

PROJECT REPORT

CHINA'S TROPICAL TIMBER PROCESSING SMFES' CHALLENGES AND OPPORTUNITIES FOR PROCUREMENT OF TIMBER FROM LEGAL AND SUSTAINABLY MANAGED FOREST

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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 proportion of the raw materials used by the SMFEs are imported and large volumes of tropical timber are imported and processed. 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.

This study, Financed by the International Tropical Timber Organization (ITTO), selected the Yangtze River Delta region as the target area, as the production, consumption, and trade in China's tropical timber products are concentrated. Surveys in terms of questionnaires and interviews were conducted on the SMFEs in this area. Through filed surveys, the status of the SMFEs as well as their opportunities and challenges were assessed. The understanding, knowledge and awareness of the international act/regulations on timber procurement, and their response measures were studied. Finally, the impact of the international act/regulations on timber procurement from the United States and the Europe on China's SMFEs has been evaluated with the aim of lay the foundation for developing policy recommendations.

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Acronyms and abbreviations

AFS	Australian Financial Services
APEC	Asia-Pacific Economic Cooperation
BV	Bureau Veritas International Inspection Group
CAF	Chinese Academy of Forestry
CARB	California Air Resources Board
CEC	California Energy Commission
CFCC	China Forest Certification Council
CITES	Convention on International Trade in Endangered Species
CoC	Chain of Custody Certification
Co., Ltd	Company Limited
CSA	Canadian Standards Association
DDR	Due Diligence Regulation
EU	European Union
EUTR	European Union Timber Regulation
FAO	Food and Agriculture Organization
FLEGT	Forest Law Enforcement, Governance and Trade Action Plan
FM	Forest Management
FPI	China Forest Products Index Mechanism
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
IR	International Timber Regulations
ISO	International Organization for Standardization
ITTO	International Tropical Timber Organization
LEI	Lembaga Ekolabel Indonesia
MTCS	Malaysian Timber Certification System
OEM	Originally Equipment Manufacturers
PEFC	The Pan-Euro Forest Certification Council
PC	Procurement Contracts
REDD	Reducing Emissions from Deforestation and forest Degradation
Q & A	Questions and Answers
R&D	Research and Development
RIFPI	Research Institute of Forestry Policy and Information
SCS	Scientific Certification Systems
SFI	Sustainable Forestry Initiative
SMEs	Small and Medium-scale Enterprises
SMFEs	Small and Medium-scale Forestry Enterprises
SGS	Societe Generale de Surveillance
SW	Smart Wood
TFT	Tropical Forest Trust
U.S.	United States
VPA	Voluntary Partnership Agreement
WTO	World Trade Organization

Executive Summary

This report investigates the characteristics of Chinese small and medium forest enterprises (SMFEs) by ways of questionnaire, field interview and interview with stakeholders, and focuses on their preparedness in satisfying the EU and US' timber procurement policies, as well as the main difficulties and obstacles therein. In the present stage, the EU and US Timber Regulations bring much challenge to Chinese SMFEs than opportunity.

In trying to deal with the EU and US regulations on timber legality neither SMFEs nor the state institutions that could assist the SMFEs are not well informed and thus unprepared.

Overseas importers and domestic consumers are not prepared to pay higher prices for wood products to compensate for the cost of certification. Existing research shows that Chinese SMFEs are not, at present (March,2013), experiencing any pressure from the market nor do they see any business advantage which would encourage them to proceed to secure third party verification of legality or chain of custody certification.

Current situation

Recently, two major forest products trade partners of China - US and EU have introduced and implemented the timber procurement law to issue new demand on timber trade legitimacy.

Since there is no internationally unified definition of timber legitimacy at present, the relevant law procedures and documents in international trade of forest products vary from country to country, which is caused by the differences in management system, organizational structures, economic development stages in regions and countries, as well as politics, culture and historical development.

To reach a consensus, a great deal of work requires to be done. This also leads to the challenge that Chinese small and medium forest enterprises (SMFEs) are facing some challenges that cannot be solved by individual enterprise in the export and import of timber.

In China's timber processing industry, over 90% of products are attributed to SMFEs. They play a very important role in satisfying the needs of forest products in the Chinese domestic and international market as well as in employment. Meanwhile, they also make huge contribution to improving the livelihood of poor and vulnerable groups.

But still a great number of challenges exist in the sustainable operation of timer that cannot be solved by them independently. USA amended its Lacey Act in 2008, and EU Timber Regulation went into force in March, 2013, which will produce influence on SMFEs. But how much do Chinese SMFEs know about EU and US Timber Regulations and how are their preparations? In what aspects will they change?

The countermeasures for the proposed questions will not only influence Chinese domestic forest products industry but also bring changes to the trade pattern of

international forest products.

To try and provide an answer to the questions above, the Yangtze River Delta of China (Jiangsu province, Zhejiang province and Shanghai city) - the concentrated area of trade, consuming and processing of Chinese forest products is selected as the sampling area in this research. Field investigation is conducted over the operating conditions of the forest products enterprises in the research area, their understanding and attitude of legal timber certification as well as their countermeasures.

Profile of target areas of the project

The economic circle of the Yangtze River Delta - the most influential area of the trade, production and consumption of tropical timber in China is selected for research in this project. The research area incorporates the biggest port of importation for tropical timber in China - Zhangjiagang in Jiangsu province, where 1/3 of total tropical log supply of China is imported each year.

The capital of the solid timber floor and two of four main wood-based panels bases in China are distributed in this area. Zhejiang, Shanghai and Jiangsu, which are all located within this area, have become the most important trade areas of tropical forest products with the economic aggregate taking up 21.3% of China's total volume.

Situation and characteristics of SMFEs in China

China has a large number of forest products processing enterprises which are widely distributed across the country. The relatively concentrated regions are as follows: The processing area in the border region between Russia and Northeast China, the Yangtze River Delta, Guangdong, Fujian and other coastal areas, and Beijing and Tianjin in Bohai Economic Rim.

The forest products processing industry basically belongs to the labor intensive and the resource dependence industries. Relative to other manufacturing industries, its technology and fund barriers are low, and the cost of raw material and the labor accounts for the majority of the total output. The scale of timber product processing enterprises is generally small.

A total of 133 forest products processing enterprises are investigated in Jiangsu and Zhejiang provinces, with the main characteristics of SMFEs concluded as follows: dominance of private enterprises, relatively small operating scale of enterprises, low educational level of business owners and their employees, lack of independent brands, lack of core competence, and lack of modern management ideas. The existing problems stated above lead to the enterprises' low capacity in risk resistance.

Challenges facing SMFEs in China

In recent years, China's steadily improving macro-economic situation has created good macro-environment for the development of small and medium-sized enterprises. The policies of "building materials going to the countryside" and "Replacement of used furniture with new ones" also bring opportunities for the development of SMFEs.

During the 12th Five-Year-Plan period, investment in infrastructure and high-speed development of real estate will continually drive the demand in forest products,

which will benefit the enterprises of forest industry with the advantages of industrial clusters. Even so, the SMFEs are still faced with many challenges as outlined below.

Limited information resource of market and new technology

This survey shows that more than half of the enterprises acquire information through public channels such as the Internet and trade fairs, while only 10.5% of enterprises acquire information through the government, and only two enterprises get information from research institutes. The channels from which enterprises receive technological support are similar, indicating a fact that there is a gap between tropical timber processing enterprises and relevant professional research institutions, and an absence of information service function of the government.

