

A short analysis on the stricter European regulations on tropical hardwood imports and their side effects

Jean-Marc Roda, Eric Aretz, Hin Fui Lim

► **To cite this version:**

Jean-Marc Roda, Eric Aretz, Hin Fui Lim. A short analysis on the stricter European regulations on tropical hardwood imports and their side effects. 11 p Working paper. 2007. <cirad-00194212>

HAL Id: cirad-00194212

<http://hal.cirad.fr/cirad-00194212>

Submitted on 6 Dec 2007

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Discussion – working paper

A short analysis on the stricter European regulations on tropical hardwood imports and their side effects

First version : March 2007

By Roda, Jean-Marc¹, Arets, Eric J.M.M²; Lim, Hin Fui³

Abstract

This paper analyses the side effects of the stricter regulation on tropical hardwood or timber imports. It considers the place of Europe within the global timber market, where Europe accounts only for a very limited share. It also explains the high selectivity of European markets, with its consequences. While tropical wooden furniture and other secondary processed products are not considered as timber here, their question is also discussed. The number of empirical studies specifically dealing with the side effects of EU regulations is limited, but the results are converging, showing that these regulations have a general adverse effect, contrary to the initial aim of promoting the sustainability of tropical timbers. These side effects are essentially to divert the trade towards countries with lower standards, and to add a burden on most of the producing countries which have already a set of comparative disadvantages for the production of legal or sustainable timber. The effects are positive on a limited number of companies which markets are very dependent of Europe. The question is then analysed from a broader perspective, replacing the effects of the EU regulations as an incidental factor compared to the increasing consumption of tropical timber by the three developing giants: Brazil, India and China.

Introduction

With a long history of concerns regarding the state and the sustainability of tropical forests, the European opinion has been in the recent years particularly awakened by several spectacular activist-events and campaigns organised by environmentalist NGOs, which culminated around the years 2001 to 2003. Coincidentally, or probably as a result, several European governments decided to increase their own level of environmental requirements when purchasing tropical timbers for public markets, while some others are still pondering the opportunity of specifically addressing tropical timber trade. Denmark has issued the first policy in this matter, in 2003, followed by UK in 2004 and France in 2006. Netherlands is still in the process to issue definitive guidelines. At least in Danish and British policies, the tendency is to use existing ecolabels like FSC or PEFC as a reference, while the terms of French and Dutch policies are purposely not directly favouring any specific ecolabel. All of these procurement policies are unilateral measures.

Conversely and at a broader level, the European Union (EU) launched an action plan to restrict the amount of illegal timber entering the EU, by increasing the legal requirements on tropical timber imports (Communication from the Commission to the Council and the

¹ Corresponding author; CIRAD, UR Tropical wood products, FRIM, Techno-Economics, Kepong, 52109 Malaysia; CIRAD, UR Bois Tropicaux, Montpellier, F-34398 France

² Alterra, Centre for Ecosystem studies, Wageningen University and Research Centre, Wageningen, 6700 The Netherlands

³ Forest Research Institute of Malaysia, Techno-Economics, Kepong, 52109 Malaysia

European Parliament 2003). Because of a necessary compliance with WTO regulations, and the need to avoid any unfair competition with temperate timbers or other materials which may not be submitted to the same requirements nor to the same production complexity, this action plan “Forest Law Enforcement, Governance and Trade” (hereafter referred as FLEGT) is based on voluntary individual partnerships between the EU and producer countries, with assistance provided in exchange of the trade restriction, and the process is still in progress. Beside the nature of the various restriction measures, their recent and almost simultaneous development forms a continuum of actions which progressively hardens the regulation of wood imports.

All the actions by governments as well by NGOs started with the legitimate concern to promote a more sustainable management of tropical forests, and to combat the illegal trade of tropical timbers. The underlying hypothesis of all actions restricting regulations of tropical hardwood imports into Europe, is that it automatically directly entail positive impacts on the global sustainability of tropical forests. But the reality of the impacts might be more complex, and these actions may have side effects. The purpose of this paper is not to discuss whether positive or negative aspects prevail in the impacts of stricter European regulation on tropical hardwood imports. Instead, it is to examine the global trade context of these regulations on tropical hardwood imports, and to discuss the hypothesis that they do have side effects, and if so, to analyse and discuss them.

