

# **PROJECT REPORT**

## **POLICY SUGGESTIONS FOR PROMOTING PROCUREMENT OF TIMBER FROM LEGAL AND SUSTAINABLY MANAGED FOREST IN SMFES**

**ITTO TFL-PD 017/09 Rev 2 (M)**

**HOST GOVERNMENT:  
The People's Republic of China**

**EXECUTING AGENCY:  
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## **Foreword**

Today, China has become the world's largest log importer and the largest lumber importer and the largest exporting country of wood-based panels and wooden furniture. In China, the number of wood-based panel enterprises totals around 20,000, while those manufacturing furniture total around 80,000. Altogether estimates put the total number of employees in the timber sector at over ten million.

In China, more than 90 per cent of the total forestry industrial output is provided by small and medium-scale forestry enterprises (SMFEs), which also played an important role in meeting the twin demands from domestic and international markets for China's forest products. A large volumes of tropical timber are imported and processed by the SMFEs.

Many SMFEs are exporting finished products and many others supply processed tropical timber parts and components to larger companies for assembly for export. They also manufacture furniture and other products from tropical timber for the domestic market. China's SMFEs are, however, facing challenges related to procurement of timber from legal and sustainably managed forest, challenges they are not well equipped to address.

The majority of the SMFEs in China do not understand the issues of procurement of timber from legal and sustainably managed forest. As a result of this weakness the SMFEs do not appreciate the international market requirements for verified legal and sustainable sourcing, chain of custody or the importance of contributing to the needs of their overseas buyers in respect of transparent corporate social responsibility.

Based on the investigations carried out in the project area, the challenges arising from the U.S. Lacey Act and EU Timber Regulations for China's SMFEs are analyzed and elaborated in the report "China's tropical timber processing SMFEs' challenges and opportunities for procurement of timber from legal and sustainably managed forest".

Based on that report, suggestions are made for the improvement of the legal procurement of tropical timber by China's SMFEs after a thorough analysis of the current situation and problems.

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Dr. Michael Adams the international consultant to the project visited China in September 2011 and September 2012 and worked with the project team. During his stay in China, he visited wood processing enterprises in Zhejiang province and the city of Shanghai. The questionnaire for enterprises were revised after discussion with the international consultant. The outline of this report was also discussed between the project team and the international consultant.

## Acronyms and abbreviations

CCICED	China Council for International Cooperation on Environment and Development
CFCC	China Forest Certification Council
CNFPIA	China National Forest Products Industry Association
CoC	Chain of Custody Certification
DEFRA	Department for Environment, Food and Rural Affairs of Britain
DFID	Department for International Development of Britain
ENA	Europe and North America
EU	European Union
EUTR	European Union Timber Regulation
FAO	Food and Agriculture Organization
FPI	China Forest Products Index Mechanism
FLEG	Forest Law Enforcement and Governance
FLEGT	Forest Law Enforcement, Governance and Trade Action Plan
FSC	Forest Stewardship Council
ITTO	International Tropical Timber Organization
MOFCOM	Ministry of Commerce of China
NGO	Non-Government Organization
PEFC	The Pan-Euro Forest Certification Council
SMEs	Small and Medium-scale Enterprises
SMFEs	Small and Medium-scale Forestry Enterprises
TFT	Tropical Forest Trust
TLAS	Trusted Timber Legality Assurance System
TTAP	Timber Trade Action Plan
US	United States

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## 1. Introduction

Demand of forest products of excellent quality and reasonable price has continuously increased in domestic and foreign markets and this has accelerated the development of forest product industry in China. The growing demand has promoted the rapid development of China's international trade in forest products (the trade volume of forest products in China totaled 18.2 billion US dollars in 2000, and 118.8 billion US dollars in 2012).

China has become the largest importing country of log and sawn timber, and also the largest exporting country of wood based panels and furniture in the world (FAO, 2011, ITTO, 2011). China has twenty thousand enterprises producing wood based panels and eighty thousand furniture manufacturers. The number of employees in the wood processing industries exceeds ten million.

Due to the different policies, regulations, stages of economic development, historical and cultural traditions and managerial systems between countries, each link between the upstream and downstream of industry chain has established the modes of forest product manufacturing, trade and consumption adapted to the characteristics of each country..

These modes are relatively stable within a certain time period after reaching the supply - demand equilibrium. When the policies, regulations, economic development level and managerial system of one link on the industry chain change the resulting impact will be transmitted along the industry chain, causing a change in cost and profit structures. This further results in a changes in the whole industry chain pattern and global trade pattern of forest products.

Because of the differences in the levels of monopoly and competition of each link for resources, the profits and the adaptability to cost change also vary. When a factor which can cause the change in cost is altered abruptly and violently, the link with the weakest adaptability to the cost in the industry chain will be the first to be impacted. When the impact is beyond the adaptability of the entire industry chain, the industry chain may break down, leading to the collapse of many enterprises and considerable unemployment..

The SMFE manufacturing industries are the most vulnerable in the whole industry chain, because of low profit margins and poor capacity to adapt to external changes. The manufacturing industry earns the lower - end meager profit of the international industry chain by relying on the comparative advantage of cheap labor.

Once the external change occurs, this link is usually the biggest victim. (Lang Xianping, 2010) When the cost and profit factors become the manufacturing industry is the first to bear the impact.

Although the whole industry chain consisting of timber production, processing and utilization is an indivisible whole, the countries involved in each link have unique production and management modes. Moreover, the production and management modes in different countries are independent from each other but are interacting. Although each link changes with the changes in other countries, time will be needed to adapt to the changes.

The forest products industry in China is embedded in the international industry chain of timber products. Moreover, China is located in the intermediate link of the chain. Fluctuations in supply and demand in upstream and downstream markets are transmitted to this link with the fastest speed. Due to the increasing competition, the market for timber products in China has almost become a perfectly competitive market. It has the following characteristics: a large number of enterprises, freedom of entry and exit, high homogeneity, overcapacity and meager profits.

One of the most important characteristics of a perfectly competitive market can be described as follows: The marginal cost of products is close to the marginal sales price, and the profit in the production link approaches zero. Therefore, a little cost increased is likely to be the last burden that the manufacturing enterprises can bear. The enterprises of timber production in China have a low profit margin, and are vulnerable to the impact of rising prices (sun, 2008).

At present the cost and profit structures of China's enterprises tend to diverge for different scales of enterprises. The large-scale enterprises are completely different from SMFEs in profit level and adaptability to cost changes, due to such advantages as the availability of capital, professionalism of management, brand effect of products, high added value of products, low financing costs, efficiencies from procurement scale and strong bargaining power.

Compared with large enterprises, China's SMFEs are inferior technologically and have a low bargaining power because of the lack of core technology and competence. These enterprises are generally faced with various difficulties and challenges such as: limited access to market and new technical information, lack of effective communication channels with policy-makers, low participation in policy development or modification, shortage of capital, limited financing channels and high funding cost.

In recent years, the SMFEs in China have experienced huge challenges from

unstable market demand at home and abroad, rising prices of labor, rapid appreciation of the RMB and imported inflation due to excessive money.

These weaknesses facing China's SMFEs in the global industry chain of forest products expose them to a very high risk. The average life expectancy of European and American enterprises is generally 40 years, while that of small and medium-sized enterprises in China is only 2.5 years (according to "White Paper of Human Resources Management in China's Small and Medium-Sized Enterprises").

Therefore, the small and medium-sized enterprises in China mostly cherish the concept of "survival first, then the development ". Survival has always been the most important issue for SMFEs.

In addition to the various challenges experienced in the market, SMFEs are also facing numerous insurmountable difficulties as a result of reductions in availability of tropical timber as countries implement sustainable management of their and as a result of the growing concern on climate change and the environment.

In relation to sustainable forest management China's SMFEs do not understand the issues because of a lack of information due to poor communication with policy makers and government departments.

The understanding by SMFEs of policies in the international market for timber products is limited. Most of SMFEs selling into the domestic market have not experienced the concept of sustainable forest management. The enterprises do not understand the significance of the legality of supply and legitimacy of their timber business.

