade between tropical countries and Europe. Finally, interviews with representatives of importers of tropical and temperate hardwood and exporters of tropical hardwood are conducted to complement and enrich the analysis.

3.1. Literature Search

The current study consulted international reports, government reports as well as scientific papers. As for the scientific papers, the literature search was conducted using *Science Direct* and *Scopus* databases between January 2013 and March 2013. The search-term sequence "illegal logging" was used for both databases (resulting in 288 articles). The ensuing search results were filtered using the query "timber market" OR market* (91 results) with subsequent filtering for FLEGT OR VPA AND Certification* (8 articles). Related references from the relevant articles within the search results were further reviewed. The search for international reports was conducted during the same period using *Google Scholar* and by further exploring each of the relevant organization's and institution's official web-pages and online publications.

3.2. Trade Data Analysis

Trade data from UN COMTRADE [25] database were analyzed to detect potential changes in trade patterns and to assess whether these possible changes can be linked to policy instruments. In addition, basic econometric analysis of sawnwood imports was conducted in order to assess the degree of substitutability between oak and tropical timber.

3.2.1. Econometric Analysis

Econometric analysis was conducted to assess whether oak is a substitute for tropical timber in European imports of hardwood lumber. The UN COMTRADE database [25] provided data for imports and value of imports of tropical (HS1996 classification 440729) and oak lumber (HS2002

classification 440791). Based on this information, import unit values (in US$) were calculated and subsequently deflated to obtain estimates of real (constant) import prices. Historical macroeconomic data, gross domestic product (GDP) in constant US$ and deflators were collected from the World Bank [26].

The following equation defines sawnwood (lumber) imports:

$$[Q^M = f(P_{tropical}, P_{oak}, D^M)] \quad (1)$$

where Q^M = import demand for tropical sawnwood, $P_{tropical}$ = real tropical sawnwood import price, P_{oak} = the real oak sawnwood import price, D^M = Real gross domestic product (GDP) in constant US$, used as demand shifter. The model is log-linear, allowing for direct interpretation of estimated coefficients in terms of elasticities. In Equation (1), the price elasticity for tropical sawnwood is expected to have negative sign, whereas the price elasticity for oak sawnwood, *i.e.*, the cross-price elasticity, is expected to have positive sign when tropical sawnwood and oak sawnwood are substitutes.

Due to short time series for tropical and oak lumber imports (the starting year is 1996), Equation (1) was estimated with a time series cross-section (TSXS) approach (For details about the method, see, e.g., Buongiorno [27,28]). The countries included in the analysis—Austria, Belgium, France, Germany, Italy, the Netherlands, Spain, Sweden and the UK—comprise some of the major importers of tropical lumber. The analysis was conducted by means of ordinary least squares (OLS) regression using the statistical software IBM SPSS Statistics 21.

3.3. Questionnaires

There are two main methodological approaches in social sciences: nomothetic and idiographic. The former emphasizes quantitative analysis of a few aspects to test hypotheses and make statistical generalizations, while the latter relies on a case-study to achieve in-depth understanding of complex phenomena, and it is indeed the preferred approach when little is known about a phenomenon [29,30]. For this reason we chose the idiographic approach for data gathering.

Observational units [31] were thus selected for theoretical reasons rather than for representativity [32]. Thus, two sets of structured interviews were conducted. The first one (during March–May 2013) involved UK experts and representatives of importers or final users of tropical and temperate hardwood. The questionnaires were sent via E-mail, and interviews were made by telephone or in-person. The second set of questionnaires (during April–May 2013) was sent via E-mail to experts, exporters of tropical hardwood, and civil society representatives from Indonesia.

4. Results and Discussion

4.1. Ambiguity in the International Timber-Trade

International initiatives such as FLEGT and FSC seem to have resulted in both increasing support of legality verification and certification uptake in South-east Asian nations [33], driven by market pressure and the need for compliance with good forest governance and EU standards [10]. Studies suggest that the amount of illegally sourced timber being placed on the European market has been decreasing [34], and by 2009 the rate of illegal logging in Indonesia was estimated to have halved to

about 40% [35]. However, estimations on the scale of illegal logging are still very uncertain [4], and illegal trade is not recorded in the trade databases [36], perhaps notably in the case of Indonesia where existing supply-demand assessments are based on official statistics that only register large and medium sized wood industries, not considering small-scale operations and informal trades [4].