1 The place of Europe within the world tropical timber market

1.1 Europe accounts for a very limited share of the world tropical timber consumption

After North America, Europe has traditionally dominated the world’s timber trade and timber consumption, as the second largest consumer of hardwood and softwood . But this picture of Europe having a major impact on the global timber economy, is essentially due to the pre-eminence of temperate wood products in the European consumption, following the global pattern of the western countries. Regarding the world tropical timber market, it is a different story. Today, Europe⁴ represents a very limited part of the world consumption of tropical timber: less than 1% of the world tropical logs consumption, and respectively less than 7 and 6% of tropical sawn timber and plywood world consumptions. The volume of logs and plywood consumed by Europe is decreasing since 1998, and stabilising in the last years. Meanwhile, the European consumption of sawn timber is fluctuant but not declining, because it is mainly based on some specific technical requirements which only some tropical species can fulfil (Figure 1). According to the calculations based on either FAO or ITTO sources, the overall European roundwood-equivalent consumption of tropical timber is assessed between 3 to 6 % of the world consumption [computed from (International Tropical Timber Organisation 2006) and (Food and Agriculture Organization of the United Nations 2007)]. Thus the European footprint on the tropical timber production, through its own consumption, is low at the world scale. It is already decreasing for a short decade in absolute value, and it will in the future even decrease more, in relative value, because of the steady consumption increases of Brazil, India and China. These 3 countries only, account for 45 to 50% of the world consumption of tropical timber in roundwood equivalent, and their importance is increasing. Each of these countries consumes much more (4 to almost 8 times) than the whole Europe itself, while their exports of the different timber products are excessively low

⁴ Countries of the European Union, hereafter referred as “Europe “.

compared to their consumption. Two other tropical countries with a different profile, because they are more export-dependant for some products, have a major importance at the world scale. That is Indonesia and Malaysia. These two other huge consumers (each consumes more than 3 times than the whole Europe itself) along with China, Brazil and India, form a cluster of tropical countries which accounts for 60% of the world tropical timber consumption. The patterns of their overall increasing consumption, influenced by their status of developing countries, are the real driver of the requirements for tropical timbers at the world scale, and have progressively overwhelmed the European influence.

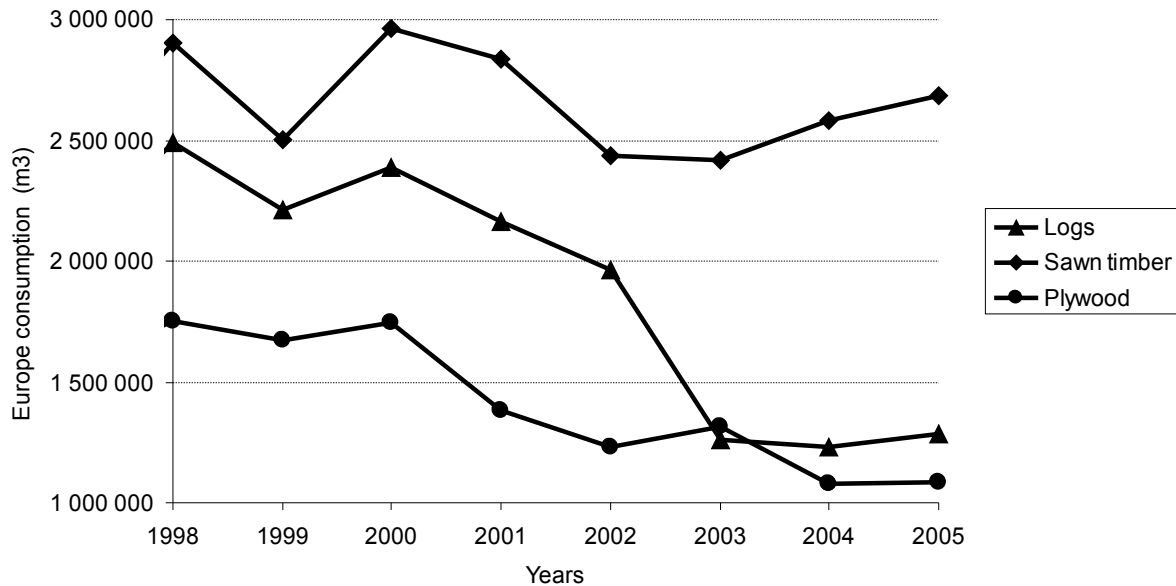


Figure 1 Evolution of European consumption for the main tropical timber products (source : Faostat)