Numerous enterprises have not have heard of the term timber legality. Some enterprises have heard of the EU and US Timber Regulations but do not know how to respond or how to meet the relevant requirements. Some SMFEs, having entered the international market, can meet the requirements for certification, but they do not have information on certification of sources of raw materials to satisfy buyers.

Some enterprises, while understanding the needs of international timber markets, do not know how to conduct the relevant activities. Compounding the problem for SMFEs is the application of different standards between the institutions carrying out the legitimacy identification, lack of institutions to assist and difficulty in obtaining relevant information.

Some SMFEs wishing to conduct legitimacy verification cannot succeed because of the high cost of verification by the third party agencies. In these cases legitimacy verification is given up and they face the risk of losing markets.

The EU and US Timber Regulations have been bringing new difficulties and challenges to China's SMFEs such that they can barely survive the fierce market competition.

SMFEs play a most important role in China's forest product industry. They contribute 90% of the gross output value of forestry in China, the highest contribution to employment.

Among all forestry enterprises most are small and medium-sized enterprises and are located mainly in the countryside or suburbs because of the relatively low land cost. However, they provide employment opportunities to a surplus rural labor force and therefore contribute to income distribution and poverty reduction thus making a significant contribution to alleviating poverty for disadvantaged groups. The SMFEs play an indispensable role in the forest product industry in China.

Based on the investigations carried out in the project area, the challenges arising from the EU and US Timber Regulations for China 's SMFEs are analyzed and elaborated in the report on the ITTO project "Equipping Small and Medium Sized Forestry Enterprises in China for Procurement of Tropical Timber from Legal and Sustainably Managed Forests " (project number: TFL-PD 017/09 REV.2 (M)). Another report is titled " China's tropical timber processing SMFEs' and their opportunities and challenges for procurement of timber from legal and sustainably managed forest ", hereinafter referred as to the "Report of opportunities and challenges ".

Based on the report of opportunities and challenges, suggestion are made for the improvement of the legal procurement of tropical timber by China's SMFES after a thorough analysis of the current situation and problems.

## **2 Main Findings in the "Report of the Opportunities and Challenges"**

The Yangtze River Delta region of China, as the most developed market of consumption, production and import of tropical forest products in China, is taken as a target region in the "Report of the Opportunities and Challenges". Through literature review and a series of surveys and interviews, the characteristics of SMFEs in China, the current situation, their understanding of the US and European timber acts and the difficulty in meeting the requirements of these regulations are discussed. The main

findings in the report are stated as follows.

## **2.1 Characteristics of Forest Products Trade in China**

- **China's international trade of forest products featured by high dependence on imports constitutes the production link of the global industry chain.**

The international trade of forest products in China is a kind of Compensation trade for the lack of large diameter tropical hardwood, fiber for paper. The wood raw materials such as logs, converted timber, paper pulp are imported( waste paper). The exported products are the finished products such as wooden furniture, wooden products and plywood. Tropical logs of large diameter are imported. According to the data released by the State Forestry Administration, it is estimated that the total consumption of timber in China will increase to 0.457-0.477 billion cubic meters by 2020. The demand - supply gap of timber will remain in the range of 0.1-0.15 billion cubic meters for a very long time.

- **Concentration of Export Market for Forest Products in China**

China's export of forest products is highly dependent on the developed countries such as the European Union, the United States and Japan. The main exports comprise wooden furniture ,plywood, wooden products, fiberboard and wood flooring. These forest products accounted for more than 69% of the total export of wooden forest products in 2012. The main markets are the developed countries and regions such as the United States, the European Union and Japan.

In 2012, the export volumes of four commodities (furniture, plywood, wooden products and solid wood floor) exported to the United States, the European Union and Japan accounted for 57.8%, 47.8% and 69.6% of the total export volume, respectively.

- **The international market policies and economic changes have a great influence on the survival of SMFEs of China.**

- During the financial crisis in 2008, the growth of imports and exports of forest products in China slowed down noticeably. The growth in timber processing, wood based panel manufacturing, bamboo, wood furniture manufacturing and wood pulp papermaking was limited. In 2008, among the

top ten provinces with the highest gross output values of forest industry, Guangdong, Zhejiang, Shandong and Sichuan presented a negative growth for the first time. More than 50% of the plywood enterprises in China stopped production. Moreover, more than 20% of the wooden floor enterprises were in some kind of predicament. Nearly 65% of the timber processing enterprises were shut down or on the verge of shut down.

- Policy changes in the trading countries also have a great influence on China's international trade of forest products.
  - Russia and Gabon were once the main suppliers of imported logs for China. For policy reasons in recent years, log imports from these two countries has fallen. Although Russia is still the biggest log import countries of China but logs imported from Russia dropped 10million cubic meters from the peak time since Russia impose high tax for log export. Now New Zealand and the United States has become the mainly logs imported countries for China.
  - The anti-dumping policies have reduced the market share of China's forest products in foreign markets. In recent years, anti-dumping and anti-subsidy investigations launched by the international markets on China have increased. In the years 2000 - 2010, there were more than twenty cases of export trade friction for China's forest products. The cumulative amount of money involving in these cases was as high as US\$1.637 billion. Anti-dumping and anti-subsidy investigations were launched on China's multi-layer parquet and plywood by the United States in 2010 and 2012. The frequent anti-dumping investigations by the United States on forest products from China not only seriously impacts China's exports of wooden products, but also damages the competitiveness of the exported wooden products. The case of bedroom furniture is illustrated in detail in this section. In 2003, before the anti-dumping investigation launched by the United States on China's wooden furniture, the export of bedroom furniture from China accounted for 48% of the import market share of the United States. After the anti-dumping investigation launched by the United States on wooden bedroom furniture from China, the market share of China's bedroom furniture in the United States declined. In 2012, the market share was only 24%.

## **2.2 China's SMFEs are facing different types of challenges and are apparently disadvantaged.**

- **The majority of the enterprises in the trade are SMFEs**

Among all the forest enterprises, over 99.6 % are SMFEs and these enterprises dominate exports of forest products. In terms of the exports of wooden products, the monthly sales of most export SMFEs is lower than US\$200,000. Among the enterprises exporting solid wood floor and bedroom furniture made from hardwoods the SMFEs account for a very high proportion. The enterprises with monthly exports of less than US\$500,000 per month account for 98%; the enterprises exporting wooden bedroom furniture with a monthly export sale less than US\$500,000 per month account for 94%; SMFEs exporting wooden doors with the monthly export volume less than US\$200,000 account for 92%. 100% of the enterprises have a monthly export sale of less than US\$500,000.

- **The private enterprises that occupy the dominant position are usually small scales.**

China's forest product processing is a perfectly competitive field, where there is no state-owned enterprise in the real sense.

As the forest products processing industry has a low requirement for capital, equipment and technology and a low entry barrier, the scale of many enterprises is relatively small, with each having few employees and a low turnover.

- **Low educational level of entrepreneurs**

The SMFEs are mostly located in the forestry regions or towns with a low land costs and many business owners come are from the rural areas and generally have only a basic educational level. The majority of forest products processing business owners are local residents of the county in which their operations are conducted. According to one survey, 75% of business owners have the educational background below high school, and 45% business owners have the educational background below junior high school.

- **Lack of professional talents, low managerial level and inadequate R&D**

Most forest product production enterprises are family enterprises and the owners of such enterprises are also the managers. Business owners supervise marketing, the enterprises management and the finances. The capacity for growth of such enterprises is highly limited by the professional limitations of the owners. China's timber processing plants tend to hire migrant workers with low education levels and no professional skills (Sun Changjin, 2008). The workers usually have the educational background below high school or junior high school. Thus, enterprises lack professional technologies and management personnel.

- **Overcapacity and high product homogeneity**

There are numerous participants in the forest product market due to the low capital and technical barriers to entry. For instance, a lumber plant can start production after spending less than 50,000 yuan on one band saw and two circular saws. A furniture enterprises can be either small or large in scale. Therefore, China's furniture and board enterprises are many and this leads to fierce market competition and overcapacity. Due to the relatively weak financial strength, SMFEs lack research and development investment and few have independent brands. They produce very few original products because most are imitations or products/components made for other enterprises. Therefore, the products made by SMFEs are mostly low-end, simple products, The quality of these low-end products is a major problem and there are few high value products manufactured or sold.