Enterprises lack effective communication with government agencies and are insufficiently engaged in policy development.

The SMFEs lack spokespersons of their own interests due to inadequate qualification or insufficient strength. As a result, they fail to feedback the difficulties encountered in production and operation timely to the government, with small influence on policies, because their suggestion and opinions don't have channel for feedback.

SMFEs experience unstable demand in the domestic and foreign markets.

The economic growth of Chinese forest industry depends on the economic development situation of countries exporting wood products to a certain extent, which means the influence of the global economic situation on the development of forest industry in China is increasingly large.

Rising labor cost and labor shortages

In the recent two years, the wage of workers in China has grown by 20%, with the mean monthly salary of ordinary workers at 3000-4000 yuan. Even so, SMFEs are still faced with difficulties in employee recruitment.

Inadequate access to formal sources of finance

The financing cost of micro and small enterprises in some regions of China is 50% higher than that of large and medium-sized enterprises. In the recent three years, the financing increment of China's government platform and large and medium-sized enterprises is over 3 times higher than that of micro and small enterprises. SMFEs are at a disadvantageous position for bank credit.

Appreciation of RMB and exchange rate changes create risks

In recent years, RMB exchange rate has been appreciating continually, which brings huge losses to China's export enterprises. RMB appreciation has huge influences on China's foreign trade enterprises, with even more adverse effects on the exporting enterprises. Most of the enterprises have not enough confidence for long-

term business, and the phenomenon of "order rejection due to insufficient confidence" is very serious.

Money supply created inflation

Since 2008, under the huge pressure of the global financial crisis, China's currency supply has been growing excessively. By the end of 2012, China's M2 balance had reached RMB 97.42 trillion, almost equivalent to a quarter of the world's total money supply, 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 resulting in inflation.

Challenges for Chinese SMFEs Caused by EU and US Timber Regulations

In accordance with the regulations of Lacey Act and the EU Timber Regulation, the proof of legitimacy of the source of timber must be provided by the importers. This rule increases undoubtedly the risk and costs of the EU and US trade for Chinese forest products trade enterprises.

The price advantages of China based on huge low-cost labor force, good industrial clusters and preferential economic development policy are lost. On the background of continuous weakness of the global economy, the application of the EU and US Timber Regulations brings tremendously negative impact on enterprises with forest products trade. The impacts include the following aspects.

Difficulties faced by Chinese SMFEs when exporting to the EU and US markets has been aggravated

According to the Lacey Act and the EU Timber Regulation, strict surveillance is exercised on timber and forest products imported from China. The US and EU's import enterprises will inevitably reduce the wood products imported from China so as to avoid risks. Thus, the export volume of Chinese forest products was downsized.

The operating costs and risks for SMFEs are high

On the one hand, the procedure of obtaining the source information of forest products is complicated and with high costs. On the other hand, during the beginning stages of the application of the regulations, the forest products trade enterprises, which have difficulties in thoroughly understanding and getting used to the new rules, are facing the risk of severe punishment. The operating costs of the enterprises thus rise radically.

Sharp reduction in availability of tropical raw materials could drive SMFEs to turn to alternative timbers

In some developing timber producing countries, the timber production and management systems are not fully established. Therefore, it is hard for the enterprises to provide valid documents for the legitimacy of sources. With the application of the Lacey Act and the EU Timber Regulation, the manufacturing and processing

enterprises for tropical timber products are compelled to search for more secure supplies from other routes.

Obstacles existing in third-party legitimacy identification in China

SMFEs confused by varying timber trade policies in importing countries.

The identification documents for timber legitimacy required by the EU and US countries and in China are different.

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).

From what has been stated above, it is obvious that the required documents for the legitimacy of the timber products in different countries are different, which has puzzled the enterprises.

Many tropical timber countries cannot provide adequate documentation on legality for SMFEs to satisfy demands in EU and US

Even if the small and medium enterprises are intended to supplement the required documents for the EU and the US on the basis of the legitimacy procedures required by China Customs, such as the felling certificate, the duty-paid proof, the certificate of the forest rights, they will not necessarily pass.

The historical evolution, cultural tradition and economical development stage determine the specific management system of a country. In many countries, the institutions and systems are not completely established (Sun Changjin, 2008). Therefore, they can hardly provide the documents required by the EU and US Timber Regulations. In order to satisfy the requirements of the EU and US markets, the timber producing countries have to increase the functions of the management institutions, or the management divisions, for which both funds and time are needed.

The supply chain for imported and domestic timber is complicated and tracing is a challenge

The structure of the current supply chain of Chinese forest products processing enterprises is complicated. In some cases, the components of one piece of furniture might come from different countries (Hai Lingchao, 2013).

For instance, the face veneer of plywood with at least one veneer of tropical

timber is mainly imported timber while the core veneer is mainly domestically made timber. Plywood is an intermediate product. During its manufacturing into furniture, other wood material is possibly added, which increases the complexity of the supply chain.

The supply chain is divided into two phases.

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; 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, following which they are sold to plywood factories for processing.

Plywood has experienced 13 steps in which 8 steps for the core veneers and 5 steps for the face veneers to arrive at the manufacturing enterprises.

For a piece of furniture manufactured with plywood and timber, the supply chain of the other timber material should be added, thus the needed procedures are even more complicated.

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

The timber resources of Chinese SMFEs are mainly purchased from timber markets. With one more upstream intermediate agents and traders, the complicity of the supply chain is further strengthened. Thus the tracing of the timber is more difficult. Particularly, for the consideration of protection of commercial secrets, the suppliers seldom release information on the upstream suppliers to the manufacturing and processing enterprises, in order to avoid the direct transaction between the enterprises and the upstream suppliers without participation of the suppliers themselves. Since the SMFEs have limited purchase volume, they have little influence on the suppliers. It is even more difficult for the intermediate agents to ask for documents of proof of legitimacy from the enterprises of the origin. Therefore, it is very difficult for the small and medium enterprises to accomplish the due diligence investigation of timber all by themselves.

Chinese institutions and timber associations are not well equipped to provide advice or training on meeting market requirements on legality

Even though the sustainable market means is showing up, the system is not well established (Sun Changjin, 2008). There are many SMFEs in China, but no more than

10 third-party(project interviews,2013) institutions are entitled to provide legitimacy identification and no more than 10 auditors(project interview,2013) are capable of the legitimacy identification. The quantity of the identification agencies is in utterly inadequate proportion compared with the thousands of SMFEs in China. A search for "timber legitimacy identification consulting" in China's biggest search engine "Baidu" returns no information about the contact of any companies or agencies providing timber legitimacy identification and consulting services.

Standards for legality verification are not uniform

Every sovereign nation has its own legal system and regulations on forest resource exploitation management, which are entitled to explain the legitimacy of timber. At present, no uniform definition about the legitimacy of timber has been reached. The proof demanded by each country is also different. In addition, the identification standards of third-party institutions are different. Not a standard from one third-party legitimacy identification agency is widely accepted.

Insufficient recognition of need for legality verification by SMFEs

In the survey, only 28% of enterprises interviewed have heard about the EU and US Timber Regulations. A large proportion of small and medium enterprises for tropical forest timber processing have poor knowledge in the EU and US Timber Regulations, especially the enterprises selling products mainly to Chinese domestic markets.

Few SMFEs were willing to accept sponsored support for CoC certification or train for legality verification. Some enterprises even express a viewpoint that the training of legitimacy identification is of no interest as there is no profit in it and there is no demand from buyers.