1.2 The traditional influence of Europe in some African countries is challenged

Yet European demand patterns have still some influence in a few African countries like Ghana, Côte d'Ivoire, Cameroon, Gabon and Republic of Congo, but this also is challenged. Traditionally, these countries were exporting their tropical hardwoods almost exclusively towards Europe. But for the last decade the volume and the share of their exports to Europe is progressively decreasing, while they have diverted their sales towards Asia. The most striking examples are the Republic of Congo, which exports to Europe of logs, sawn timber, plywood, in Round Wood Equivalent, have fallen from more than 80% to less than 15% in the recent years (Figure 2). During the same period, Cameroon and Côte d'Ivoire have better resisted, and their share of export to Europe remained above 60% (Food and Agriculture Organization of the United Nations 2007). It is interesting to note that despite different political situations and economic contexts, these two countries both benefit of well developed industrial and institutional tools which allow them to process a large share of their logs, and both present a high proportion of forest industries with European shareholding.

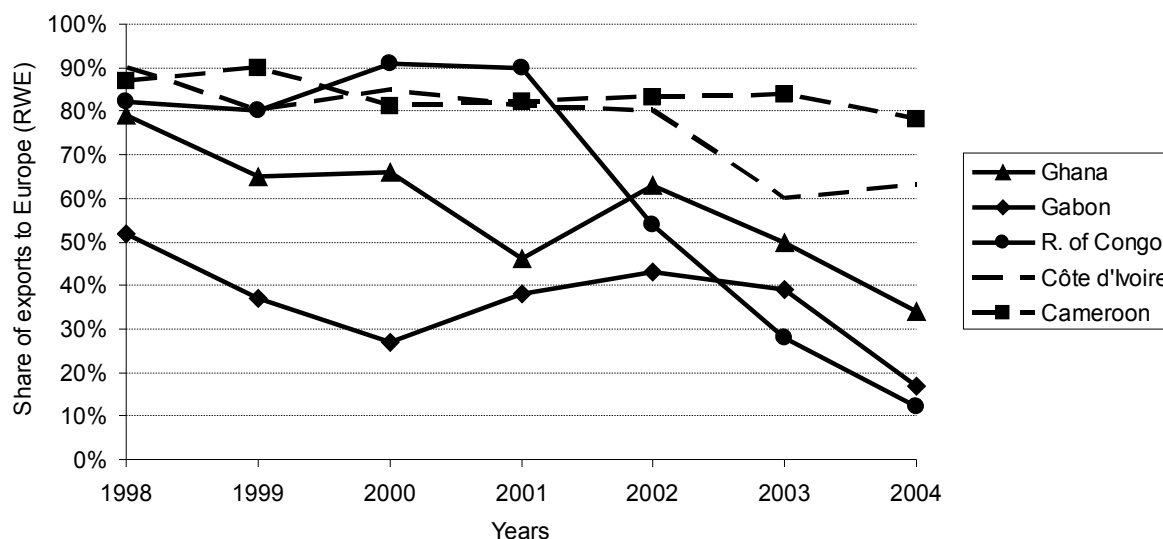


Figure 2 Evolution of hardwood exports to Europe of selected African countries (sum of logs, sawn timber, veneer and plywood, in Round Wood Equivalents, source : Faostat)