- **Lack of channel for international policy information**

Access by SMFEs to policy and market information is limited due to the lack of information channels. Currently, SMFEs mainly get market information through exhibitions and fairs and networks. Two-way communications between decision-making departments and SMFEs is very limited. Due to the lack of effective communication channels with policy-making departments SMFEs are barely involved in policy changing so their voices are seldom heard.

SMFEs can rarely get the market and information services from the research institutes. There are very few institutions involved in research and services in the forest products market, and there is little public interest institutions targeting SMFEs. Because of the obstructed information channels, a large amount of SMFEs pay very little attention to policies and they know little about policies on international timber procurement.

## **2.3 Challenges facing China's SMFEs**

As can be determined from the above discussion SMFEs have always been at a disadvantaged position in market competition. In the fiercely competitive market environment, SMFEs face countless and increasing challenges. The current report shows that the challenges facing SMFEs can be identified as follows:

- **Rising labor costs and labor shortage**

In recent years, China has been facing a gradual shortage of labour. In 2012, the working-age population in China fell by 3.45 million which led to a reduction in labour supply. In the past two years, the salary of workers has increased sharply by an annual rate of 20%, which pushes up production costs of enterprises. Meanwhile, due to poor working environment and high intensity of labour in forest product processing enterprises, the migrant workers of the generation born after 80s and 90s would rather work in electronic products processing plants because of the clean environment and because the work is less tough physically. Besides the increasing cost of labour, the difficulty in recruiting workers is another problem facing all forest products processing enterprises.

- **Funding difficulty and high funding cost**

China's SMEs have always been in a disadvantaged position when it comes to bank lending. Lack of formal financing channels and high financing costs are the important factors restricting enterprise development. The financing costs for small and micro enterprises when tapping informal financing sources can, in some regions, be as much as 50% higher than that of larger companies. In the past three years, the financing increment of China's government platform and large and medium-sized enterprises is over 3 times of that of micro and small-sized enterprises.

- **RMB exchange rate volatility pushes up market uncertainty**

The exchange rate of RMB to the US dollar in October 2012 was 1: 6.32, but it dropped to 1:6.21 at the beginning of 2013 . The appreciation of RMB is a big blow for export-oriented forest products processing enterprises. According to industry insiders, there were nearly no orders during the global financial crisis. But now due to the substantial depreciation of USD and the floating of the RMB many enterprises are afraid to accept long-term orders. This situation seriously disrupts normal trade.

- **Currency over-issuing and imported inflation**

Since 2008, China's money supply has been growing extraordinarily under the huge pressure of global financial crisis. By the end of 2012, China's broad money (M2) had reached RMB 97.42 trillion, almost equivalent to one quarter of the world's total money supply and ranking the top in the world.

In 2012, China's M2 increment amounted to 12.26 trillion yuan, accounting 46.7% of the world's total M2 increment. By the end of March, China's foreign exchange reserve was as high as 3.44 trillion USD, ranking the top in the world. Due to huge foreign exchange reserves, the central bank of China had to input base money passively through foreign exchange holding, which produced huge pressure on domestic goods prices and caused the imported inflation.

In such market environment, the gradually increasing salary level and raw material price are the primary challenges facing small and medium-sized enterprises all along.

## **2.4 China has no capacity to implement the third-party legitimacy identification at present**

- **The definition of timber legitimacy varies from country to country. SMFEs generally feel confused because of the differences in timber trade control documents required**

The requirements of the EUTR and the US Lacey act and China's documentation requirements are different but are defined according to the laws and regulations in each country or region.

China requires that the timber import enterprises should provide purchase contracts, purchase invoices, packing lists, original weight notes of shipment inspection, bills of lading, certificate of origin, official phytosanitary certificate of the exporting target country or region.

The United States requires that the timber import enterprises' declaration should include information on the scientific name of the species, the value and quantity of the timber and the name of the country in which it was harvested (Duncan Brack 2011, 2013; Han Lijing 2009).

In conformity with the EU Timber Regulation, the timber products import enterprises should provide information includes the species of timber, volume, country of harvest, the harvest location, concession of harvest, name and address of supplier, and evidence of compliance with the applicable legislation

(Duncan Brack 2008, 2011, 2013; T R Manoharan 2012; Wu Shengfu 2012).

The documents required for wood product legitimacy vary from country to country, and it is such difference that confuses China's enterprises. In China, after the importers submit the documents (purchase contracts, purchase invoices, packing lists, original weight notes of shipment inspection, bills of lading, certificate of origin, official phytosanitary certificate of the exporting country or region) to China Customs and border inspection departments, the timber is deemed legal. But when the products made of the same timber are exported to EU or US market, they may be identified as illegal.

- **Given the legitimacy management capacity of many timber producing countries, it is difficult for enterprises to provide third-party verification of legality**

Small and medium-sized enterprises in China indicate that they are willing to provide the documents they possess to European and American importers apart from the legitimacy formalities demanded by China Customs and other departments, such as felling certificate, tax payment certificate, and forest right certificate.

But in many cases providing all documents required may not be possible most of the time. The timber management systems are totally different in the supply countries due to the historical evolution, cultural tradition and economic development stage.

In many countries, relevant institutions and systems are still underdeveloped (Sun Changjin, 2008). As a result, they cannot provide the documents satisfying the requirements of EU and US Timber Regulations. In order to meet the requirements of European and American markets, timber producing countries must add new functions of management institutions or departments and even create new institutions and functions but this will take time are they will require assistance.

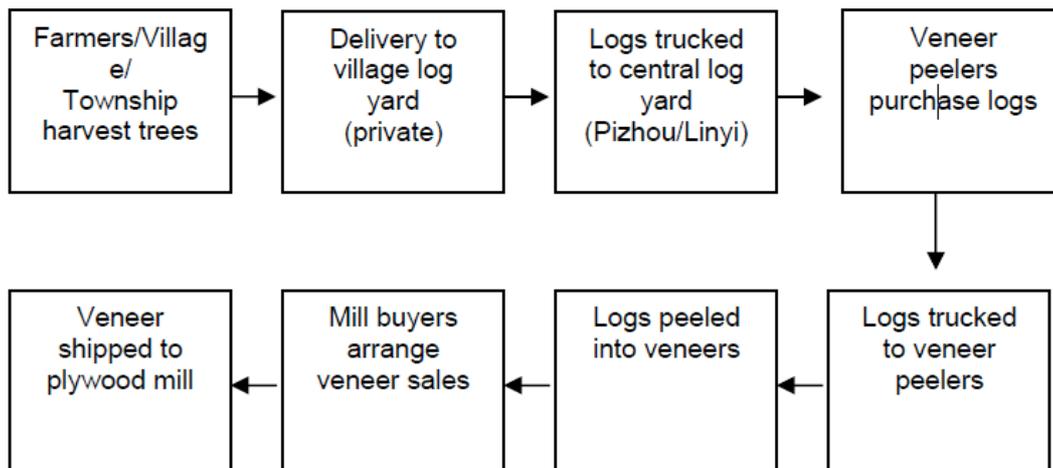
- **The supply chain structure of forest products in China is complex and the formalities are cumbersome and time-consuming.**

China's forest products supply chain and supply network consists of felling operators, processors, traders and/or middlemen. The current structure of the supply chain for China's forest products processing enterprises is complicated. In some cases, the components of one piece of furniture might come from different countries (Hai Lingchao, 2013, China Timber).

