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Wood and Wooden Products Market of Vietnam in 2010 - 2017

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ABSTRACT
Vietnam is one of the biggest export wood countries in the world, but the unit value of wood is much lower than other countries because of many reasons from wood supply chain: high value in importing material wood; deforestation, affectless exploiting and management leading to low production value. Constructing an effective wood supply chain is good method to achieve main point of all international certification for wood and wood product to achieve higher value and it also is the best way to protect and develop forest sustainably with higher economic value. This article will concentrate to provide an overview of wood supply chain management, analyze the effectiveness of wood supply chain in Vietnam in period 2010 - 2017 and propose some solutions to enhance the effectiveness of wood supply chain in Vietnam and to protect and develop sustainably the forest in Vietnam.

KEYWORDS: Export, import, forest, wood and wooden products, wood supply chain.

I. INTRODUCTION

Vietnam is a country with high proportion of forest coverage (from 39 percent to 42 percent in period 2010 – 2017). Forests in Vietnam are rich with resources and diverse ecology, holding a rich biodiversity, including many endemic species. With many issues that encourage increasing the planted forest area in period 2010-2017, the total forest area in Vietnam is also increasing each year.

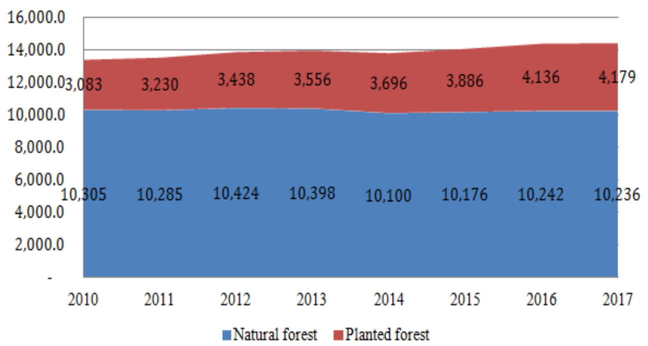

Figure 1: Forest area in period 2010-2017
Source: *Ministry of Agriculture and Rural Development*

Forests in Viet Nam are categorized into three main categories: (i) specialized forest (15%), mainly protected areas such as national parks and nature conservation areas; (ii) protective forest (35%), mainly for protection of water sources, soils and environment; (iii) production forest (50%), including both natural forests and forest plantations (VNForest, 2013).

With rich resources for developing the forest product processing industries especially wood products, in period 2010 – 2017, Vietnam is always one of the biggest export wood countries in the world, especially from 2013 when the net value of export wood was over 5 billion USD, Vietnam become the biggest wood and wooden products export country in ASEAN and the sixth of the world. In 2017, net value of export wood was over 7.7 billion USD, Vietnam become the fifth biggest wood and wooden products export country of the world with 6% market share.

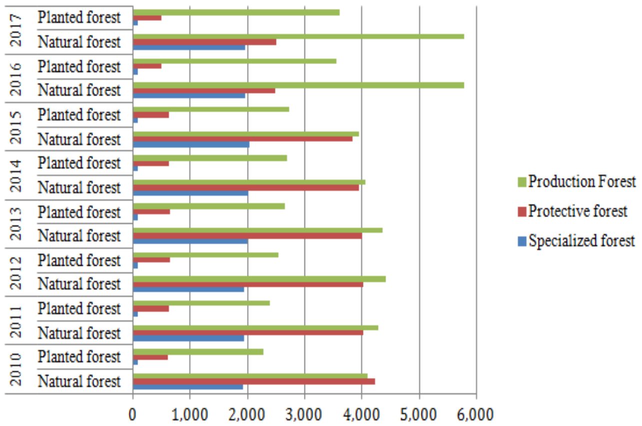

Figure2: Types of forest sort by sources and functions in period 2010-2017
Source: *Ministry of Agriculture and Rural Development*

But the unit value of wood is much lower than other countries and we have to use a lot of importing material wood because we can't gain the certifications for exporting wood products. It also relate to situation that wood products of Vietnam often concentrate on some special kind of perennial wood and it relates to deforest in many areas.