1.3 European markets are highly selective

Even if the opinion usually assumes that the European demand concerns mainly higher value timbers and thus have an impact on the economy of the timber production, its footprint in this regard is limited too. Actually, the European footprint is very high on certain specific tropical timbers, belonging to what can be called “niche markets” at the world scale, because of the specificity of the requirements (mainly regarding the delays of delivery, the logistics, the presentation and packaging of the products as well as their technical quality). These requirements make the production for European markets not so easy nor so profitable for developing economies, which explains why most of the critically export-dependant tropical countries (ie Gabon or Republic of Congo) are increasing the share of their timber sales towards Asia, because these markets are less profitable but also less requiring (Roda 2001a). While the European consumption decreases, the selectivity of the demanded products is becoming higher. As a result, the gap between the requirements of European markets and the main markets is also increasing. Conversely, this phenomenon entails a higher dependence of the decreasing number of producing firms which are specialised into the European markets. They become more sensitive to the fine tuning of this demand, and their eventual ability or impossibility to fulfil all the requirements of this demand is becoming their main comparative advantage or impediment within the international trade of tropical timbers, which has become essentially regulated by the Asian and Latin-American producers .

1.4 Imports of furniture and other secondary processed wood products have probably a higher impact than timber imports

Despite the fact that furniture and secondary processed products (hereafter named as SPWP) are beyond the scope of the timber question, it is nevertheless interesting to consider it in brief. Indeed, while the European consumption of tropical timber is slightly decreasing, the import of SPWP has increased over the last ten years, with Malaysian, Indonesian, and lately also Chinese producers being very active. Despite this progression, the tropical SPWP have

been losing market shares in Europe, because of the increase of use of PVC products and temperate SPWP (FAO 2007).

We take here into account only the quantitatively significant SPWP, which are wooden furniture (wooden seats, kitchen, office, and other furniture), wooden joinery and carpentry, wooden frames, densified wooden profiles and blocks, and various mouldings and floorings⁵. There is no statistical tool nor database allowing to assess the consumption of the tropical SPWP at the world scale. The only way to quantify the importance of these products is the international trade, which gives distorted and exaggerated proportions compared to real consumption, since the wooden SPWP are assumed to represent a greater volume in the internal consumption of the producer countries, than the actual international trade. According to the United Nations Commodity Trade database, the EU25 imported in 2005 only 15%⁶ of the value world imports of the main SPWP, but 22%⁷ of the value of the world imports of the main SPWP produced in tropical countries (United Nations 2007). Considering that China has become a major exporter of SPWP to Europe, the proportion could be as much as 27%⁸. Of course, one should keep in mind that these figures represent only the data registered in the UN database, not the real international trade, and that the real proportions of the consumption itself are probably much lower. This latest assumption is made on the basis of several empirical studies which suggest that in most of the tropical countries, the internal trade and consumption of forest products is much more important than the external trade. Nevertheless, this suggests that SPWP may carry the impact on tropical forests of Europe consumption, while the European regulations on tropical hardwood imports have only limited impacts on the actual evolution of the tropical forests at the global scale.

2 The evidence of negative side-effects in the context of most of the producers

2.1 From strident comments to objective studies

With a rather strident judgemental tone, Bryant (Bryant 1999) pointed out the possible side-effects of the stricter regulations on forest products: “industrialized countries have a propensity to levy import restrictions in order to coerce developing countries into implementing sound programs [...] Developing countries can easily turn to secondary sources, such as their own markets, to fulfil their immediate needs [ie need of selling their products]”.

Since that time and this normative position, a few empirical studies have highlighted that, due to the relatively high gap between the relatively low demand of the countries imposing some trade standard, and the much greater demand of other countries with lower standards, the side-effects of stricter environmental regulations on timber imports were noticeable. In the specific case of the European stricter regulations set, there is a pair of convergent empirical studies, which are also convergent with an impact study regarding stricter import regulations outside Europe, in Australia, indicating similar results and side effects (Jacko Pöyry Consulting 2005).

⁵ This refers to the products described by standardized international nomenclature HS1996 : Codes 440920, 4413, 4414, 4418, 940330, 940340, 940360, 940161, 940169.

⁶ That is approximately 8 100 000 000 USD, on 52 600 000 000 USD.