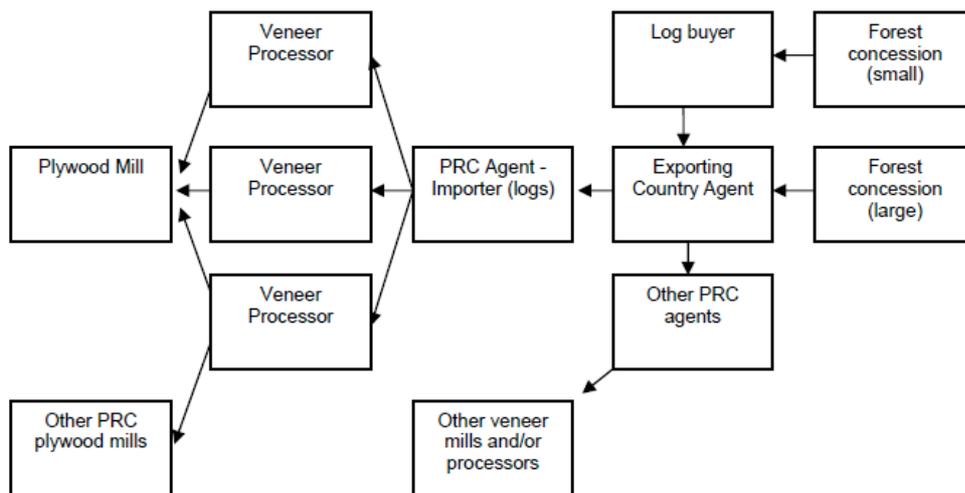
For instance, the face veneer of plywood with at least one veneer of tropical timber is mainly made of imported timber, while the core veneer is mainly domestically produced timber. Plywood is only an intermediate product. During its manufacturing into furniture, other wood material is possibly added, which increases the complexity of the supply chain.

Below is the supply chain structure of standard plywood containing at least one layer of tropical non-coniferous wood (the face veneer of this kind of plywood is made of imported material, with core veneer made of Chinese domestic materials). The supply chain is divided into two sections:

1. Supply chain of core veneer as the base material of the plywood The supply chain of core veneer as the base material of plywood is as follows (cited from TFT report, Legitimacy Status of Timber Supply Chain in China). After the timber is felled by the forest owners, it is transported to a timber distribution center; the sawmills purchase logs from the distribution center and transport them to the factories; after peeling and cutting, the timber is sold to plywood factories.



2. The supply chain of face and back veneers of plywood is as follows. The logs felled are transported to the distribution center by the forest owners and are sold by export agents (domestic or international) to Chinese import agents; then they are sold to veneer processing factories, after which they are sold to plywood factories for processing.



The figure above shows that plywood is just an intermediate product, with its raw materials purchased from different countries through 13 links, of which 8 links are required for core veneers to reach manufacturing enterprises and 5 links for face veneer. For a piece of furniture manufactured with plywood and timber, the supply chain of other timber materials should be added. Thus, more links will be involved.

Furthermore, some suppliers for enterprises are stable, while others are only temporary. In the whole supply chain, the raw materials might come from different regions, or even different countries. The supply chains are interweaved to form a complex timber supply network. This kind of supply chain is dynamic, interactive, and cost tracing is very expensive and difficult.

The timber materials used by China's SMFEs are mainly purchased directly from the timber markets. With one more upstream intermediate agents and traders, the complicity of the supply chain is increased further. Thus, the tracing of the timber is becoming more difficult. For the purpose of protecting commercial secrets, the suppliers seldom release the information about the upstream suppliers to the manufacturing and processing enterprises, in order to avoid the direct transaction between the enterprises and the upstream suppliers. Since the SMFEs have limited purchase volume, they exert little influence on the suppliers. It is even more difficult for the intermediate agents to ask for documents for legitimacy identification from the enterprises of the origin. Therefore, it is nearly impossible for the small and medium-sized enterprises to accomplish the investigation of timber all by themselves.

- **In addition, there are few institutions specialized in the consultation and training of legitimacy identification, so it is almost impossible for SMFEs to get any information of third-party institutions capable of legitimacy identification.**

Although the demand for products from sustainable sources is emerging, the system has not been well established so far (Sun Changjin, 2008). There are many SMFEs in China, but no more than 10 third-party institutions that are qualified to provide legitimacy verification services and no more than 10 auditors are capable of the legitimacy identification. The number of verification agencies is so small in relation to the thousands of SMFEs in China. However the number reflects the lack of demand from the timber sector for services related to meeting market requirements for proof of legality

A search for "timber legitimacy verification consulting" in China's biggest search engine "Baidu" gives no information about the contact of any companies or agencies providing timber legitimacy identification and consulting services.

The screenshot shows a Baidu search interface. The search bar contains the text "木材合法性认定咨询". Below the search bar, there are several search results. The first result is "木材合法性来源认证公司\_木材合法性来源认证厂家/批发商...", which is a link to a company page on Alibaba. Other results include "木材合法性检验VLC认证-认证木材、检验木材尽在阿里巴巴-杭州...", "中国木材与木制品流通协会申请设立进口木材专业委员会", and "中英合作'中国木材合法性认定体系研究'项目在京启动-《林产...>".

- **The standards followed by legitimacy verification agencies are not uniform**

At present, no uniform definition about the legitimacy of timber has been established. The identification procedures demanded by each country are also different. In addition, the identification standards followed by third-party institutions are variable. No one standard from any third-party legitimacy verification agency is widely accepted everywhere.

- **Insufficient understanding of timber legitimacy by SMFEs**

In the "Report of Opportunities and Challenges", only 28% of the surveyed enterprises had heard about EU and US timber regulations. Most of SMFEs engaged in tropical forest timber processing, especially those selling to the domestic market know little about EU and US timber regulation. When SMFEs were offered financial and technical assistance to undertake CoC certification none showed any serious interest. Most enterprises expressed the view that training on legitimacy identification or undertaking CoC certification will result in only additional costs and no benefit. They consider that if not all raw materials required in their production then only securing verification for a few items only will be a waste of time. If the SMFE were to undertake verification for all timbers used in manufacturing the cost would be prohibitive. It will be unprofitable for any an enterprise to complete legitimacy identification for all raw materials. The SMFEs approached during the course of this project generally felt that training and counseling in legitimacy verification is meaningless and time-consuming if legitimacy identification itself is infeasible. The cost of third-party verification by companies offering such services in China is extremely high.

For SMFEs, the third-party legitimacy identification is highly expensive and complex. Here is a simple example:

an order involves five direct suppliers, with at least five certificates to be made. In each link, the charge of identification is 2000 dollars, and a total of 8,000 dollars is charged for the four links. To supplying products to the purchaser, an enterprise will pay above 40,000 US dollars for the legitimacy identification each year. Legitimacy identification is generally conducted based on batch. For a different batch, an enterprise will pay the same charge again. Meanwhile, SMFEs usually purchase a large number of batches with one batch involving only a small amount of products. Therefore, their costs of legitimacy identification are far beyond that of large enterprises. In addition, the SMFEs are weak in bargaining power, with unstable suppliers, which results in higher cost of the legitimacy identification per unit of product.

- **The cost of third-party legitimacy identification cannot be passed on**

The timber supply chain in China is usually driven by retailers and buyers (Sun,

2008). If all parties are willing to pay higher prices for certificated products then the products will be more competitive in the market. The certificated products are usually higher priced, due to the additional cost in securing legitimacy verification which should be borne by all links of the supply chain. According to the feedback from the market, people have realized that costumers are not willing to pay higher price for the sustainable products.

- **Lack of the talents for the management of timber legitimacy in the SMFEs**

For the legitimacy identification of an enterprise, special personnel are needed to collect relevant information and documents and manage the materials. The talents are required to excel in foreign trade, English and law. Furthermore, they are also required to actively collect the information of both domestic and foreign market, with continuous attention to the Chinese government policies and a concern on sustainable development and ecological and environmental protection. Under the situation that Chinese timber processing factories tend to employ "migrant workers" who are poorly educated and skilled (Sun Changjin, 2008), the SMFEs are lack of comprehensive talents, not mentioning those with special knowledge in legitimacy management of timber supply chain.

### **3. China's efforts in timber legitimacy identification**

To improve the domestic forest supervision and to crack down on illegal logging, China has taken a number of important measures, and also enacted new regulations to protect the forest and wild animals, including forest management, law enforcement program and monitoring methods. By laying down regulations on logging quota, logging license and certificate of transportation, China's timber management measures have been strengthened.