This article aim at analysing the situation of wood and wooden products market in Vietnam in recent period 2010 – 2017 to identify the changes and causes and find the solutions to enhance the position of wood and wooden products of Vietnam in the world market.

Constructing an effective wood supply chain with standards according to the requirements of the international wood production certificate is the best way to protect and develop forest sustainably with higher economic value in Vietnam.

II. METHODOLOGY

To analyse the situation of Wood and wooden products market of Vietnam in period 2010 – 2017, the secondary data are collected from reports of states organizations such as Forest status report of Vietnam in period 2010 - 2017 of Ministry of Agriculture and Rural Development; Customs Handbook on International Merchandise Trade of Vietnam from 2010- 2017 of General Department of Customs; Handbook of International Merchandise Trade of Vietnam from 2010- 2017 of General Statistics Office and other economic and scientific articles and reports.

III. RESULTS – SITUATION OF WOOD AND WOODEN PRODUCTS MARKET OF VIETNAM IN 2010 - 2017

A. *Wood supply chain model*

In WWF and IKAE project about the legal of wood in Vietnam, the wood SC in Vietnam was described as Fig 3.

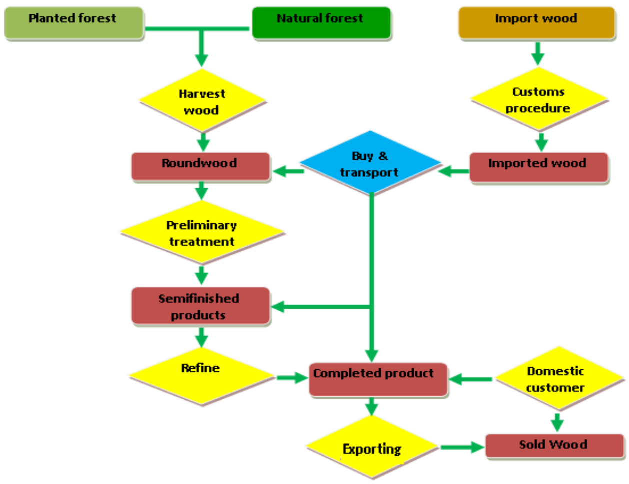

Figure 3: Wood supply chain in Vietnam.

Source: *WWF & IKEA*

: Situation of wood processing

: Technology step to transform wood

: Buy and transport relate to wood ownership

Forest Owners:

For a long time, forest in Vietnam belonged to state-owned entities for management and utilization. These entities included state forest enterprises, the special use forest management board, the protection forest management board and cooperatives.

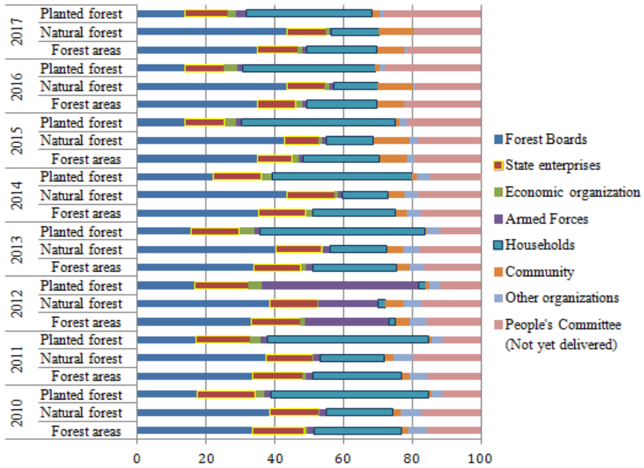

Figure 4: Forest Owners and their kind of forest in period 2010-2017

Source: *Ministry of Agriculture and Rural Development*

Recently, ownership has shifted towards households, individuals, village communities and the private sector as they are increasingly being allocated both forest and forest land (Figure 4).