⁷ That is approximately 2 000 000 000 USD on 9 600 000 000 USD

⁸ Computed by CIRAD from the UNComTrade(United Nations 2007)

2.2 Convergence of two recent empirical works on stricter imports regulation in Europe

An impact assessment of the FLEGT process (Indufor 2003) has concluded that this generic EU regulation will have little effect on the promotion of forest sustainable forest management or against illegal activities, in the majority of tropical countries which have a very limited share of timber sales to Europe, and which constitute the majority of tropical timber producers countries. But the impacts are expected to be greater in only a few tropical countries which still largely depend on sales towards Europe. The main point is that the EU regulation on timber is likely to encourage a leakage of export towards third countries with less strict regulations, and which resell finished products to Europe (Indufor 2003). Because the chain of custody of these finished products is much more difficult to identify than for timbers, there are currently no specific environmental regulations for their imports regarding legality of the harvests at their origin, or sustainable management of forests.

In France, an impact study of the new public procurement policy (with sustainable management criteria for timber) has shown that this regulation tool may have only a limited effect in promoting sustainable management in tropical forests. At the same time it is likely to encourage producers of tropical timber to divert their sales to other parts of the world than Europe. . More in detail, this study reveals that, this regulation tool will have an important media impact. This will create a *de facto* segregation favouring temperate timbers as well as plantation timbers, because the offered quantities of these timbers complying with regulations is much more bigger than for complying tropical timbers from natural forests⁹. Furthermore, the French study finds that this procurement policy favours the large scale industrial producers in tropical countries., but disfavours small producers from the same countries. This last effect is due to the fact that, while the large industries are usually integrated and thus get certified or can prove the legality and the origin of the material with less difficulties or relative cost, the local small and medium operators have not the economic power to force their local suppliers to meet these requirements. Some of these small scale operators are integrated, but then, do not benefit of scale economies and have a comparatively higher cost of meeting the requirements.

With these two works, the adverse side effects of some stricter European regulations are identified and qualified, but no study has quantified them, so far.

2.3 The broader perspective

While the above mentioned empirical studies essentially discuss the huge gap between the level of European requirements and the actual importance of the European market, it is also interesting to consider the offer of tropical products complying with the European stricter regulations, and its potential evolutions. The share of FSC certified production forests appears to be so far the only worldwide available index able to provide, in some extent, some basic indication on the potential ability to produce timber that will comply with a minimum level of environmental or legal requirements¹⁰. The use of such an indicator relies on the postulation that, in a given country, there is a correlation between the easiness to develop FSC certified timber, and to produce timber complying with environmental and legal European import regulations.

A recent empirical study, has confronted such FSC indicator with a range of market data (dependency of the producing countries on European markets and various timber products,

⁹ According to , the tropical forest today only represent 5% of the total available certified areas, which entails an unbalanced offer between temperate timbers and tropical timbers.

¹⁰ Among all the existing forest certifications schemes, only FSC is widespread both in temperate and tropical countries, and publicly displays the characteristics of each certified timber production under its scheme

market shares, and more than 200 other economic indicators (Wang 2006). It was expected that in a given country, the level of FSC certification would be related to the share of sales to markets with a high environmental sensitiveness, but the results was totally different. A factorial analysis of the extent of FSC certification showed that more than 50% of statistical inertia was explained by only two factors: firstly poverty versus high standards of living¹¹, and secondly the potential budget that a national society (civil or public) could theoretically allow for financing the forest¹². These results reveal a structural relationship between the extension of FSC and the economic development of a country, but not with its sales to eco-sensitive markets. It also shows that almost all the tropical countries significantly producing timber, belong to the group of the poor, with low GDP or GNI/ha, thus being structurally unable to really see an extent of FSC. This is somehow consistent with the results of the empirical studies described above, which suggest that the increase of the imports standards in Europe do not really entails any real development of the offer, having even adverse side effects, except on some companies being very dependant on the European market . By extension, the results of this factorial analysis also suggest that the stricter European regulations would hardly have an impact on the sustainability of tropical timber and forests. It seems on the contrary that the increase of European imports standards will have many unfair side effects on tropical countries, if not coming with accompanying actions to solve the problems of poverty, economic development, and comparative disadvantages, which are the main underlying factors featuring the tropical timber production legality or environmental quality(Roda 2006). In the same time, Brazilian, Indian, and especially Chinese consumptions are still exponentially growing . This probably will continue to level down the relative importance of the European market for tropical timbers at a world scale. It suggests that any positive impact of the European stricter regulations is likely to be completely outnumbered by the pressure of the markets of the developing countries. But it also suggests that the adverse side effects of these regulations would be only a reinforcing factor within the global trend, mostly independent of Europe policies, which is the increasing control of tropical timber economy by the developing countries. Ultimately, these European stricter regulations could just accelerate what has already begun more than ten years ago (Roda 2000), that is the disconnection of Europe and of the world tropical timber economy, except for a few big timber companies installed in the tropics, with European shareholding .