Instead, they consider that, it is just a show if only one or two products among dozens of varieties of raw materials are identified for legitimacy, while it will be unbearable for any an enterprise to complete legitimacy identification for all products. Therefore, those enterprises regard the training and consultation of legitimacy identification meaningless and time-consuming in that case that legitimacy identification itself is infeasible.

Third-party legality verification management systems are too expensive for SMFEs

For SMFEs, the third-party legitimacy identification is highly expensive and complex. For example, for the SMFEs participating in the training and consultation of legitimacy identification in this project, one batch of an order involves five exporters, which means at least five certificates are to be prepared. In each section, the charge for identification is 2000 dollars, and totally 8000 dollars are charged for four sections. For the sake of supplying products to the purchaser, an enterprise will pay above 40,000 dollars for the legitimacy identification in each year. Legitimacy identification is generally conducted on a basis of batch. For any a batch, an enterprise will pay the same charge.

In normal conditions, SMFEs usually purchases in a large number of batches

with one batch involving very small amount of products, which causes that their costs of legitimacy identification are far beyond that of large enterprises. In addition, the SMFEs are weak in bargaining, with unstable suppliers, which results in higher cost for the legitimacy identification of per unit product.

The cost of third-party legitimacy identification can not be transferred to buyers

The supply chain is usually driven by retailers and buyers. If both are willing to pay higher purchasing price for legally identified products, then the products identified will be more competitive in the market. The products identified are usually higher priced, due to their additional cost in legitimacy identification which should be consumed in all links of the supply chain. According to the feedback of the market, people have realized that the costumers are not will to pay higher price for the sustainable products.

SMFEs do not have the management capacity to sustain a legality verification system

For the legitimacy identification of an enterprise, special personnel are needed to collect relevant information and documents and manage the materials, etc. The talents are required to excel in foreign trade, English and law.

Furthermore, they are also required to actively collect market information domestically and internationally, with continuous focus on the Chinese government' policies and a concern on sustainable development and ecological and environmental protection.

Owing to a situation that Chinese timber processing factories tend to employ "migrant workers" who are poorly educated and less skilled, The SMFEs generally seriously lack comprehensive talents, not mentioning those with special knowledge in legitimacy management of timber supply chain, so that the cost of legitimacy identification cannot be transferred to the downstream market due to insufficient legitimacy information, causing an awkward situation of the SMFEs

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1. Introduction

Globalisation has allowed China to become one of the world's main centers for forest products manufacturing and international demand for forest products of high quality at reasonable prices has continued to increase. Since accession to the WTO, China's forest products industry has developed on a large scale and increasing market demand has contributed to the rapid growth of China's international trade in forest products (e.g., China's volume of trade of forest products was 18.2 billion US dollars in 2000 (<http://www.doc88.com/p-951217586626.html>), and reached 118.8 billion US dollars in 2012).

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 (FAO, 2011, ITTO, 2011). In China, the number of wood-based panel enterprises total 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.

Over the past two decades the forestry industry has also made a significant contribution to the domestic economy and environment. In some provinces, e.g., Jiangsu, Shandong, Guangdong, where the forest product industries are more developed growth has been achieved in both forest resources and industrial output as well as farmers' income.

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. These SMFEs, usually located in suburban or rural areas, are providing vital jobs for the underemployed rural labor force. Being an important component in the chain of the wood processing industry, China's SMFEs coordinate with upstream and downstream businesses of all sizes in terms of direct exports or indirectly supplying semi-finished products to large export enterprises.

However, due to their small scale, the SMFEs are characterized by having weak bargaining power, great financing difficulties, generally low education of the practitioners, low levels of business management and technology an absence of R&D investment and weak core competitiveness. These features are the prevalent weaknesses in China's SMEs. In the face of any policy change which would induce higher cost, their resilience and ability to withstand pressure is lower than their large counterparts. What is worse, due to rigorous market competition, this in turn leads to profit reduction, bringing production to a standstill or company closure. Thus, there is risk of large scale unemployment in a vulnerable group which could result in social instability.

Since the global financial crisis in 2008, sluggish market demand in Europe and the United States has led to shocks to China's exports of forest products. Chinese plywood enterprises had to reduce output by more than half, more than 20 percent of flooring manufacturers faced difficulties and nearly 65 per cent of primary timber processing enterprises stopped production or closed down. Even with the beginning

of the recovery in 2010 enterprises still faced challenges such as higher domestic labor costs, excess manufacturing capacity, more intense market competition, and the exchange rate appreciation of the Chinese Yuan against the US dollar. For all these reasons, the SMFEs were faced with falling profits and great difficulties in, for example, recruiting workers.

In addition to the above challenges, China's timber SMFEs are confronted with trade barriers developed to address issues of procurement and forest sustainability that they cannot address on their own. On issues such as sustainable forest management the lack of a platform for SMFEs and government departments to exchange information has limited SMEs understanding of international policies for the forest products market. Most of the SMFEs dealing in the domestic market have not yet heard about the concept of sustainable forest management, thus they have very limited knowledge on or understanding of the significance of the legality in the timber/wood business. For some enterprises who have heard about international laws and regulations for the timber trade, few know the specifics or how to satisfy the requirements. For those companies who have already had access to the international market and are required to provide certified products, they lack access to information on the certification materials from the buyer side. For those companies who understand the international timber legality requirements they are not clear on how to carry out the related activities. For those SMFEs who have the desire to be certified there are no more than 10 certifying organizations and not more than 10 full time auditors on independent legality verification in China. Additionally, promotion and outreach of the certifying organizations in China is weak such that SMFEs cannot easily obtain information and details of services offered. For those SMFEs who are lucky to first find and then finance third-party certification the costs are so high as to be a form of barrier to their access to international markets.

SMFEs are facing new challenges in the form of the Lacey Act and the EUTR requiring timber procurement from verified legal sources. These are now requirements in two of China's major trade partners for forest products. At present there is no consensus on the definition of legality of timber procurement and the legal procedures and documents required in international trading vary country by country.

Therefore, the procedures that have to be followed by exporters to satisfy importers differ to a certain extent from those required by the China Customs on the legal formalities of timber imports and exports. There is also discord with the national management system for timber legality in tropical timber supply countries. Such mismatches are due to different stages of economic development, political, cultural and historical background in countries, which result in difficulties in reaching a consensus. For the SMFEs there exist a lot of challenges in international trading that they are not able to cope with relying on their own resources.

Given the importance of the SMFEs in international trade of China's forest products and their contribution in providing jobs for the rural labor force and in improving the standard of living of the rural population, it is of great significance to study their response to the international regulations on timber procurement. It is vital to help them overcome existing difficulties, problems, and obstacles to facilitate the

healthy development of the SMFEs so as to contribute to global efforts to legitimize the timber business.

It is equally as important to provide decision makers with a sound basis for decision-making. Both large and small sized enterprises play a vital role in supporting economic development and environmental stability and employment generation. The regulations on timber procurement of the United States and the European Union are aiming at sustainable management of forest resource, rather than no use. Therefore the issue is how to improve the capacity of SMFEs to meet legality requirements which is now key to the legitimate trade in forest products.

This study, financed by the International Tropical Timber Organization (ITTO), selected the Yangtze River Delta region as the target area, as the production, consumption, and trade in China’s tropical timber products are concentrated.