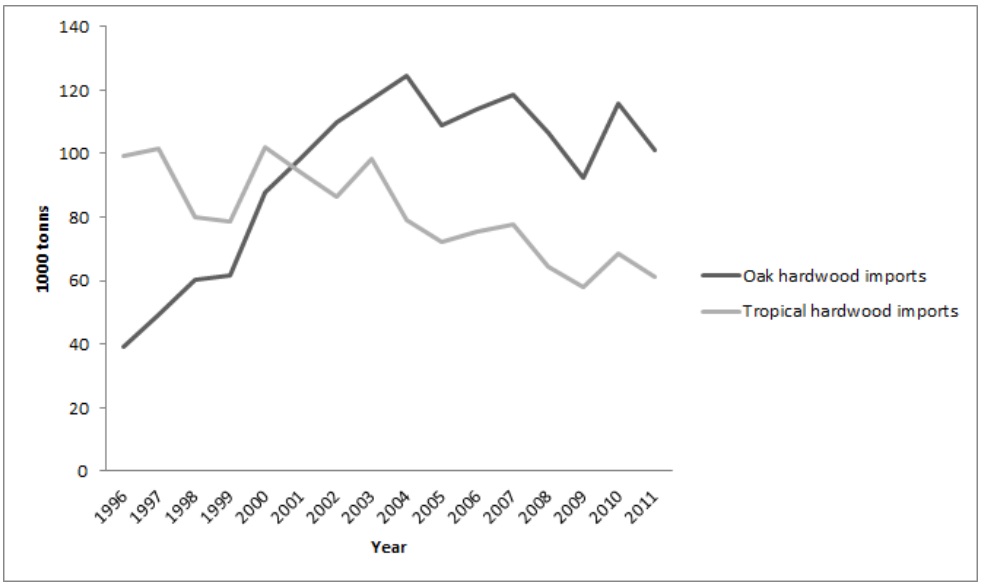
Thus, the observed trend of decreasing tropical timber imports, to the EU in general and the UK in particular, can be associated to some extent with the decline of illegally sourced wood being placed on the market. However, to what extent initiatives such as FLEGT or third party verification schemes play a part in this decline of illegal exports is still unclear. One plausible cause of this decrease could be that the present regulation has actually created ambiguity in the timber trade market, and ambiguity averse agents are simply reluctant to trade. Indeed, even though FSC certification provides evidence of legally sourced timber, certification alone does not ensure compliance with FLEGT's legality demands [10], so that traders might be unable to establish if the documentation they are planning to supply will be sufficient to satisfy FLEGT's requirement. In addition, if the costs necessary to obtain such documentation are difficult to be assessed, trade is likely to be impaired.

FLEGT seems to promote a "narrow interpretation of legality" and the lack of general consensus on its interpretation both within Europe and between Indonesia and the EU [12] is obviously a source of ambiguity. Hence, the questionable effectiveness of these policy mechanisms in combating illegal logging, coupled with concerns around the documentations and licenses, is raising ambiguity among operators in the EU. This could push them away from tropical imports in order to avoid uncertainty, in line with the predictions of theory discussed above. Ambiguity in international timber trade could in fact be one factor behind observed trends such as *substitution* (importers opting for temperate hardwoods instead of tropical hardwoods) and *trade diversion* (producers choosing to export timber to destinations with less stringent regulatory framework than the EU). Below these aspects are discussed in greater detail.

4.1.1. Substitution: Comparing Oak and Tropical Lumber Imports

Production of sawn temperate hardwood has been steadily increasing in 2011, particularly in Croatia and Ukraine [7]. Croatia was also mentioned by several UK respondents as the main supplier of temperate hardwoods (respondents a2, a3 and b1 respectively; see Supplementary information). It is also noteworthy that all UK respondents named the USA as the most important oak supplier outside Europe. Looking specifically at trade data from the UK, the substitution of tropical sawnwood imports with oak sawnwood imports is quite evident (Figure 3).

Figure 3. UK's oak imports vs. tropical timber imports. Source: UN COMTRADE [23] trade data analysis.