3 Discussion

At a first level of analysis, the question of the side effects of stricter European regulations on tropical hardwoods imports appears as a quasi free competition example. With a very large demand for the products by many countries and segments of industry, an increase of market constraints imposed by one minor share of the demand (Europe) is sanctioned by a phenomenon of diversion of a part of the trade towards the larger share of the demand with lower requirements for the environmental or legal aspects of the production. The trade diversion essentially prevents the promotion of better production practices in the countries of origin. Of course this is not *per se* a reason for Europe to stop demanding legally and sustainably produced timber. But such a situation, if providing a clear conscience to the European stakeholders, is unfortunately of little use to improve the global sustainability of tropical hardwoods and forests.

¹¹ FSC certification is observed to a greater extent in countries wich present high energy consumptions and development of transports, while FSC extension is limited in countries with high poverty indicators

¹² That is, a unknown sum of money proportional to the GNI or the GDP of the country, relatively to the forest area of the country (GNI/ha or GDP/ha)

Yet a very small part of offer and demand appears as a classical bilateral monopoly. It is the case of the few producing firms which are bound to the European market for structural reasons. These firms adapt their behaviour according to their market constraints and their production constraints (especially the difficult industrial context of developing countries). The increase of the market constraints might endanger some of these firms, but in the same time reinforce their niche, protecting them against the global competition.

At a second level of analysis, it is important to differentiate the nature of the various European regulations on tropical hardwoods imports. The unilateral regulations, as the national public procurement policies, only increase the market constraints for the firms from the tropical countries, without countermeasures to help the changes and reforms in a way that promotes economic development of these countries, or that reduces their comparative disadvantages. Thus these unilateral regulations mainly result in a diversion of the sales towards other markets, except for the few firms bound to the European market. In this regard, it is very interesting to highlight the noticeable differences between such policies of various European countries. Indeed, these differences partly correspond to the differences¹³ between the clusters of hardwood producing firms having their main shareholding in the same European countries. Conversely the bilateral regulations propose measures to help the producers to meet the market constraints. FLEGT include actions in order to support governance reforms in the targeted countries, to support law enforcement tools, verification and monitoring, to better prepare them to work towards eco-certification, to make the actors aware of the necessity to export and import timber from legal sources, etc. The action plan also mentions support to community based forestry and customary rights of indigenous people. In the same time, FLEGT will have only a limited effect because the bilateral negotiations are currently only focused on a few countries, and regarding a very small share of the world tropical hardwood consumption.

Considering the limited efficiency of the existing regulations, as well as the relative importance of their side effects, it is worth to consider the parameters of the trade. While the European demand constraints are increasing, the producing firms, which are mainly located in developing countries with comparative disadvantages, can only play on their internal production constraints (organisation, efficiency, strategy of the firm itself). The limited leverage effect of the internal constraints, compared to the huge market with low level of requirements, facilitates the trade diversion effect. Meanwhile the critical factors of the hardwood production are the political stability of the country, governance and corruption, infrastructure and industrial services. These factors are also essentially those which usually, along with the poverty, entail a low level of legality and sustainability of the hardwood productions. They form the external production constraints, and remain generally largely out of reach of the firm action, especially when the firms are of small size. Logically, any strategy should first plan actions tackling these constraints, or helping the firms to overcome it, prior to restrict the imports the European import regulations, or in order to give sense to them¹⁴.

Conclusion :

The stricter European regulations on tropical timber imports presents side effects which are contradictory with their general aim, or contexts, which is to design tools favouring the sustainability of tropical timbers and forests. It essentially consists in diverting the trade from

¹³ Former colonies and location of the involved firms, number of the firms in the different producing countries, nature of the products and the trade, size of the corresponding firms and availability of eco-certified product, etc.