Surveys in terms of questionnaires and interviews were conducted on the SMFEs in this area. Through filed surveys, the status of the SMFEs as well as their opportunities and challenges were assessed,

The understanding, knowledge and awareness of the international act/regulations on timber procurement, and their response measures were studied. Finally, the impact of the international act regulations on timber procurement from the United States and the Europe on China’s SMFEs has been evaluated with the aim of lay the foundation for developing policy recommendations.

Aims and approach

The study aims at producing a report for the ITTO project (NO. TFL-PD 017/09 Rev.2 (M)), “Equipping Small and Medium Sized Forestry Enterprises in China for Procurement of Tropical Timber from Legal and Sustainably Managed Forest”.

Based on a literature review and analysis on the trade data, questionnaires were emailed to the targeted SMFEs, followed by visits by the research team for one-to-one interviews with respondents from the SMFEs.

Moreover, the upstream enterprises and stakeholders along the supply chain of the targeted SMFEs, e.g., associations, forestry officials, etc., were also surveyed in the form of personal interviews or roundtable forums. Specifically, four cities in Jiangsu province, i.e., Pizhou, Changzhou, Changshu, and Zhangjiagang, and two districts in Huzhou city in Zhejiang province, i.e., Nanxun and Jiuguan, were surveyed focusing on the SMFEs. In Shanghai and Zhangjiagang, trading enterprises and stakeholders were interviewed (see table 1.1). In addition, according to the planned output 4, two pilot SMFEs were selected and offered COC training on the certification of timber procurement legality, of which their costs of third-party certification were studied.

Table 1. 1 Sample distribution

Questionnaire	Pizhou	Changzhou	Changshu	Nanxun and Jiuguan	
No. of samples	27	27	18	61	
Interview			Zhangjiagang	Nanxun	Shanghai
No. of samples			4	5	8

Regarding the quality of returned questionnaires, due to the sensitivity of the data related to output value, volume, and sales, the credibility of the responses is suspect but does provide a means for approximations of scale.

Furthermore, respondents' understanding of some questions may differ, or sometimes ambiguity in some questions seems to have misleads respondents leading to biased answers.

For example, on the question "*Have staff attended training on legality/legitimacy*", there was a higher share of the flooring manufactures in Huzhou of Zhejiang province who answered "Yes".

However, when the research team checked with them, it was the training the respondents believed this related to the legitimacy of domestic production procedures rather than the legitimacy of timber procurement. For this reason, the data on Huzhou is considered invalid and will not be included in the analysis for this study.

It is also noteworthy that conduct of one-to-one interviews with enterprises in China requires close liaison with local business associations and should involve their coordination. As a result, it is very difficult to use random sampling methods to select samples enterprises. Nevertheless, the SMFEs producing the same products and of similar sizes have reported with a high homogeneity, which is in particular reflected in their production process, recruitment, and business management.

Therefore, although the surveyed SMFEs were not random-selected samples, the data and results are considered representative and reveal the basic situation of the local businesses, especially in term of the legality of timber uses.

2. Background

2.1 Resources and local economic conditions

As proposed in the Project Proposal, the study selected the Yangtze River Delta region (i.e., Jiangsu, Zhejiang, and Shanghai) as the target area, where the processing, consumption, and trade market for China's tropical timber products are the most concentrated.

This section will focus on the local economic conditions and forest resources, aiming to provide an overview of the macroeconomic environment and trend of development for the SMFEs in this region.

The Yangtze River Delta region formed by Zhejiang province, Jiangsu province, and Shanghai, is regarded as the most developed area in China. This region lies in the mid-point of China's coastline, embraced by the coastal ports of Shanghai, Nanjing, Zhangjiagang, and so on. Having 70 per cent port capacity of the total, this region is located at a very favorable place for international trade.

At the beginning of China's reform era, this region played a leading role in the development of private sector, and has been continuously one of the most vigorous economies in China. Years of private economic development has formed its own industrial cluster of local characteristics. This region is seen as China's largest potential economic zone, with the fastest growth and the highest GDP. The forestry processing and manufacturing industry has also benefited from the advantages of location and industrial cluster, thus has higher competitiveness in the domestic market.

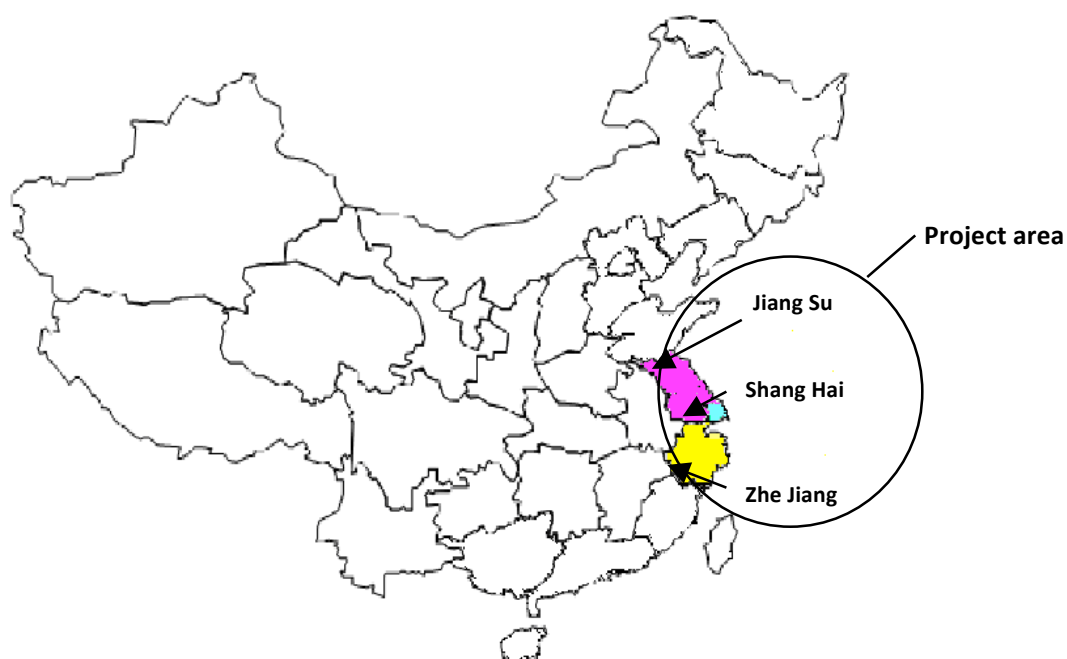


Figure 2.1 Survey Sites on the Map of China

The economic zone of the Yangtze River Delta region has a total area of nearly

205,800 square kilometers, accounting for 2 per cent of the total area of China. The population was 157 million in 2011, accounting for 11.7 per cent of the total population. In recent years the economy has shown steady growth in association with the country's industrialization process. In 2011, the GDP of Jiangsu province was about 5 trillion yuan, ranking as the second highest in China, while that of Zhejiang province was 3.2 trillion and the fourth, and that of Shanghai was 1.9 trillion, the eleventh. The total GDP of the three amounted to 10.1 trillion yuan, contributing over 20 per cent of the country's total (see table 2.1). The total value of import and export of the economic zone was equivalent to 12.86596 trillion US dollars, which was 35 per cent of the total import-export value of China.