The current Vietnamese forest area is for 67.9% publicly owned, 25.1% is privately owned and the remainder is under another type of ownership (FAO, 2015).

Households own biggest production forest area, most area of Forest Boards are protective and specialized forest.

Economic organizations, most of them are forest producing companies, have about 2 million ha forest area and 81% area are production forest.

Wood Importers:

Vietnam's wood processing sector is likely to remain highly dependent on imported materials from a large number of sources: Currently, 80% of the industry's raw materials are imported. Vietnam imported wood material and products from more than 600 different vendors from 26 countries and territories, with China, the United States, and Mekong countries as major sources.

Collectors:

Most collectors in wood SC don't make added value for wood products, but they often take an important role because most of household owners don't have enough money for cutting down and transportation. They are private traders, peeled wood workshops and State Forest Enterprises.

Production organizations:

By 2010, Vietnam had more than 3,000 wood processing enterprises. 95% are private companies, with various levels of domestic and foreign direct investment or joint-stock arrangements; only 5% are state-owned. (Nguyen Ton Quyen, 2010).

Up to 2017, there are about 4500 wood- processing enterprises and 85% of them are in private sector. Only 10% of them are FDI companies but these companies contribute 35% exporting wood products value. There are three kinds of wood-processing enterprises: chip processing facility, pulp processing facility/ paper companies and sawmills and wood refinery. 93% of enterprises are small or very small, 5.5% medium, and 1.5% big (VIFORES, 2018). About 1,500 enterprises both process, export wood and wooden products.

Vietnam has more than 300 wood-processing villages, 50 percent of which are located in the Red River Delta. These villages consume approximately 350-400 thousand cubic meters (m3) round wood equivalent (RWE) per year, mostly for furniture and wooden carvings. Most manufacturers in these villages are households processing large quantities of timber from natural forests legally restricted from commercial use.

Wholesalers, retailers and exporters:

Big furniture enterprises often manage their distribution channel to domestic and foreign customers, but there are few enterprises like this in Vietnam.

With furniture SC: Most of production organizations are medium, small and even extremely small. Extremely small organizations often produce to order and buy directly to customers. Bigger organizations often buy for retailers in other provinces.

With pulpwood SC: paper with different usage often distribute on other kind of wholesalers, retailers and exporters. This channel is much higher than furniture SC.

Customers

Exporting products hold about 70% wood products value. In domestic market, most of wood customers are in cities with 30% for families, 40% for new construction projects.

B. Detail information of Import wood and wooden products in period 2010 -2017

According to the statistics of the General Department of Customs, wood and wooden products import turnover to Vietnam increased in period 2010 – 2014, decreased in period 2014 -2016 and increased rapidly in 2017, especially in China market.

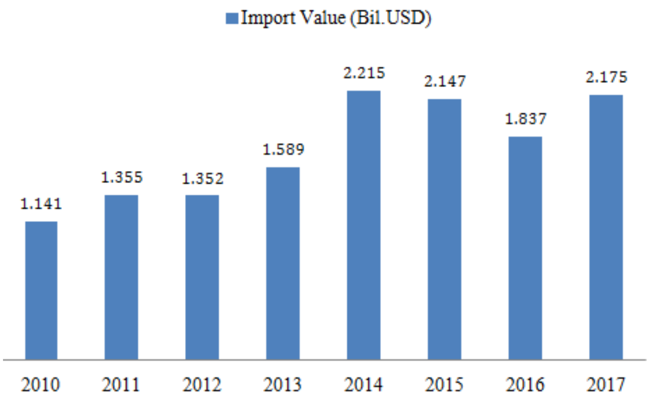

Figure 5: Wood and wooden products import value of Vietnam in period 2010 – 2017

In period 2010-2017, five major wood and wooden markets with high import turnover to Vietnam are the China, United States, Laos, Thailand, Cambodia and Malaysia. In 2017, China continues to be the largest wood and wooden products supply market for Vietnam, reaching nearly 363 million USD, up by 26% over the same period in 2016, accounting for 16,7 % of the total wood and wooden products import turnover of the country. Besides, three markets next to China, the United States, Thailand and Malaysia, also recorded an increase value in this period. On the contrary, wood and wooden products import turnover from Cambodia and Laos market fell sharply from 2016, with the reduction of 52.75% and 77.95% respectively compared to 2015, mainly because these two countries increased intensify policies to limit the export of wood materials.