China enjoys a strong position in the tropical timber supply chain as well as for other commodities. It has played a unique role in supporting the transformation to sustainable forestry and forest industry development around the world and the prevention of harmful operational activities (Sun, 2008). Internationally, the Chinese government is actively promoting the timber identification system, participating in the FLEG ENA (Europe and North America) process, and cooperating with some countries (such as Russia, Indonesia, US, Indonesia, Myanmar, Australia etc.) on collaboration against illegal logging), in order to solve the illegal logging problem and to jointly promote the forest law enforcement and legitimacy identification. Chinese government and Chinese timber industry have made various efforts to combat illegal timber imports into China, and to crack down on illegal wood products trades together with the international community. The main actions that China is actively launching are as follows:

- **China provided technical and financial assistance to Myanmar and Laos to Plant Trees in Place of Drug Plantation**

From 1990's until 2005, China has poured more than 500million RMB into plant in place of drug plantation. Over 41000ha are alternatively-planted ,and over 36000 ha are in Myanmar .

- **Projects by China Council for International Cooperation on Environment and Development (CCICED)**

Since 1992, the Chinese government has been committed to the cooperation with the international community and, via CCICED, to search for measures to reduce the negative environmental and economic impact brought by economic development.

Under the promotion of CCICED, the Ministry of Commerce of China (MOFCOM) set up an international working group, to establish strategies of building

more sustainable global supply chains (including the supply chain of timber). In May, 2009, the Ministry of Environmental Protection and MOFCOM issued an environmental compulsory draft concerning foreign-invested enterprises. In conformity with the rules of the draft, Chinese investors have to determine whether their projects about to launch have adverse environmental impact and abide by the international environmental treaties signed by China. The banks should also take the environmental and social issues into account in their decisions on financing for the enterprises. MOFCOM and the State Bureau of Forestry of China published the Guide on Sustainable Overseas Silviculture by Chinese Enterprises. The guide covers the advices on the coherence to relevant laws, the promotion of participation of Chinese citizens in policy making, the forest supervision and the protection of biodiversity. Essentially, it is applicable to forest planting companies.

- **Issud the Guidelines on Sustainable Management of Overseas Forests and the Guideline on Sustainable Cultivation of overseas Forest for enterprises**

China issued guidelines for Chinese enterprises that engage in overseas forest cultivation activities. The Guidelines on Sustainable Management of Overseas Forests for Chinese Enterprises was jointly designed by the State Forestry Administration (SFA) and the Ministry of Commerce. The Chinese government would encourage and support domestic enterprises to carry out forest cultivation activities in foreign countries in a manner that highlights sustainability, bio-diversity and the development of local community. The purpose of the move is to guide relevant enterprises to help the countries or regions that are faced with difficulties in forest restoration and to help improve the livelihood of local residents. China will cooperate with international organizations to carry out pilot programs to improve the guidelines and will also take the guidelines as key basis for evaluating and supervising the performance of relevant enterprises.

- **Sino-EU bilateral coordination mechanism concerning forest law enforcement and administrative management**

A “Sino-EU bilateral coordination mechanism concerning forest law enforcement and administrative management” was signed in 2009 and aims to promote Sino-EU cooperation on forest law enforcement and administrative management. In the agreement, the European Commission's Environment Directorate - General, related EU countries, and China's Forestry Bureau will closely cooperate when necessary, to make sure the integration of FLEGT, China's policies on development policy, trade and tariff. Specifically, the coordination mechanism will

"explore a way shared by both China and Europe in relation to the legitimacy identification of wood and wood products for the export countries, including the FLEGT voluntary partnership agreement".

Sino-EU Bilateral coordination mechanism (FLEG) was implemented in 2010, in the form of forum. The contents include policy dialogue, information exchange, jointly combating illegal logging and trade. The key activities include the understanding and capacity building concerning EU FLEGT and EU Timber Regulations (EUTR), green public purchase policy of woods, domestic timber tracing system, research of the influence of EU FLEGT and EUTR on SMFES, etc.

### ● **Sino-Japan cooperation**

A joint memorandum in cracking down on illegal logging and trade was signed between China and Japan in August 2010 to strengthen bilateral cooperation in sustainable forest management. The purpose of the memorandum is to establish cooperation framework to combat illegal logging and trade. Both sides agree to make joint efforts to establish the legitimacy identification mechanism concerning logging, processing, sales, import and export of timber and wood products in both countries to promote legal trade, the use of timber and wood products and sustainable forest management.

From 2009 to 2011, China Timber & Wood Products Distribution Association and Japan Timber & Wood Products Association hosted jointly the Seminar on Procurement and Supply of Legal Timber and Wood Products for three consecutive years. This activity promoted experience exchanges between Chinese and Japanese governments and enterprises in areas of governmental green procurement, timber and wood legitimacy identification.

- National leader commitment to international cooperation, participation in FLEG process.
- Chinese delegation to Indonesia to further investigate forest use and trade process;
- Government initiated forest policy dialogue to discuss international and domestic strategy;

### ● **Government's green procurement policy**

In 2006, the Ministry of Finance and the Ministry of Environmental Protection of China issued officially the Implementation Advice on Government Procurement of

Environmentally labelled Products and published for the first time the Government Procurement List for Environmentally labelled Products. The scope of government's green procurement, green product list and implementation timetable were specified for the first time. This indicated that the Chinese government included the environmental factor in the government procurement.

At present, 24 products, for example, artificial boards, wood floors and furniture, are included in the legitimacy framework of China and other importing countries supporting sustainability. The development direction of this project is determined as "to define legitimacy and requirements with respect to sustainability, and to promote the involvement of concerned parties and the transparency of implementation". The concept of green development, the implementation of green development policy and the increasing demands in Chinese domestic and international markets on green products impose more pressure for a green development scheme of market on the Chinese forest enterprises.

#### ● **Identification system of timber legitimacy in China**

Research on a system for timber legitimacy in China was co-funded by the Department for International Development of Britain (DFID), the Environment Agency of Britain, the Department for Environment, Food and Rural Affairs of Britain (DEFRA) and the State Bureau of Forestry of China, to explore possible systems for timber legitimacy in China.

#### ● **Actions of private sectors**

The timber industry of China has fully realized that the enterprises themselves should take responsibilities and take substantial actions to eliminate illegal timber trade. If the actions were not taken, the export trade would be jeopardized. The measures that have already been applied are listed below:

- Holding the certificate of Chain of Custody (CoC): The existing holders are FSC 1393, PEFC 102, CFCC (for trial period). By 2010, the number of holders is predicted to reach 20.
- Joining in the Global Forest Trade Network (China): There are currently 27 members, covering an area of 7993732 m<sup>3</sup>.
- Supporting the China Green Wood initiative of the World Wildlife Fund (WWF)

- Participating in the Timber Trade Action Plan (TTAP) of Forest Associations: various supply chains defined by EU importers; international supply chains certified by a third party.
- Adhering to the Code of Action of the China National Forest Products Industry Association (CNFPIA): a guide of due diligence investigation for timber source and legitimacy.

- **China Forest Products Indicators Mechanism (FPI)**

Based on this project, a government-enterprises information exchange ‘platform’ named as(Forest Products Index Mechanism, FPI) had been launched in March 2012.It is an information exchange platform initiated and supported by the State Bureau of Forestry of China, providing information on relevant policies for enterprises, associations, government, research institutions.

This platform conveys information on relevant policies and forest sustainable operation, with a purpose of promoting concerns on the sustainable operation of forest products among the small and medium enterprises by sharing information on the global experiences and with the leading role of large forest enterprises with industrial responsibilities. One of the current missions is to communicate with the enterprises about policies and to provide trainings about forest sustainable operation, legal procurement of timber and etc..

A series of activities has being been tested since March 2013:

- A timber enterprises forum topic “Responsibility and Competitiveness of Timber Enterprises” has been held and is expected to hold this forum every year
- The established government-enterprises dialogue has been held twice based on the information ‘platform’ and this will continue.
- A seminar on the trade situation and international timber regulations was held and this is expected be continued periodically.