Table 2. 2 Basic Information of the Provinces and Cities in Yangtze River Delta in 2011

	GDP			Area		Population	
	Billion yuan	Rank	% of China	Square km	% of China	Million	% of China
Jiangsu	4911.027	2	10.4	100000	1.0	78.99	5.9
Zhejiang	3231.885	4	6.8	100000	1.0	54.63	4.1
Shanghai	1919.569	11	4.1	5800	0.1	23.47	1.7
Total	10062.48		21.3	205800	2.1	157.09	11.7

Source: National Bureau of Statistics of China

2.2 Development of commercial forestry

The economic zone of the Yangtze River Delta region is of importance in the trade and consumption of tropical timber processing industry, where China's largest port of entry for tropical timber is located here, i.e., Zhangjiagang of Jiangsu province.

On average, more than one third of tropical logs are imported via here annually, 60 per cent of which are then shipped to Jiangsu, Zhejiang, Shanghai, and Shandong (Ling Fengming, 2008). In the meantime, the market for specialized flooring products in this area is the largest of China and unique of the world, the wholesale center for furniture and decorative board timber here is the largest of the East China, and the specialized market for wood belts is the unique one in entire East China. The developed economy enables a strong consumption capacity on wood products. Two out of the four plywood base of China are located in this area, i.e., Pizhou of Jiangsu, and Jiashan of Zhejiang. At the same time, the "City of Solid Wood Floor" and the "City of laminate flooring" are also located here.

2.2.1 The forest industry in Jiangsu Province

The forest industry in Jiangsu province contributes a large share in China since the forestry output of Jiangsu in 2009 exceeded 100 billion yuan. During 2002-2009, forestry output increased by three times or more, ranking from the ninth to the fourth, producing 7 per cent of the total forestry output of China with merely 0.7 per cent of forest land (Forestry Bureau of Jiangsu, 2011) (see figure 2.2).

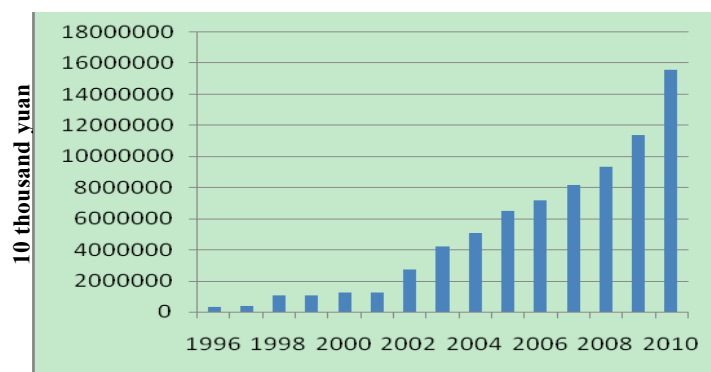


Figure 2. 1 The Forestry Output in Jiangsu Province, 1996-2010

At present the share of output of the secondary industries in Jiangsu province, including the forest products processing industry, has been increasing and led by wood-based panels production. In 2010, the production of veneer of Jiangsu ranked the first in China, while the production of plywood, wood and bamboo floors ranked the second highest.

Seen from the share of timber products out of their national total production respectively, the particleboard and plywood productions were dominant between 2006 and 2010 (figure 2.3). Looking at the absolute value, basically the industrial output of forestry has shown an increasing trend in recent years, with the largest total production in wood flooring and plywood the second largest.

By the end of 2009, in Xuzhou, Jiangsu, the number of enterprises producing plywood and plywood related products exceeded 3,000, equipping with over 2,200 process production lines. The annual output of plywood of all kinds in these enterprises exceeded 7 million cubic meters, which was about one fifth of the total production in China.

The average annual growth has been more than 40 per cent, making it the largest base of plywood production in China. Pizhou city in Jiangsu is one of the largest four bases for wood-based panel export. In 2010, the output value of wood-based panel processing reached 30 billion yuan, from over 2,000 enterprises. Directly employing over 200,000 employees, these enterprises produced annually wood-based panel of high quality of 8 million cubic meters. The plywood exported from Xuzhou in 2010 amounted to 14,581 batches, with a total of 2.474 million cubic meters, and accounting for 33 per cent of the total export volume of China.

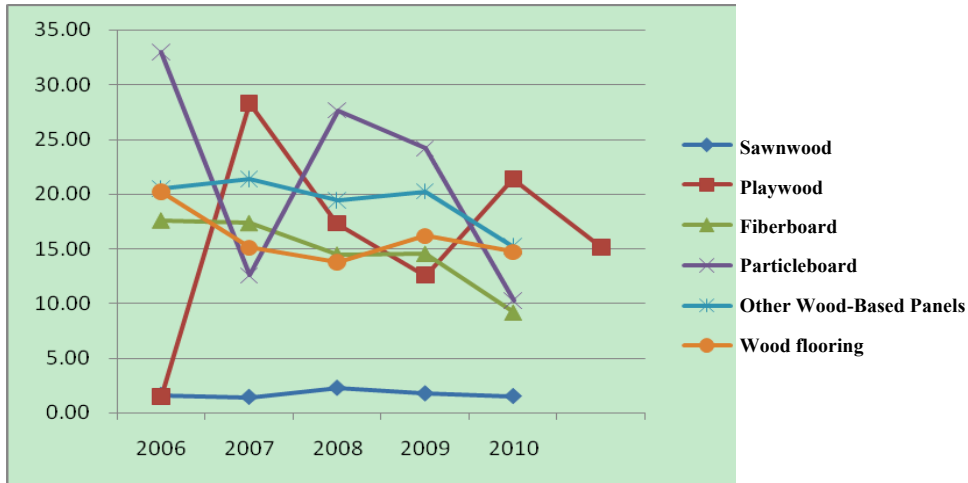


Figure 2. 3 Share of Forest Products of Jiangsu, 2006-2010

In addition, Shuyang county is a major place for timber processing in north Jiangsu, where a cluster of timber processing industry has been formed here. Currently more than 2,300 timber processing enterprises in this district are involved in the processing of timber of 2.9 million cubic meters, and of medium or high density board of 0.9 million cubic meters, annually.

Henglin township of Wujin District, Changzhou city is known as the “City of Composite Flooring”. This industrial cluster of flooring producers has an output of more than half of the total output of China.

Zhangjiagang, endowed with strong geographical advantage and convenient traffic conditions, has become China’s largest distribution center for tropical logs. Its annual volume of timber imports has maintained at 3 million cubic meters on average, once high up to 3.8 million.