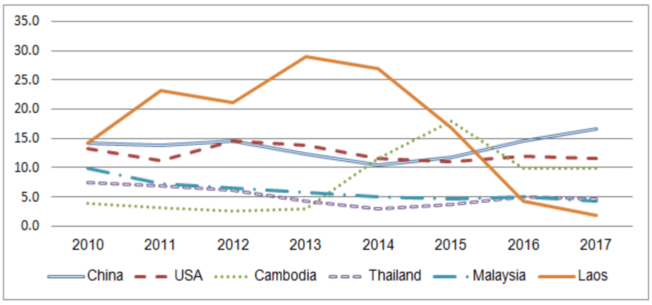

Figure 6: Main wood and wooden products importing markets of Vietnam in period 2010 – 2017

C. Domestic production in period 2010 -2017

For domestic raw materials, on the basis of successful implementation of state afforestation programs and projects in the past time such as: Program of greening bare land and denuded hills in 1993-1998 period (Program 327), Five million hectare reforestation Program in the period of 1998-2010 (Project 661), Plan for Forest Protection and Development in the period of 2011-2015; Therefore, besides good management and protection of existing forest areas, increasing the forest coverage to 41.45% in 2017, a stable and legal plantation material source for the wood processing industry has created.

Table 1: Production of wood by kinds of economic activity

Unit: Thous. m3

Year	2010	2011	2012	2013	2014	2015	2016	2017
TOTAL	***4,042***	***4,692***	***5,251***	***5,908***	***7,701***	***9,199***	***10,267***	11,455*
State	***1,376***	***1,893***	***1,721***	***1,891***	***2,356***	***2,734***	***1,812***	
Non-state	***2,612***	***2,737***	***3,460***	***3,940***	***5,245***	***6,344***	***8,361***	
Collective	3	3	3	4	5	7	20	
Private	2,555	2,671	3,386	3,856	5,132	6,208	7,629	
Household	54	63	70	80	108	129	712	
Foreign invested sector	***53***	***62***	***69***	***77***	***100***	***121***	***94***	

Source: *Vietnam General Statistics Office.*

In some recent decades, with supports from many international organizations, Vietnam government has been implemented many programs to support forest planting, harvesting and wood processing in accordance with international requirements. Implementing sustainable forest management as defined by the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest certification (PEFC), ensures that forests remain the most biodiversity ecosystems on the planet, and that society's forest needs and demands will be met in the long term.

Table 2: Global wood Certificated: area and number of custody certificates

Year	FSC			PEFC	
	Ha	No of Certificate	No of custody certificate	Ha	No of custody certificate
2010	30,855	-	-	-	-
2011	39,688	5	265	-	-
2012	45,17	6	281	-	-
2013	87,733	9	360	-	5
2014	133,823	11	384	-	5
2015	159,988	14	473	-	2
2016	203,863	24	526	-	5
2017	221,522	29	590	-	7

Source: *FSC, PEFC*

However, ompared to the wood processing industry of some countries that are competing directly with Vietnam, such as Malaysia and Thailand, the productivity of Vietnam's wood industry is much lower. This is due to some weaknesses of Vietnam's wood processing and manufacturing industry:

Firstly, the weaknesses related to inputs, such as labor level, technology, management level ... Content of inputs, such as high-skilled labor, innovative design products, complex technology are limited.