#### **4. Experiences and lessons from the implementation of projects**

- Experiences

- In China, no institutions have conducted such profound and meticulous investigations and analyses on the applicability of the legitimacy of timber from the perspective of the interests of SMFEs. In the past, SMFEs were associated with negative impressions. Their difficulties and contributions as well as the necessity of the existence of SMFEs in a certain historical development stage of Chinese economy are seldom appreciated by society. The current research may help to provide a new angle of view to reveal the

difficulties and contributions of SMFEs, with a purpose of finding a solution for their way out and encouraging their contributions to the sustainable operation of global tropical forest industry. This project is also a reference for the forest products related government agencies as well as various stakeholders in their decision making. It is a big step forward for the SMFEs in China.

- The institution for the implementation of the project, as a top research institution of Chinese forestry policies and information, maintains a long term cooperation with the government, enterprises, associations, research facilities, NGOs and identification agencies, and enjoys a good reputation. Therefore, during the project implementation, it has received supports and cooperation from the related parties, such as the State Bureau of Forestry, the General Customs Administration, the Ministry of Commerce, the Department of Forestry of different provinces and the associations. The related information acquired is therefore complete and meticulous.
- In China, investigations on enterprises are very difficult. The coordinator of this project participated in the investigation and analysis of the situations of SMFEs from 2008 to 2010 initiated by the Food and Agriculture Organization (FAO) of the United Nations. He/she is familiar with the current situation and the channels and methods of investigation, which provides a good foundation for the successful implementation of the project and smooth progression of investigations. The enterprises and associations are highly cooperative in the process.
- The coordinator of this project has been responsible for the monthly and annual analysis of international trade of forest products of the State Bureau of Forestry as well as the supporting work for decision-making in relative trade policies since 2006. He/she has many years' of experiences in investigation and research on the forest products manufacturing and processing industry in China. With frequent communications with the State Bureau of Forestry and related forest industry associations, he/she understands well the interests of stakeholders, especially those of the SMFEs, which is a basis for the submission of pertinent and applicable policy suggestions.

- In the design of the output of the project, it is very wise to organize trainings of timber legitimacy and third-party identification consultation for two pilot enterprises. This is significantly meaningful for the further understanding of the situation of Chinese SMFEs in the field of legitimacy identification. In China, very few enterprises (less than 10) have went through legitimacy identification up to the end of 2012. The understanding of the enterprises on the effects of legitimacy identification is very limited. The two pilot enterprises financed by this project were convinced of the trial of legitimacy trainings after long time persuasion, which causes a longer time for implementation compared with the original plan. After further understanding the details about the training contents and costs needed for the identification, one of the two enterprises decided to give up the legitimacy identification with a belief that legitimacy identification meant nothing to their enterprise.
  
- Due to the lack of information exchange platforms, the government departments, especially the central government of China, seldom have the chance to express views with the SMFEs, which is the main restriction to the two-way exchange of policy information. This project designed an information exchange channel for the government and enterprises in the activity outputs. Positive practices about sustainable operation are conducted on the platform of "China Forest Products Indicators Mechanism (FPI)". Based on data, this platform established an exchange channel of policy information between the central government and enterprises, which is an innovative and effective attempt to convey information of policies of forest sustainable operation to enterprises.
  
- Lessons
  - In the implementation of the project, extensive investigations were conducted on the enterprises. The data concerning the trade turnover and volume is secret in the industry, so the authenticity of sensitive data retrieved from the returned questionnaires, such as the output, production and trade volume of an enterprise might be abated.
  - For that different enterprises have different interpretations on some certain questions, their answers to some questions might deviate because of misunderstanding of ambiguous questions. For instance, a large proportion

of the flooring enterprises in Huzhou, Zhejiang, answered "yes" to the question "whether have you participated in trainings on legitimacy". However, we confirmed that these enterprises received trainings on domestic legitimate production, instead of those on legitimacy of international timber procurement. In the future, a pre-survey should be conducted on these questions, to avoid the possible ambiguity of questions.

- The one-on-one investigation on Chinese enterprises has to be done with the cooperation of the associations having close contact with the local enterprises. It is very difficult compared with random sampling. However, the Chinese forest products processing and manufacturing enterprises with similar products or similar scale have a high homogeneity, mainly with respect to the production procedure, recruitment and business operation. Therefore, even the investigated enterprises were not randomly sampled, the results presented to a large extent the basic situation of the local enterprises. Especially in the aspect of timber legitimacy, the results reflected in the investigation are representative.
- More time is required for the practices of enterprise investigation and questionnaire design. The pre-survey time should be increased to practice repeatedly the questionnaires. Furthermore, the investigation should be divided into several stages in several years instead of being accomplished intensively within one year. During the composition of the report, new questions would arise, so it is necessary to add complementary survey after the beginning of the report composition. In this way, new questions could be identified on the basis of the conclusion of the first stage of investigation to conduct a new round of survey. This could help to discover more potential questions and put forward policy propositions.
- The survey for this project mainly focused on flooring and wood based panel enterprises located in Yangzi River Delta and furniture enterprises mainly in Pear River Delta, so this report reflects of the flooring sector situation. For the furniture sector another survey and study would need to be undertaken so as to make pertinent policy suggestions.
- The survey for this project were mainly conducted before 2013, the EU timber regulation come into effect, what the real impact of EU timber regulation will be impose on Chinese SMFEs would need to be studied.

- For some investigation steps, new sites should be included for investigation. China is an intermediate link of the global forest supply chain. The research on the factors influencing Chinese forest products cannot be completed without the investigation into the upstream and downstream markets of the industry. In this project, investigations into upstream and downstream countries are not involved. Thus no further understanding can be obtained on the upstream timber producing countries and the downstream product consumption countries. Due to the limited sources of information from second-hand data, the analysis results might be affected to some degrees.
- If a training course or information system for serving SMFEs is mainly focus on timber regulations will not easy to attract SMFEs' interests for long term, the training course structure and form and content should be combined with some market information and trade trance thus a multiple function platform for information sharing be needed.

## **5. Propositions on policy making**

The definition of timber legitimacy varies between supplying, manufacturing and consumption countries, due to the differences of the historical and cultural background and the economic development stages. In order to solve the problems in the management of timber legitimacy, an agreement on the definition of timber legitimacy among the countries involved in the industry chain should be reached. The conformity of the definition of legitimacy is the coherence of related legal documents; that is, the document requirements in the product circulation should be consistent. The conformity of the documents of timber legitimacy requires the soundness of the relevant management institutions and their functions in the countries involved.

The original intention of timber legitimacy is to make use of forests reasonably and sustainably, but not to forbid the use of forests. The aim is not to cause the closure of a large number of enterprises by restricting products from entering the EU and US markets due to their lack of valid proof.. With a contraction of the supply chain the effect would be that consumers in the EU and US markets would not be able to enjoy the high quality timber products at reasonable price that come from China. If demand for raw materials falls the timber supply countries would accumulate stocks, prices would fall and the livelihood of people depending on the timber industry would be at risk. Therefore, to facilitate the purchase of legal timber coming from

sustainably operated forest is not a matter for individual enterprises or even a single country. Intergovernmental cooperation is the desired approach to address this problem.

### **Specific recommendations**

The following propositions are put forward based on the suggestions above.

#### **5.1 For Chinese government departments**

China enjoys a strong position in the tropical timber supply chain as well as for other commodities. It has played a unique role in supporting the transformation to sustainable forestry and forest industry development around the world and the prevention of harmful operational activities (Sun, 2008). It is suggested that the Chinese government strengthens its management and makes a greater contribution to assisting supply countries introduce sustainable operations and timber tracking systems. Chinese experts and financial resources of the Chinese government, when combined, could have a significant impact on the pace of establishment of legality verification systems in producer countries..

- International communication and information exchange should be reinforced to publicize the experience and efforts of China in the timber legitimacy management

China has internationally advanced experience in the management of timber legitimacy domestically. Meanwhile, China has made great efforts in promoting global timber legitimacy. Publicity should be supported to the upstream and downstream countries, in order to address the misconception that China is passive and negative in the global fight against illegal felling and trade in illegal timber. In addition, international cooperation should be pursued to realize a effort against illegal timber felling and related trade.