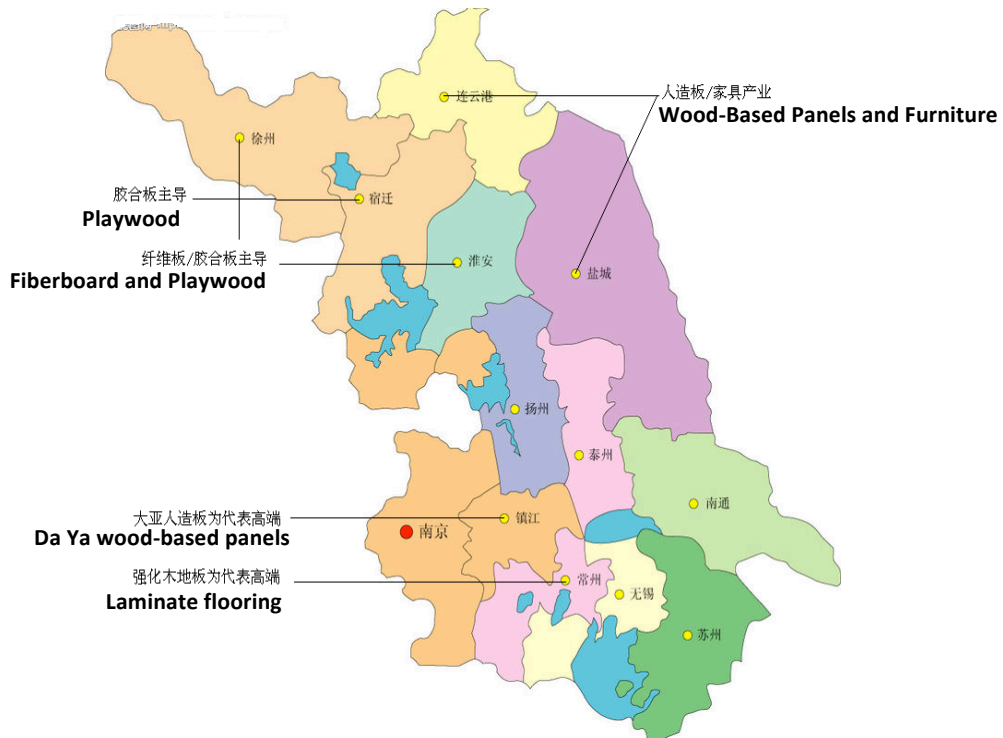


Figure 2. 2 Distribution of the Timber Processing Industry in Jiangsu

2.2.2 The Forest Industry in Zhejiang Province

In Zhejiang province, where the forest cover amounts to 60.58 percent it's the provincial output value of forestry was 315.48 billion yuan in 2011, of which the primary industry was 65.73 billion yuan, the secondary industry was 190.08 billion yuan, and the third industry 59.67 billion. The forest product processing industry in Zhejiang mainly covers wood products manufacturing, wood/bamboo/rattan furniture manufacturing and wood-based panel manufacturing the shares are depicted in figure 2.5.

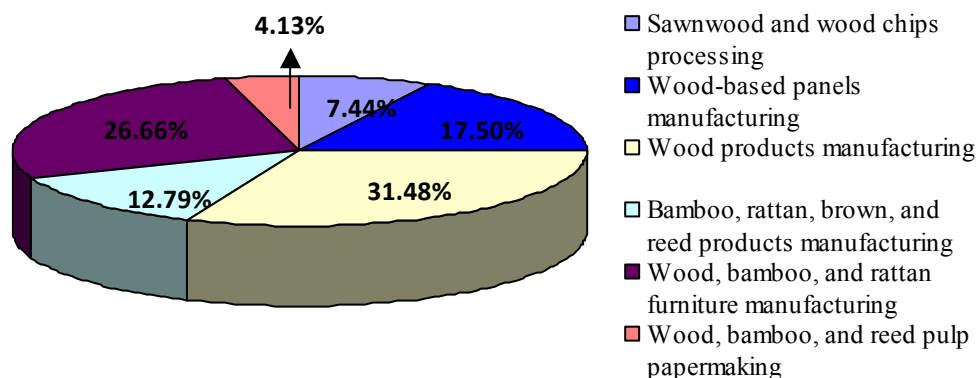


Figure 2. 3 Main Components of the Forest Product Processing in Zhejiang by Output Value Shares

Source of data: *China Forestry Statistical Yearbook 2010*

In Zhejiang province, the representative industries include, the wood-based panel manufacturing in Jiashan, Nanxun, and Deqing (while Jiashan is one of the four bases for plywood production of China), the wooden floor manufacturing in Nanxun and Lishui (while Nanxun is regarded as the “City of Solid Wood Flooring”), the wood furniture manufacturing in Wenzhou and Jiashan, the wooden toys and wooden crafts manufacturing in Yunhe, and the bamboo products industry in Anji (including bamboo flooring, bamboo laminates, bamboo crafts, bamboo charcoal articles for daily use, and so on). With years of development, in Zhejiang the wood processing industry cluster has been formed based on the plywood of Jiashan, the wood flooring of Nanxun, the wooden lines of Dongyang, the wooden handicrafts of Huangyan, and the wooden toys of Yunhe. Figure 2.6 presents the distribution of the specialized forestry industries in Zhejiang.

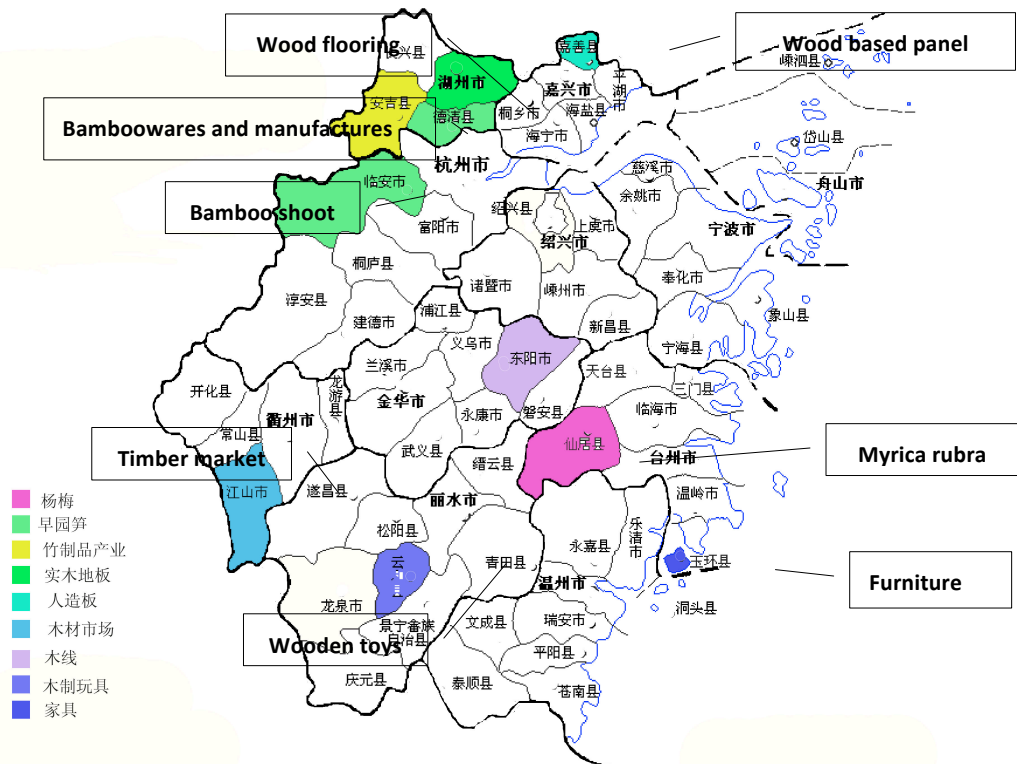


Figure 2. 4 Distribution of the Specialized Forestry Industries in Zhejiang

2.2.3 The Forest Industry in Shanghai

As the financial and business center of China, Shanghai is economically developed with high income levels of its residents who also have strong purchasing power. Moreover, being located in the center of the Yangtze River Delta region and at the estuary of the Yangtze River, Shanghai is endowed with convenient access to Jiangsu, Zhejiang both overland and by waterway and easy access to the international market due to the closeness to the ports of Zhangjiagang, Shanghai, and Taicang. Shanghai plays an important role in the trade of China's forest products and has become the distribution center for China's hardwood timber.