Secondly, enterprises' knowledge about product consumption market is still weak. Many enterprises are not directly connected to the market, but through buying companies. Lack of market information makes businesses passive in production and business.

Third, Vietnam's wood processing enterprises are mostly small and medium scale with weak resources. To overcome this, the industry needs its own policy to support small and medium enterprises, especially with enterprises in investment priority areas as wood industry.

Finally, Vietnam now lacks of supporting industries and related industries for the wood industry. In order to create a driving force for the development of the industry, Vietnam needs strong supporting industries, thereby creating momentum for joint ventures, reducing transaction costs ...to enhance the competitiveness of enterprise.

D. Exporting Wood in period 2010 -2017

With rich resources, wood and wooden products industries play an important role in export turnover of Vietnam recently. In period 2010 – 2017, export turnover of wood and wooden products always increase quickly with the average grow is 15,6%.

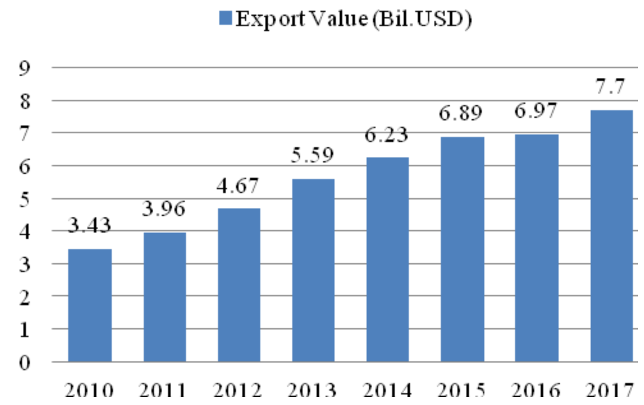

Figure 7: Wood and wooden products export value of Vietnam in period 2010 - 2017

In period 2010-2017, five major markets with high export turnover are the United States, China, Japan, EU and South Korea. In 2017, the turnover from these four markets amounted to over $ 6.8 billion, accounting for 88.4% of Vietnam's total export turnover from all markets.

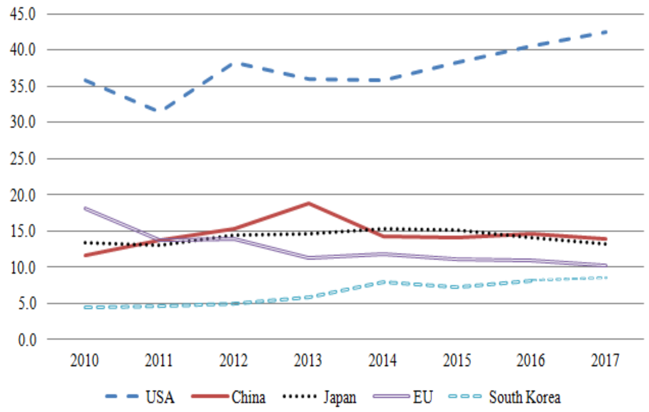

Figure 8: Main wood and wooden products exporting markets of Vietnam in period 2010 - 2017

The USA is the largest wood export market of Vietnam in the period 2010 - 2017, accounting for 31.4% to 42.4% of total wood exports value of Vietnam in this period. This situation poses the requirements for Vietnam's state managers in wood and wooden products industry to be properly prepared to minimize changes in exports to the USA market due to President Trump's trade policy (to reduce trade deficit, protect domestic trade and encourage domestic productions).

China and Japan are often the second and third largest wood export market of Vietnam in the period 2010 - 2017, accounting for 11.6% to 18.8% of total wood exports of Vietnam in this period. Currently, China has adopted the regulation that only legal wood can be used in public agencies and considers adopting a step-by-step policy to control the legality of wood resources in the country in the coming time. The Japanese government enacted the Clean Wood Act in May, 2017 and legal guiding documents to apply of the Clean Wood Act are gradually being reviewed and adjusted by the Government of Japan.