- Intergovernmental exchange and cooperation should be strengthened. Via negotiations, the coherence of documents of timber legitimacy between nations could be achieved.

As has been stated above, due to the differences in historical and cultural background, economic development stages and management system in different countries, the definitions of the timber legitimacy are different in the timber supplying countries, manufacturing countries and consumption countries. In order to achieve the management of timber legitimacy, an agreement in the definition of

timber legitimacy and the requirements in relevant documents should be reached among different countries. That is, the legal documents required by the importing countries of timber products should be consistent with the conditions of the exporting countries. Communication and cooperation with timber consuming countries should be maintained via China-US Strategic and Economic Dialogue, Bilateral Coordination Mechanism of China-EU Forest Legal Enforcement and Executive Management, and China-Japan Economic High Level Dialogue, etc.. On the basis of bilateral and multilateral exchange and cooperation, a consensus on the definition of timber legitimacy among different countries should be promoted. A mutual identification of the timber legitimacy that conforms to the situation of every country, especially the developing countries, should be established. This is also the method with the lowest cost to eliminate the confusion of timber trading and manufacturing enterprises about the legitimate operation of timber products and to promote the management of timber legitimacy in enterprises.

- The introduction of credible timber legality assurance systems (TLAS) in developing timber producing countries should be supported.

To achieve consistency and unification of the timber legitimacy documents among the timber supplying countries, manufacturing countries and consumption countries, every country should have established timber management institutions and relevant functions. This might be difficult in some developing timber producing countries. Therefore, international cooperation is needed to construct the appropriate management systems in supply countries (Sun Changjin, 2008).

At present, Europe, the US and a few other countries have launched supportive activities in some timber producing countries. China could also join these initiatives and provide financial support and send specialists to participate in the on-going projects of EU, US and other countries, to support the implementation of TLAS in timber producing countries.

- Forest recovery and cultivation in tropical timber producing countries should be conducted with China's foreign aid fund

China has advanced reforestation technology. Some tropical timber producing countries need to expand forest recovery and the establishment of plantations. China's aid to Africa, as an example, helps alleviate the pressure on countries natural resources and provides a guides for China's overseas enterprises to ensure they act

responsibly.

- International publicity should be reinforced to make the international community understand the difficulties and transformation that China forest industry, especially SMFEs, is going through.

Through the current project, it is known that the number of SMFEs in China is huge and that the supply chain of Chinese forest products are complicated. The importance of SMFEs to China forest industry, even global forest industry and their challenges and difficulties of timber legitimacy operation are showed by this project. Some of these features are determined by the economic development stage and management background of China, a developing country. But the developed countries cannot understand the situation. Some of the difficulties can be solved by the coordination between countries and governments, which are beyond the power of enterprises.

International exchange and publicity help the international community to understand the difficulties, challenges, complexity and ongoing efforts of Chinese SMFEs. With a goal of realizing win-win cooperation, It is inevitable to strive to be understood by and cooperate with the international community, and reach agreements in some aspects so that Chinese SMFEs can provide service with contributions to the sustainable operation of tropical forests in the world. For instance, with China-US Strategic and Economic Dialogue and the Bilateral Conference of China-US Fighting Against Illegal Timber Felling and Related Trade, the US agreed to implement special codes to China's deep processing products such as fiberboard, particleboards paper and paper pulp. For these products, the tree species and place of origin of timber are not necessary, which simplifies the declaration requirements regulated in the Lacey Act.

- The ability of SMFEs to understand and adopt sustainable operations should be strengthened

China has an old saying that goes "to be turned into iron, the metal itself should be hard", which means that one should have a strong body no matter in what environment. No matter how complicated the international environment is, the increase of the competence of Chinese SMFEs in sustainable operation is crucial.

The contribution and significance of SMFEs to China lie in, first of all, that they provide a large number of employment opportunities and maintain the livelihood of rural surplus labor force and the poor population. As the Party General Secretary Xi

Jinping has emphasized, employment has a vital bearing on people's livelihood (Xi, 2013).

In the field of legitimate timber procurement by SMFEs, the popular saying circulating in the realm of sales and marketing applies also to the guidance and promotion of SMFEs to legitimate operation. The saying goes, "the true sales is to solve problems reasonably for the client; the need and concerns of the client should be understood with your heart. Apply our knowledge, products and service in fulfilling the need of the client, and takes away his concerns."

The government departments should solve the concerns of SMFEs positively and help them out of the difficulties of information shortage and struggle for living. Only when they are strong enough to grow, can they afford to repay with the sustainable operation of the forests.

Another Chinese saying goes "etiquette comes after the plenty of food". When the government has understood the difficulties of SMFEs and help them to solve the problems of living from their standpoints, the enterprises can grow and repay sustainably the environment and focus on the issues of legitimacy. In this respect, the gap between the service of Chinese government to SMFEs and that of developed countries should be acknowledged. The experience of the service to SMFEs by developed countries of EU and US should be learned so that Chinese government can provide public products and service to SMFEs (the experiment of the US and the EU should be complemented).

Restructuring the competence of SMFEs should be launched in the following aspects.

- Public information services on domestic and international forest products market and sustainable operations should be provided to SMFEs via public platforms. In general, large enterprises have special departments focusing on the market information collection and analysis of domestic and international markets, in order to provide support for the strategic decisions of the enterprise. However, SMFEs have limited channels to obtain market information due to the limitation of human resources and funding. They are not capable of obtaining information on the policies related to timber legitimacy and sustainable operations. The government departments can provide public products and services such as policy information, to pass information on domestic and international policies about sustainable operation to SMFEs.

- The combination of production, study, research and application and cooperation between associations and research institutions should be supported. The output of work by institutions on market investigation and policy research should not be limited just providing reports, instead, they should find means to effectively deliver such information to the SMFEs. It has been found in this investigation that research institutions are the least used information channel for enterprises. According to the questionnaire, only two enterprises (1.5%) obtained information from research institutions. Research institutions have great advantage on information, technology, policy and the analysis of international markets, etc. But due to the lack of exchange platforms between research institutions and enterprises, their resources cannot be passed to enterprises, meaning that updated information cannot be transformed into productivity improvement. The industrial associations have close contacts with enterprises, but have relatively less input into research. Therefore, there is a need to explore ways to facilitate cooperation between research institutions and industrial associations so that both can play their own advantage to serve SMFEs with market and policy information which will be helpful for the growth and development of SMFEs.
- A platform for regular exchange of policy information should be established to facilitate a two-way exchange of information between the decision making departments of government and SMFEs. The difficulties and policy requests of SMFEs should be heard regularly and policy information should be passed to SMFEs promptly. Thus, the policy exchange is no longer a one-way deliverance, but an interactive process. When SMFEs find their demand increasingly more concerned by the decision making departments, their focus and participation into policy will be encouraged.

## **5.2 For developing timber producing countries**

- **Forest management should be improved.**

At present, some developing countries have an unstable political environment and incomplete management system. Under these circumstances it is impossible to establish an institution to manage the legitimacy of timber in conformity with the requirements of the EU. The governments of African countries have no corresponding

agencies to conduct legitimacy identification. In order to solve this problem, the timber supplying countries should promote the construction of forest resource management system. That is to say, to fight against the source of illegal felling and related trade. A key countermeasure is to establish a good forest resource management system.

Many countries have set up complete timber management systems from which the timber producing countries can draw lessons. The illegal felling of timber and the illegal trade of timber should be severely fought back from the source countries, by strengthening the timber management system and timber trade management procedure, reinforcing the internal approval and management procedures, standardizing the corporate felling behaviors, enhancing customs surveillance and domestic forest greening and law enforcement.

- **International cooperation should be strengthened.**

Many countries have started to be committed to promoting and establishing policies for responsible global forest trade. Meanwhile, the legitimacy of timber and the sustainable operations have become increasingly important, even a compulsory requirement for the entry to the global market. The timber producing countries should be fully aware that the timber legitimacy identification has significant importance to the promotion of sustainable development of forests. The positive participation into international cooperation is helpful in increasing the credibility of the timber of its own country in the international market. On the premise that domestic forest identification system is lacked, the participation into TLAS is a good choice.