Given such a location development the hardwood timber distribution center of the East China was firmly built an example is the Furen Timber Trade Center of Shanghai. There are more than 500 enterprises trading in this center, involving nearly 300 kinds of timber, lumber, wood pieces, and blanks for solid wood flooring from over 100 countries. Among them the number of lumber traders reaches 150, making the center the largest wholesale center in the East China for furniture and decorative timber boards. The number of wood pieces traders is over 100, and that of flooring materials traders exceeds 160, making this center the only, and the largest specialized trade market for wood pieces and flooring materials, respectively. In addition, there is a large number of the timber manufacturing enterprise in Jiangsu and Zhejiang which tend to procure timber and raw materials from this center.

2.2.4 China's international trade in wood products

China's forest products industry is well established as a key component of the

global industrial chain of timber production, trading, processing, exporting, and consumption. Any change in the industrial chain such as fluctuations in the economy or the consumer market, or trading policy changes on timber supply or consumption are transmitted to the timber products industry and up the to the supply of forest products thus affecting the structure of international trade in forest products.

Before addressing the opportunities and challenges facing China’s SMFEs in meeting international market requirements and regulations on timber procurement, it is necessary to understand the status and structure of the international trade in forest products in China and to analyze the status and characteristics of China’s forest products in the global trading market.

Wood product imports

Log imports

According to the China Customs trade data from 2001 to 2011, China’s timber imports showed a stable growth trend in 2001to 2007, in both volume and value. Affected by the financial crisis, imports of logs show a significant decline in 2008 and 2009, and a move toward recovery from 2010 to 2011 pulled by the rapid development of the domestic economy and the world economy, driving timber imports to grow again (see figure 2.7).

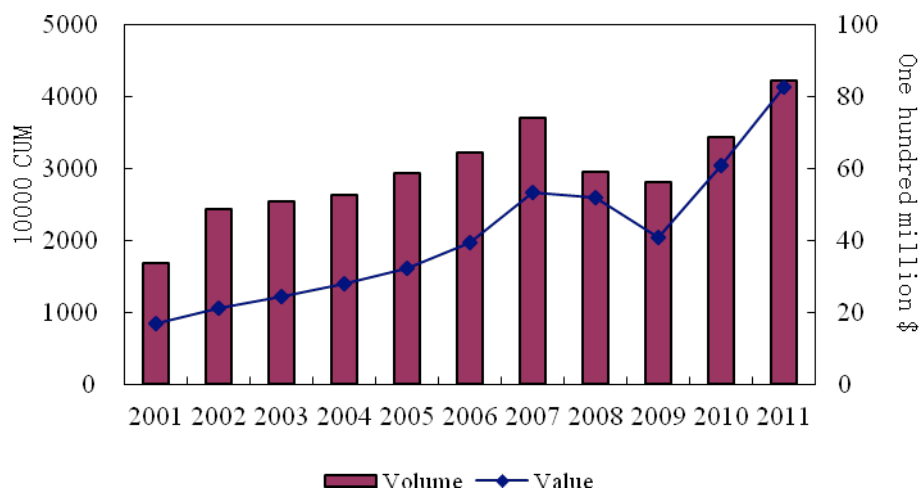


Figure 2. 5 Imports of Log Wood of China between 2001 and 2011

Source of data: United Nations Commodity Trade Statistics Database

Table 2.2 lists the top five source countries that China imported logs from in years of 2001, 2005, and 2010. In the years 2001 and 2005, four out of the five countries were tropical timber producing countries, among which Malaysia and Papua New Guinea had been in the top five by 2005. In 2010 there were only two tropical timber supplying countries.

During the decade of 2001-2010, the largest exporters of log to China have changed from Malaysia and Indonesia to Russia and New Zealand. The logs that China imported have changed from mainly tropical timber to temperate timber. Seeing from the volume imported, the share from the REDD countries continued to

decline, from 37.1 per cent in 2001 to 25 per cent in 2005, and further to 21.5 per cent in 2010.

Table 2. 3 Top Five Countries the China Imported Logs from, by Volume

	First	Second	Third	Fourth	Fifth
2001	Malaysia	Indonesia	Gabon	Papua New Guinea	Russia
2005	Russia	Malaysia	Papua New Guinea	Myanma	Gabon
2010	Russia	New Zealand	United States	Papua New Guinea	Solomn Islands

Source of data: General Administration of Customs of the People's Republic of China

Lumber imports

During the past decade driven by the rapid growth of the building and decoration industries and the furniture manufacturing industry, in association with the prohibition on the export of logs in some countries, imports of lumber showed a rapid upward trend in both volume and value in China.

Between 2001 and 2011, the total volume of imported lumber increased from 4.02 million to 21.55 million cubic meters . The pace of growth in imports was more rapid in the period 2008-2011. The trend in the volume and value of imports can be seen in figure 2.8.

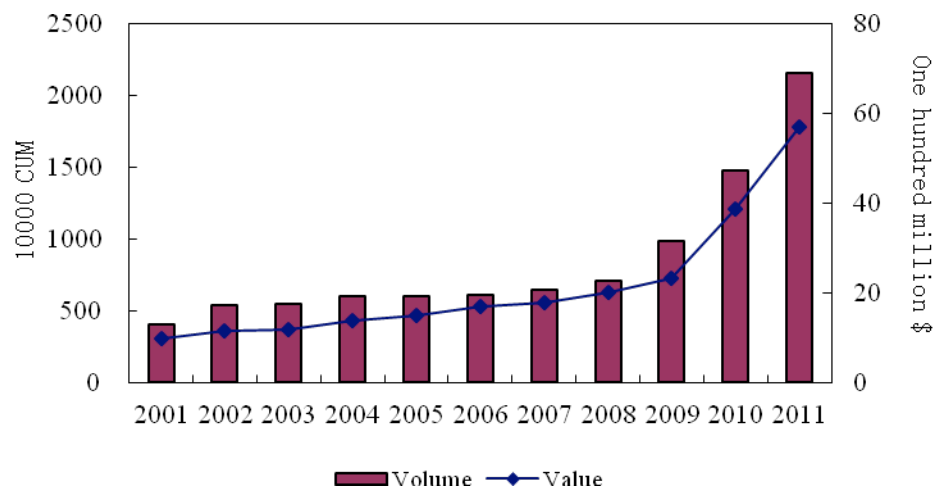


Figure 2. 6 Imports of Lumber of China between 2001-2011

Source of data: United Nations Commodity Trade Statistics Database

Table 2.3 lists the top five countries that China imported lumber from in the years of 2001, 2005, and 2010. In 2001 and 2005, three out of the five were tropical countries, but in 2010 there were only two. During this decade the largest supplier of lumber for China changed from Indonesia and Malaysia to Russia and Canada.

The lumber that China imported has changed from mainly tropical timber to

temperate timber. Seeing from the volume imported, the share from the REDD countries continued to decline, from 55.3 per cent in 2001 to 47.3 per cent in 2005, and further to 23 per cent in 2010.

Table 2. 4 Top Five Countries that China Imported Lumber, by Volume

	First	Second	Third	Fourth	Fifth
2001	Indonesia	Malaysia	United States	Thailand	Germany
2005	Russia	United States	Thailand	Indonesia	Indonesia
2010	Russia	Canada	United States	Thailand	The Philippines

Source of data: General Administration of Customs of the People’s Republic of China

Wood product exports

Among all the wood products that China exports the main products for which tropical timber is used are furniture, plywood and solid wood flooring. In this section the focus will be on furniture and plywood due to the fact that furniture is the largest export commodity which is made of wood, with 18.3 billion US dollars in value in 2012 accounting for 42 per cent of the total export value of wood products in that year, and that the export value of plywood in 2012 was 4.8 billion US dollars accounting for 11 per cent of the total wood product exports.