In addition to imminent factors such as the continued depressed housing market [15], another major reason for the decline in tropical imports is the development of temperate hardwood products marketed as alternatives for tropical hardwoods [7]. In the last few years, oak has consolidated its dominant market position in the European flooring and joinery sectors while tropical hardwoods have continued to lose market shares [7]. All interviewed specialists from the sector confirmed that "oak now dominates European temperate hardwood trade" (respondent a2; see Supplementary information and respondents pointed out that there seems to be a "…strong fashion for oak" (a2). This is echoed by international reports documenting a strong consumer preference for oak, which further benefits from new treatments making it applicable for a wider range of uses [7]. Oak seems to have similar properties as many of the tropical species, e.g., the Indonesian *meranti* [37], further respondents mentioned that oak is "more readily available" (that is, with shorter supply chains) and it can be purchased "little and often" (a2) in the furniture and flooring sector. Other reasons behind the shift were "obvious geographical benefits" (trading within Europe), "environmental awareness" and "validity of documentation" (a3) and "risk avoidance" (a4).

These last two reasons cited offer some examples of how ambiguity could have promoted substitution by inducing strong consumer confidence in temperate hardwood lumber as opposed to tropical hardwood lumber. Specifically, UK importers assess the risks associated with the value of the wood they want to purchase, and, as the effects and/or the requirement of FLEGT are not fully understood/ known, ambiguity arises, forcing them to opt for more reliable timber sources from within their "own continent" or from North America.

Consequently, one can further assume that timber markets in Europe are likely to be subject to leakage from efforts to raise legality demands and certification in producing countries in the tropics further resulting in increased timber production in the Northern hemisphere (EU, Eastern Europe and North America). Such implications could result directly or indirectly from *market effects leakage* (We refer the interested reader to Schwarze *et al.* [38] for a detailed discussion on *market effects leakage*).

Market effects leakage occurs when policy actions in one place indirectly create incentives for third parties to increase activities elsewhere and is caused by a shift in market equilibrium [39], e.g., legality verification and certification, reducing the share of illegally sourced timber on the market, and thus increasing prices and pressures on temperate forests, e.g., in Eastern Europe or North America.

Using Equation (1) and the OLS method, we find that the model explains 65% of the variation. Income and price elasticities are all significant at the 1% level. While tropical lumber import demand is inelastic to changes in GDP, it is elastic to changes in the price of tropical lumber as well as changes in the price of oak lumber (cross-price elasticity). The positive sign of the cross-price elasticity indicates that oak lumber is a substitute for tropical lumber (Table 1).

Table 1. Tropical lumber import demand elasticities.

GDP	$\text{Price}_{\text{Tropical}}$	$\text{Price}_{\text{Oak}}$
0.768	−1.798	1.233

4.1.2. Trade Diversion

As in theoretical framework, also in real markets the exporter (Indonesia) has the alternative to trade with an importer coming from a less regulated country like China, where no documentation is required and where legality requirements are less stringent [40]. As there is no clear evidence of consistent price premiums on the EU market for certification [5], and since legality requirements imply increased costs for providing documentation and generate additional uncertainties due to the discrepancies in the interpretation of legality between the two traders, this scenario is very plausible.

Thus, as the legality demands in the EU importing countries were growing, producing countries in South-east Asia, e.g., Indonesia and Malaysia, were increasing their exports to other regional markets in Asia and the Middle East [16]. This was also mentioned by respondents from Indonesia, stating that EU has "…too many regulations" (respondents c2 and c3; see Supplementary information) and that "Indonesia will see other potential countries to trade their timber with less regulations but continuously buying the products" (c2). The majority of Indonesian respondents named China when asked which countries other than Europe are targeted for timber exports.

With most of the global tropical sawnwood trade concentrated in the Asian region, China consolidated its position as the dominant market for tropical timber imports [15]. UK experts mentioned that it is "…important to stress that China is a major and growing influence in global tropical wood trade flows and the recent decline in EU trade in tropical wood needs to be seen against this background" (a2). Further, at the same time as European imports of tropical timber have been declining, exports from China to Europe have increased [7,14]. Some of this timber, originally illegally sourced, has then been exported legally to the EU as further processed products [40].

However, this loophole in the FLEGT system has already been addressed by the European Commission (EC). In particular, in 2009 the EC signed an agreement with China—the *EU-China Bilateral Coordination Mechanism on Forest Law Enforcement and Governance*—in order to ensure the "…integration of FLEG in EU and Chinese policies on development, trade and customs and other policies" [40]. Specifically, the EUTR covers a broad range of timber products, including further

processed products such as flooring, plywood, pulp and paper [41]. It is, however, still too early to assess the extent to which these measures will prove efficient in tackling this "trade circumvention".