¹⁴ A complementing strategy could be to consider the question of SPWP, on which market Europe has a greater influence. But the real influence and the potential side effects, have still to be investigated.

Europe to other countries less demanding in terms of legality or environmental quality, and in forbidding the Europe markets to tropical countries which are already poor, still developing, or with strong comparative disadvantages. It also forbids this market to the small companies which precisely haven't the structural tools nor the economic context to produce at the required levels. Conversely, a few bigger companies with a high dependency on the European market are encouraged to improve their practices, this being even a factor of comparative advantage for them. The side effects are essentially due to the very limited importance of Europe as a world consumer of tropical timber, compared to the other consumers, creating a classical trade-diversion effect. Yet, this trade diversion effect demands further studies in order to be quantified. With the continuously growing consumption of the big developing countries, there is little prospect that this situation could change. The risk is that Europe becomes even more disconnected from the general dynamics of the tropical timber economy, except for a small quantity of products with very specific technological characteristics and uses.

Note

The literature on ecocertification side effects is also very interesting to consult, since the trade of tropical products timber markets for ecocertified products present many structural similarities with the trade of this kind of timber towards Europe. An interesting state of the art on the law aspects is given by Reh binder, while Van Dam provides a producing-country point of view on the economics of forest certification (Reh binder 2003; Van Dam 2003).

References

Reference List

- Awang, Sanafri; Guizol, Philippe; Muhtaman, Diwi, et Roda, Jean-Marc. Strategy for sustainable development of furniture industries and teak forests in Java. Bogor, Indonesia: CIFOR, CIRAD, Carrefour, LATIN; 2003.
- Baudin, A; Flinkman, M, et Nordwall, H-D. Made in Italy, grown in the tropics ? ITTO Tropical Forest Update. 2005; 15(3):20-21.
- Bryant, Shawn L. Environmental Labelling's Effects On The Timber Wood Industry [Web Page]. 1999; Accessed 2007. Available at: <http://gurukul.ucc.american.edu/ted/projects/tedcross/xtrop14.htm>.
- Communication from the Commission to the Council and the European Parliament. Commission of the European Communities. Forest Law Enforcement, Governance and Trade (FLEGT): Proposal for an EU action plan. COM ed. Brussels: COM; 2003; p. 32p.
- FAO. Markets for high-value tropical hardwoods in Europe. Rome: FAO; 2007.
- Food and Agriculture Organization of the United Nations. FAO Statistical Database [Web Page]. 2007. Available at: <http://faostat.fao.org/>.
- Gudbransen, Lars H. et Humphreys, David. International initiatives to address tropical timber logging and trade - A report for the Norwegian Ministry of the Environment. Lysaker, Norway: The Fridtjof Nansen Institute; 2006; ISBN: 82-7613-489-0.
- Guizol, Philippe; Roda, Jean-Marc; Muhtaman, Dwi R.; Laburthe, Pierre; Fauveaud, Swan, et Antona, Martine. Le teck Javanais, entre surexploitation et embargo. Bois Et Forêts Des Tropiques. 2005; 284(2):11-22.