### **5.3 For developed countries such as EU and US**

The developing timber producing countries have incomplete systems for timber management. International cooperation is needed to construct the regulation system in poor forest countries (Sun Changjin, 2008). The developed countries have anticipated the primary accumulation of capital and achieved the prosperous development of society. The material basis required by the growth of developing countries and the change of consciousness need a long process.

Since the developed countries have advantages in technology and funding, they are obligated to provide technological and financial aid to the timber producing countries, which is helpful to promote the law enforcement ability in timber production and consciousness in the developing timber production countries.

- **A variable implementation policies by importing countries should be avoided and a transition period should be provided**

A gradual process with increasing abilities is key to the improvement of forest operations, which can be driven by the timber trade (Sun, 2008). Compared with the immediate and all-around implementation of identification of forest sustainable operation, the gradual advancement has less challenges.

The EU and US Timber Regulations are different from the legitimacy identification requirement of other countries. In China, most SMFEs have never heard of the Lacey Act or the EU Timber Regulation. This is not only because SMFEs are not fully prepared, but also the identification agencies are not qualified to meet the requirements of the EU Timber Regulation.

Therefore, it's difficult to meet the requirements in a short time. A certain transition stages should be set for SMFEs, providing detailed operational process and timetable. During the transition period, the difficulties with third-party identification should be recognized. Revision advices should be proposed in the period based on the deviation in the actual implementation of policy, so that the enterprises can slowly adjust themselves and make changes. A sudden and outburst implementation will bring not only severe impacts on SMFEs and but also the instability to the global trade market of forest products.

- **The countries introducing legitimacy regulations should offer technology and training for SMFEs**

As the initiator of the timber regulations, the EU and the US have the obligation to decipher correctly the basic contents and implementation methods to SMFEs, so that the latter understand the requirement and implementation methods and have exact understandings on the proof required. It is far from enough to simply publish the regulations.

In this investigation, some enterprises expressed specifically that they expected the EU and US governments to popularize the knowledge about the regulations to SMFEs and explain the detailed requirements and the procedure to meet the requirements.

The assistance of the EU and US countries to launch legitimacy training and technology training for SMFEs of the timber processing countries and decipher the important details in the regulations will not only promotes the development of SMFEs,

but also guarantees the stability of timber product supply, and facilitate the implementation of the EU and US Timber Regulations.

- **The dialogue with timber production countries should be encouraged.**

The countries of origin of timber production are mainly developing countries which have not full understanding of the EU Timber Regulation. In some countries, due to the limitation of domestic political and economic factors, there are even no third-party agencies for certification for legitimacy. Most enterprises should enhance their management ability and increase fund reserve to meet the requirements of timber identification. In order to facilitate the implementation of the EU Timber Regulation, the EU countries should strengthen the communication with timber supplying countries, help the ability construction of the countries of origin of timber production and promote their consciousness in timber legitimacy identification. It is also suggested that the EU and US countries provide financial support to reduce the identification cost and impact on SMFEs of the supplying countries.

- **The operability of timber legitimacy identification should be strengthened.**

On the basis of bilateral and multilateral exchange and cooperation, the consensus of the definition of timber legitimacy between different countries should be promoted. A mutual identification of the timber legitimacy that conforms to the situation of every country, especially the developing countries, should be established. This is also a method with the lowest cost to eliminate confusions in timber trading and manufacturing enterprises about the timber legitimate operations and to promote the timber legitimacy management in enterprises. With the actual situation of the SMFEs in the timber producing and processing countries, the procedure of timber legitimacy identification with the lowest cost and being the simplest should be adopted, so that the operability of the identification can be improved.

## **5.4 For SMFEs**

SMFEs should choose long-term cooperation partners with goodwill to avoid misusing illegal timbers. They should also avoid acquiring timbers felled illegally and refuse to purchase timbers with unclear sources. To establish a long-term capacity of meeting the EU and US timber regulations, SMFEs should strengthen their capacity

building as follows:

- Capacity building on timber legitimacy. The SMFEs should take the initiative to learn more about the requirements and the latest progresses on the timber legitimacy, ensure that all staff involving purchase, sales or marketing of the forest products are aware of the requirements on legitimacy by the EU and US, as well as be aware of the legal requirements in the country of origin of their timber products.
- SMFEs should implement supply chain management, build their own supply chain tracking systems in order to identify where the timbers are sourced. The company can trace back to the forest where the forest products purchased are felled through the supply chain trace and track system.
- The SMFEs should be aware of the regulations on deforestation, transportation and trade of forest resources in the country of timber origin and procurement. The legitimacy proofs associated the raw materials should be acquired in purchasing, including the traceability certificate of the whole chain of custody.
- A public procurement policy should be established in an enterprise to build a corporate image with responsibility. Procurement policy of an enterprise is an important statement that defines what kind of raw materials and products the enterprise may purchase or refuse. The procurement policy of an enterprise should be publicly announced to all suppliers and buyers of the enterprise, and be enforced strictly.
- Efficient use of timber resources. Although timber resources are renewable in the long run, they are non-renewable resources within a short period, especially high value timber resources. Therefore, an enterprise should make maximum and efficient use of timber resources to avoid waste.
- SMFEs should be more concerned about related information and communicate with open mind, accept the guidance and training of the government, listen to the suggestions by research institutions and international environmental protection NGOs, improve the transparency of trade information and gradually transform the idea of utilitarian management into sustainable development.

## **5.5 For NGOs**

The environmental protection NGOs are important references and supports for Chinese forest products trade in catching up with standards of the global market. Legitimate and useful activities of the NGOs in forest industry should be respected

and supported. In view of the significance of SMFEs in China and other developing countries, as well as the existing situations of Chinese SMFEs, the NGOs may give objective and comprehensive assessments on Chinese SMFEs based on their understanding and support on SMFEs.

Most environmental protection NGOs expect that more and more enterprises have environmental and legitimate supply chains. The NGOs already have approaches of timber legality identification. They are competent in helping the enterprises carry out actual identifications with their expertise. In this consideration, NGOs should better provide identification training services and technical support for the SMFEs with an attitude of equal consultation instead of fierce critics. Through cooperation with enterprises, the NGOs are enabled to improve their influences on enterprises, promote information of third-party identification to enterprises, and guide the enterprises in the direction of sustainable operation. With the improvement of enterprise production standards, the goals of the NGOs can also be achieved, with a win-win result.

## **5.6 For International Tropical Timber Organization (ITTO)**

- Although the tropical timber producing, processing and consuming countries are geographically far apart, they are essentially an inseparable whole from the perspective of industry chain. As an international organization, ITTO has the ability to make efforts in the promotion of multi-party cooperation, exchange and dialogue, promote understandings and appreciations of all parties, and reach a compromise for multi-win results. For example, on the definition of timber legitimacy and unified compilation of documents related to timber legitimacy, ITTO can promote relevant collaboration, exchange and consultation based on its influences, so as to facilitate the formation of a unified definition and legal documents on timber legitimacy.
- The research on the effective model of serving the capacity construction of SMFEs and promoting relevant models should be encouraged, to make the experiences of advanced countries useful to other developing countries.

The proportion of effect of forest trade on forests disappearance has been exaggerated in recent years. Sustainable operation of forest products, with both advantage of industrial development and contribution to the sustainability of

forests, is, as stated in *The State of the World's Forests* published by FAO in 2012, "A challenge for the forestry profession is to communicate the simple idea that the best way of saving a forest is to manage it sustainably and to benefit from its products and ecosystem services." In this regard, ITTO should input powers to carry out relevant research.

The best way of saving forests is to manage it sustainably and to benefit from its products and ecosystem services. A challenge facing the forest industry is the publicity and promotion of ideas. If the principle of managing a forest sustainably can be implemented well and the proportion of the products and ecosystem services can be increased, the global economy will be more secure. ITTO, as an international intergovernmental organization with global influence, should promote the publicity and popularization of this idea.