5. Conclusions

Trade data analysis indicates that tropical hardwood imports to the EU are decreasing, particularly noticeable in the case of the UK. International policy measures such as FSC, FLEGT and the EUTR—by reducing the amount of illegally sourced timber placed on the market and by promoting sustainable forest management—can, to some extent, be associated with this trend. These policy efforts seem to have resulted in both increasing support of legality verification and certification uptake in producing countries in the tropics such as Indonesia.

However, there are signs of increased ambiguity that could originate as a side effect of the transition towards a stricter regulation for tropical timber. Possible consequences for international timber trade originating from ambiguity are:

(i) *Substitution*: as a result of the general uncertainty concerning FLEGT's interpretation, UK importers are opting for temperate hardwoods to the detriment of tropical hardwoods in order to avoid risks. There is indeed evidence that oak lumber is a possible substitute for tropical hardwood lumber.

(ii) *Trade diversion*: since EU's legality requirements are not fully understood and they are associated with extra costs necessary to provide certification and/or required documentation, Indonesian exporters are choosing to export timber to other markets characterized by less stringent regulatory frameworks (e.g., China).

Thus, the ambiguity in international timber trade generated by trade regulations and third party certification schemes could, at least at this early stage, be detrimental for tropical timber exports to the EU, pushing both importers and exporters to trade with alternative partners. It is clearly beyond the scope of this paper to investigate possible policy recommendations. However, it is important to emphasize that transparency and consistency in the interpretation and implementation of these instruments—not least as regards the EUTR—play a crucial role in decreasing ambiguity and consequently preventing possible unintentional detrimental effects on trade.

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Conflicts of Interest

The authors declare no conflict of interest. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the European Commission.

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Supplementary

Questions and answers from the UK

The interviews have been conducted either online, via E-mail, per telephone (one respondent) or during the "Global Timber Trade and Legality Legislation" conference in Cologne, Germany, during March-May 2013. The questionnaires were directed to respondents coming from various organizations (EFI FLEGT facility, Forest Industries Intelligence Ltd. in the UK), independent consultants and timber companies within different umbrella organizations (the UK Timber Trade Federation and the London Hardwood Club).

We have received 7 answers from respondents in Europe: 4 responses from experts (marked here as: a1, a2, a3 and a4) and 3 responses from companies (marked as: b1, b2, and b3).

1. Which countries are your main suppliers of tropical hardwood?

a1: Africa, Asia, South America
a2: Main tropical wood suppliers to EU are Cameroon, Malaysia, Brazil, Gabon, Indonesia
a3: Congo/Cameroon, Indonesia, Brazil, Gabon
a4: Malaysia, Cameroon, Ivory Coast, Brazil, Indonesia
b1: Malaysia, Cameroon, Congo

b2: Indonesia, Malaysia, Brazil, Peru, Ghana, Cameroon, Congo Rep., CAR
b3: Africa, South America, Asia

2. Provided that you import and/or use tropical hardwood from Indonesia; which is the main species?

a1: Ramin
a2: Don't trade personally—however main Indonesian species are bangkirai for decking and a wide range of meranti species plus keruing for plywood
a3: Meranti, Keruing
a4: Meranti
b1: Bangkirai
b2: Bangkirai
b3: -

3. Which countries are your main suppliers of temperate hardwood?

a1: USA
a2: Main internal EU suppliers are France and Germany, main external suppliers are the USA, Croatia and Ukraine
a3: USA, Croatia
a4: USA, EU member states
b1: USA/Croatia/Hungary/France/Germany/Poland
b2: USA/Canada/Germany/France
b3: USA, all over Europe

4. Which is the most important temperate hardwood species?

a1: White oak
a2: Oak now dominates European temperate hardwood trade - beech is generally "out of fashion"
a3: White Oak, White Ash, Poplar, Black Walnut, Hard Maple, Black Cherry
a4: Oak, beech
b1: Oak
b2: Ash/Oak (White)/Maple/Cherry/Tulipwood/Walnut
b3: White oak

5. Have you noticed any shift in the ratio between tropical and temperate hardwood imports?

a1: YES
a2: YES
a3: YES
a4: YES
b1: NO
b2: NO

b3: NO

5a. If YES, how has the ratio changed?