- Hashiramoto, O; Castano, J, and Johnson S. Changing global picture of trade in wood products. FAO Corporate Document Repository. Rome; 2004 9p.
- Indufor. Impact assessment of the EU action plan for Forest Law Enforcement, Governance, and Trade (FLEGT). Helsinki: European Commission Directorate General for Development; 2003.
- International Tropical Timber Organisation. Annual Review and Assessment of the World Timber Situation. Yokohama, Japan: ITTO; 2006; ISBN: 4 902045 27 3.
- Jacko Pöyry Consulting. An overview of illegal logging. Melbourne, Australia: Australian Government - Department of Agriculture, Fisheries and Forestry; 2005 22p.
- Muhtaman, Dwi; Guizol, Philippe; Roda, Jean-Marc, et Purnomo, Herry (CIFOR, CIRAD, CIRAD, CIFOR). Geographic Indications for Javanese Teak ; A constitutional change. Survival of the Commons : Mounting Challenges ans New Realities (the Eleventh Conference of the International Association for the Study of Common Property); Bali, Indonesia. IASCP; 2006.
- Oliver, Rupert; Fripp, Emily, et Roby, Andy. Wood products trade - Africa & Europe. London: Timber Trade Federation; 2005.
- Pinto de Abreu, José Augusto A. K. et Simula, Markku. Setting the scene : Overview and implementation of phased approaches. ITTO International Workshop on Phased Approaches to Certification; Bern. Yokohama, Japan: ITTO; 2005 38 slides.
- Rehbinder, Eckard. Forest certification and environmental law. in: Meidinger, Errol; Elliott, Christopher, et Oesten, Gerhard, Editors. Social and Political Dimensions of Forest Certification. Germany: Verlag; 2003; pp. 331-352.
- Roda, Jean-Marc. Etat de l'économie des bois d'oeuvre tropicaux 2000 - State of the tropical timber economics 2000. Montpellier: Cirad; 2000. ISBN: 2-87614-441-7.
- Roda, Jean-Marc. Ecocertification tropicale et idées préconçues. Bois Et Forêts Des Tropiques. 2001a; 4(270):108-109.
- Roda, Jean-Marc. Market analysis for Acrean timbers ONFI-CIRAD ed.. Montpellier; 2001b(Forest evaluation of the State os Acre, Brazil).
- Roda, Jean-Marc. L'enclavement est-il une fatalité pour les industries du bois ? Elements de réponse é partir du cas de l'Acre (Brésil). Bois Et Forêts Des Tropiques. 2004; 280(2):68-72.
- Roda, Jean-Marc (CIRAD). European new trends of public procurement policies for tropical timber :lessons from the French case, and global implications. International Tropical Timber Organisation; Merida, Mexico. ITTO; 2006.
- Roda, Jean-Marc; Campbell, Bruce; Kowero, Godwin; Mutamba, Manyewu; Clarke, Marjella; Gonzales, L. Alberto; Mapendembe, Abisha; Oka, Hiroyasu; Shackleton, Sheona; Vantomme, Paul, et Yiping, Lou. Forest-based Livelihoods and poverty reduction : new paths from local to global scales. in : Mery, Gerardo; Alfaro, René; Kanninen, Markku, et Lobovikov, Maxim. Forests in the Global Balance - Changing Paradigms. Helsinki: IUFRO; 2005; pp. p75-96.
- Roda, Jean-Marc; Rathi, Santosh, et Simula, Markku. Elaboration d'une méthode de suivi des objectifs et impacts de la circulaire et scénarios futurs d'évolution du dispositif prévu par ce texte (Rapport de la phase 3 de l'Etude de différents scénarios d'introduction d'une écoconditionnalité dans les achats publics de bois tropicaux) CIRAD ed.. Montpellier; 2006 79p.
- Sales, Christian; Rathi, Santosh, et Roda, Jean-Marc. The world and the asian market. ATIBT Forum 2005; Shanghai. ATIBT; 2005.
- Tacconi, Luca; Boscolo, Marco, et Brack, Duncan. National and internaional policies to controll illegal forest activities. Bogor, Indonesia: Cifor; 2003.
- United Nations. United Nations Commodities Trade database [Web Page]. Accessed 2007.

Available at: <http://comtrade.un.org/db/default.aspx>.

- Van Dam, Chris. The economics of forest certification - sustainable development for whom ? in. The Latin American congress on development and environment "local challenges of globalisation"; Quito, Ecuador. FLACSO; 2003 23p.
- Wang, Wei. Exploration des liens entre l'écocertification des forêts tropicales, et le risque pays, ainsi que d'autres facteurs de développement humain (Master Thesis). Nantes: Ecoles Supérieure du Bois; 2006 26p.
- White, Andy; Sun, Xiufang Canby Kerstin; Xu, Jintao; Barr, Christopher; Katsigris, Eugenia; Bull, Gary; Cossalter, Christian, et Nilsson, Sten. China and the global market for forest products; transforming trade to benefit forests and livelihood. Cifor; 2006; ISBN: 1-932928-21-9.