Similarly, the Korean government - the fifth biggest wood and wooden export country of Vietnam - had also enacted the Act on the Sustainable Use of Wood, which came into effect on September 2017.

The implementation of these laws means the application of measures to tighten the controls on imports of wood products into the Chinese, Japanese and Korean markets. This has a great impact on exporting wood and wooden products in the coming time.

Wood export turnover to EU tend to decrease in this period because of difficulties from the new legislation called the EU Timber Regulation in EU FLEGT Action Plan.

IV. DISCUSION – SOLUTIONS FOR WOOD SUPPLY CHAIN MANAGEMENT IN VIET NAM

The key challenge for sustainable forest development is how to supply more wood products with less impact on nature. This challenge spans the whole supply chain, from where and how wood is grown and harvested to how wisely and efficiently it is processed, used and reused. Therefore, basing on the key contents of global wood certificates (FSC, PECF,…) and requirements of import countries (FLEGT of EU, LACER of American…), all components of wood SC in Vietnam need to improve the effect of their activities to enhance the quality of wood products according to legal condition and demand of customers.

1) *Orient the consumption to the quality and beauty of wood products instead of kind of wood in domestic market*

As we know most domestic customers use wood furniture as the way to show their personality and they are easily persuaded by sellers, therefore, promoting the reputation of products, the beauty and value of products is good way to make new trend in consumption wood products. With these activities, we can reduce the pressure to cut down old tree in nature forest and orient the need to planted forest.

They can also orient the market to use furniture from non – wood or recycle wood materials, especially customers in cities where have more demands and easier to accept the new trend.

2) *Introduce new kind of wood that easy to plant and its special characteristics to international market*

Most wood producers depend on requirements of international market in kind of wood they need use, so it make strong pressure to nature forest while we have a lot of good conditions to plant other good wood. Introduce new kind of wood that easy to plant in Vietnam condition and its special characteristics to international market will help wood exporters of Vietnam have a stable position in international market and it also help to develop forest in the long future.

3) Encourage processing enterprises to concentrate on developing wood manipulated skills to hold the leader position of SC

Weaknesses in producing and market knowledge make a lot of difficulties for Vietnam's wood processing enterprises in both domestic and global market. To gain better competitive advantages in market, Vietnam's enterprises need to concentrate on developing wood manipulated skills to hold the leader position of wood supply chain. Fig 8 shows the Pyramid of skill needs in wood sector that Aleksandras Abišala et al proposed in their research:

Figure 9: Pyramid of skill needs in wood sector.

4) Encourage farmers to plant wood with science process

Household now have more skill in planting trees for their forest area but they often accept to cut down the tree when they are only in 2 or 3 year old while the two years later they can 2 times bigger than before. Early cutting down the tree also make the land become poorer and the effect of next planting is much lower.

So share the information about the content of planting, protecting forest and the benefit they can gain with right science processes is the real and urgent need.

5) Remove collectors in wood supply chain

Producing organizations can help household owners in cutting and moving the tree. Buying directly and removing collectors in wood SC will provide household and organizations more benefit.

Removing collectors and use wood in supply contract will reduce deforestation situation and increase the value of wood when they have legal resource.

6) Create strict relationship between all components of wood supply chain.

Long-term contrast must be sign between forest owner and producing organizations. Because, many of producing organizations has their own forest area, they co-operate with household to ensure the quality of wood.

Sharing wood market information system between all components in wood SC now is very low. Production companies need to hold the lead position of market to collect and share the information to SC to improve the value of wood in each step of SC.

V. CONCLUSION

Vietnam is a high forest coverage rate country, we also exporting many wood products, but the value of products is much lower than products of other top wood - exporting countries and we also have suffer from climate change strongly. Deforestation, affectless exploiting and management are the main reasons. Constructing an effective wood supply chain is the best way to protect and develop forest sustainably with higher economic value and help Vietnam’s wood and wooden products companies have better position in global wood supply chain.

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