a1: EU imported 31% of global tropical timber in 2007
a2: Trade statistics show clear that share of sawn wood imported into the EU from tropical regions declined from 53% to 42% between 2003 and 2012. This probably underestimates the loss of share because domestic (internal EU) supplies of sawn hardwood (particularly European oak) have also increased their share of the market.
a3: 10 years ago, the split was 55% tropical / 45% temperate.
It is now 30% tropical / 70% temperate
a4: Imports of tropical timber have declined
b1: -
b2: -
b3: no shift, absolutely nothing, same ratio

5b. Can you offer any explanation(s) for this shift?

a1: EU imported 31% of global tropical timber in 2007, but only 19% in 2011. I think this was influenced by multiple factors, including the global economic recession in 2008 and 2009. Also I suspect, but cannot justify with statistics, that tropical timber buyers are concerned with deforestation and illegality, and hence they buy temperate...or worse, non-wood.
a2: Combination of factors including: declining availability of tropical wood due to past over-harvesting and increasing proportion now being diverted to China, lack of competitiveness of tropical wood due to long supply chains, high commercial and financial risk associated with dealing with and stocking tropical wood, the strong fashion for oak which is more readily available and can be purchased "little and often" in the furniture and flooring sector, increasing availability of substitutes—e.g. cheap "MIxed Light Hardwood" plywood from China, new panel products that can be used in outdoor applications formerly dominated by tropical wood, heat treated hardwoods for external applications, wood plastic composites, new artificial surfaces replacing hardwood veneers etc., also move to pre-fabricated factory finished units in the joinery sector means there's less of a need for easily worked "jack of all trades" wood on construction sites—a niche formerly occupied by tropical wood.
a3: Environment awareness / fashion / validity of documentation.
a4: Recession, risk avoidance by major importers.
b1: -
b2: -
b3: Fashionable shifts.

6. What do you think about the future (looking ten years ahead) of tropical timber in your country?

a1: Increasing

a2: Decreasing
a3: Decreasing
a4: Unchanged
b1: Unchanged
b2: Decreasing
b3: Unchanged

6a. If you foresee a change in the role/importance of tropical timber; can you please offer an explanation for this change?

a1: Hopefully a restoration of consumer confidence, in part driven by an effective implementation of the FLEGT Action Plan, including the EUTR**.**
a2: As above—I suspect that tropical wood will be increasingly restricted to a very narrow niche market in the EU. Important to stress that China is a major and growing influence in global tropical wood trade flows and the recent decline in EU trade in tropical wood needs to be seen against this background.
a3: -
a4: Most of it is now already FSC and PEFC certified, a decrease due to excluding illegal products might become offset by an increase of tropical timber that becomes more acceptable when illegal exports to China and elsewhere in East Asia reduce.
b1: -
b2: Tropical Hardwood volumes have decreased in UK & Europe during recent years, poor economical outlook could be main driver but there is also a fashion for "lighter" colored hardwoods which temperate species fulfill. Availability through supply chain is also a factor with better access to raw material from temperate supply regions as well as obvious geographical benefits trading within our own continent.
b3: -

7. Which effect do you expect that the European Union Timber Regulation (EUTR) will have on the share of tropical timber in total hardwood usage in your country the next ten years?

a1: Increasing
a2: -
a3: -
a4: Unchanged
b1: Unchanged
b2: Decreasing
b3: Unchanged

7a. Could you please provide a brief explanation of why you foresee this effect of the EUTR?

a1: Restoration of consumer confidence.
a2: -

a3: Demand for more transparency of legality.
a4: Prices may rise due to low availability of FSC /PEFC (certified but users of tropical timber are/or might be) insensitive to price (see also 6). EUTR will probably increase certification because it helps mitigating the risk- provided it really does (chain of custody/traceability to stump / source remains a problem).Also, certification in SE Asia is increasing, mainly in Sabah region.
b1:-
b2: EUTR is a fundamental advancement & should be welcome by all responsible operators, it is expected & sincerely hoped to reduce illegal logging which adversely affects indigenous populations & that must be the aim of every trader of forest product.
b3: Absolute nonsense since they don't recognize FSC and PEFC.

Questions and answers from Indonesia

The interviews for Indonesia have been conducted online, via E-mail during April–May 2013. The questionnaires were directed to experts, civil society representatives and timber companies.

We have received 5 answers: 3 responses from experts (marked here as: c1, c2 and c3) 1 response from a civil society representative (marked as: d1) and one response from a timber company (marked here as e1).

1. Which European countries are the main importers of Indonesian tropical timber?

c1: Netherlands
c2: UK, Netherlands, France
c3: UK, Netherlands, France, Belgium, Spain
d1: Netherlands
e1: Netherlands

2. Other than Europe, which countries are targeted for tropical timber exports?

c1: China, Japan, Middle East
c2: Japan, USA, China, Malaysia, Singapore, India, Africa
c3: US, Japan, China and Middle East
d1: Japan
e1: America (USA)

3. Which Indonesian tropical timber species are exported to Europe?

c1: Shorea, Intsia
c2: Teak, Shorea, Merbau, Ramin
c3: Most of Depterocarp (Shorea sp)
d1: Dipterocarp sp.
e1: Meranti

4. How is the trend of European demand for Indonesian tropical timber over the last decade?

c1: Decreasing
c2: Decreasing
c3: Decreasing
d1: Unchanged
e1: Decreasing

4a.Can you provide a brief explanation on this change?

c1: Global crisis in Europe
c2: Decreasing due to several reasons e.g. strict regulations from Indonesia government/law enforcement, international regulations and not to mention because of economic crisis in Europe. Don't forget to mention that illegal timbers were flooding in the international market in 2000s. Illegal logging activities are sponsored by people from neighboring countries i.e., Malaysia. Then Malaysia produced its timber to be exported to the international market including to Europe. But domestic market is actually increasing or at least quite stable.
c3: For the last five years exports timber product to European was decreasing with the many reasons: Illegal Logging Issue, number of EU country has problem for financial and other new competitive from Russia and South America and also Africa (Liberia, Gabon).
d1: -
e1: I am currently working in the timber company in the field so I don't exactly to which countries Indonesia timbers are exported

5. What is the trend, regarding the extent of European regulations on tropical timber imports, over the last decade?

c1: Increasing
c2: Increasing
c3: Unchanged
d1: Unchanged
e1: Increasing

5a.Can you provide a brief explanation on this change?

c1: European community realize the importance of timber legality or timber origin
c2: European need tropical timber but their regulations are always changing. Too many regulations! Indonesia will see other potential countries to trade their timber with less regulations but continuously buying the products.
c3: -
d1: -
e1: Too many regulations from EU regarding with tropical timber trading that create disincentives for the companies e.g. increasing production costs while the timber price is not increasing.

6. What impact do you think the following mechanisms will have on Indonesian (tropical) timber exports to Europe (1-encouraging; 2-unchanged; 3-discouraging)

FLEGT: encouraging (c1, c3); unchanged (e1); discouraging (c2, d1)
EUTR: encouraging (c1, c3); unchanged (e1); discouraging (c2, d1)
FSC/Certification: encouraging (c1,c2, c3); unchanged (e1); discouraging (d1)

6a.Can you provide a brief explanation for why you foresee these effects?

c1: Will change the mind-set of forest concessions owner in Indonesia
c2: EU develops lots of regulations while still purchasing timbers from the tropical countries that are less enforced regulations.
c3: The market has a guarantee that timber product come from legal source and well managed forest and sustained.
d1: -
e1: Seemingly that by increased number of regulation on timber trading, the production of tropical timber is decreasing, the price is also declining, so the economic principal on supply and demand of timber are not well applied here.

7. What do you think about the future (looking ten years ahead) of Indonesian exports to Europe?

c1: Unchanged
c2: Decreasing
c3: Increasing
d1: Decreasing
e1: Decreasing

Can you provide a brief explanation for this change?

c1: Will change when global crisis in Europe finished
c2: If regulations are too many, this will discouraging Indonesia timber market. Then Indonesia will seek other countries. That's a logic!
c3: Most of Indonesia timber industry now modified the factory structure to capture EU market with special product from Indonesia Hard Wood timber like outdoor furniture where the lest competitive from other country
d1: No more resources left or at least very limited.
e1: Due to declining trend on tropical timber export to Europe, the market there is not interesting anymore. The private company will change their core business on timber into other sectors. If it is the case, there is big worry that forest area will be converted to non-forested area (i.e. mining, plantation etc), so the forest area will be significantly reduced. So, be aware of it.

8. By having SFM certified status, the timber companies get:

c1: Better company image
c2: Better company image
c3: More market access
d1: Better company image
e1: Better company image