Furniture exports

The rapid growth of China’s furniture industry and the export of wooden furniture are depicted in figure 3.3. During 2001-2007, the export of wood furniture increased year by year, but in 2008 and 2009 due to the financial crisis, it suffered a sharp drop until the recovery started since 2010. The United States has been the largest importer of China’s wood furniture, while the European Union and Japan also imported a significant share. In 2012 amount that was exported to the United States, European Union, and Japan was 34 per cent, 17.5 per cent, and 6.3 per cent respectively, of which the total share was a high of 57.8 per cent (see figure 2.10).

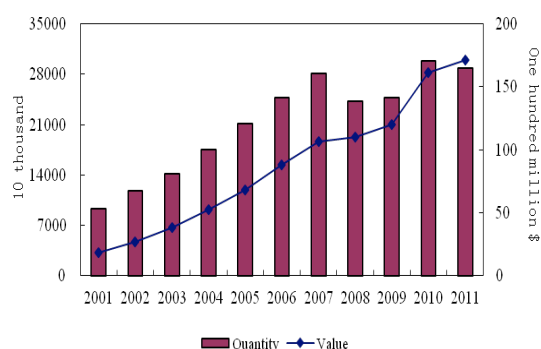


Figure 2. 7 Export of Wood Furniture in 2001-2011

Source of data: United Nations Commodity Trade Statistics Database

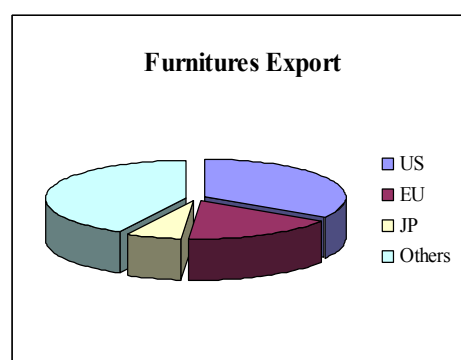


Figure 2. 8 Countries/Regions of Export of Wood Furniture

Source of data: General Administration of Customs of the People’s Republic of China

Plywood exports

Figure 3.5 depicts the rapid growth of China's plywood export in 2007, and then a sharp decline in 2008 and 2009 due to the financial crisis and shrinking international market demand, until the resumption of rapid growth later. The countries importing plywood from China are widely distributed but the United States, European Union and Japan are the most important markets for China's plywood exports. Of the total export value of plywood in 2012, the United States, European Union, and Japan shared 21.3 per cent, 18.7 per cent, and 7.8 percent, of which the total share was up to 47.8 per cent, as shown in figure 2.12.

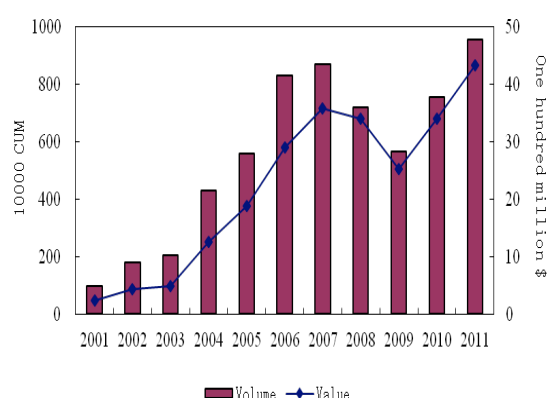


Figure 2. 9 Export of Plywood in 2001-2011
Source of data: United Nations Commodity Trade Statistics Database

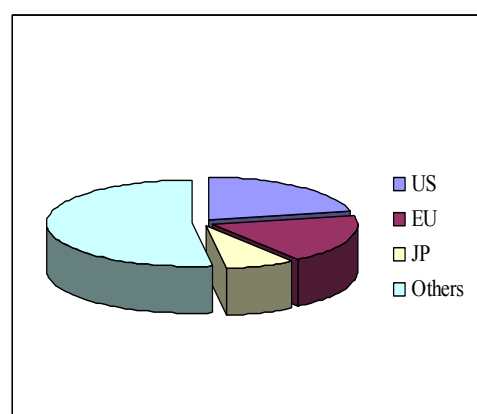


Figure 2. 10 Countries/Regions of Export of Plywood
Source of data: General Administration of Customs of the People's Republic of China

2.2.5 Position of China's wood products in the global market

At present, global forest products processing and trade is mainly concentrated in Asia-Pacific, North America and Europe. Seen from the value of trade, the main forest products processing bases include the United States, Canada, China, Russia, Germany, Japan, and the Nordic countries. The processing and manufacturing of timber products from imported raw materials in China started only recently but achieved rapid growth especially in the past ten years. China has become the world's largest log importer and lumber importer, and the largest exporter of wood-based panels and furniture (FAO, 2011; ITTO, 2011). The production, import and export volumes of logs, lumber, and wood-based panels enjoy substantial shares on the international market, as shown in Table 2.4. In the year 2010, the export value of wood furniture of China was 16.3 billion US dollars, and accounted for 30 per cent of the world's total traded amount.

Table 2. 5 Share of China's Timber Products, in 2011

		Rand	Volume (10,000m ³)	Share of the World's Total (%)
Output	Logs	5	10303.5	6.5
	Lumber	2	4503.5	11.1
	Wood-based Panel	1	11053.5	38.4

Import	Logs	1	4330.6	35.0
	Lumber	1	2311.9	20.0
	Wood-based Panel	4	297.2	4.2
Export	Wood-based Panel	1	1277.9	18.1
Consumption	Logs	2	14622.3	9.2
	Lumber	2	6731.8	16.7
	Wood-based Panel	1	10072.8	35.0

Source of data: *FAO Yearbook of Forest Products 2011*

According to *FAO Forest Products Yearbook 2011*, the yearly global round wood production were around 3.5billion cubic meters from 2006~2011. Among them industry round wood production were between 1.4~1.6 billion cubic meters per year. The global industry round wood import amount are between 0.11~0.13billion cubic meters every year.

Chinese import of round wood account for 1.2% to the total production of world's round wood production.

Table 2. 5 Share of China's Round wood Import in Global Round wood Products, in 2011

	1000 CUM	share
Global Round wood production	3469379	100%
Global Industrial Round wood Production	1577974	45%
Global Industrial round wood import	123692	3.6%
China Industrial round wood import	43306	1.2%

Source of data: *FAO Yearbook of Forest Products 2011*

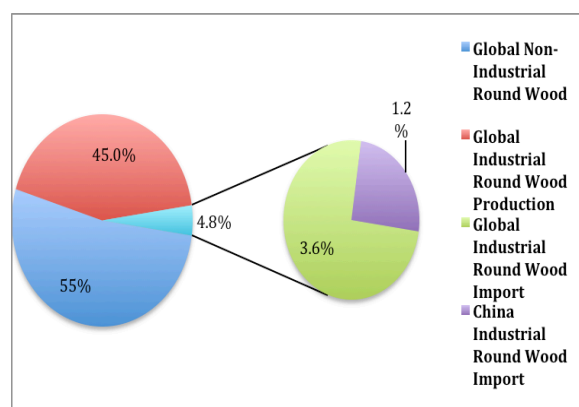


Figure 2.13 Global Round Wood Production and Import
Source of data: *FAO Forest Products Yearbook 2011*

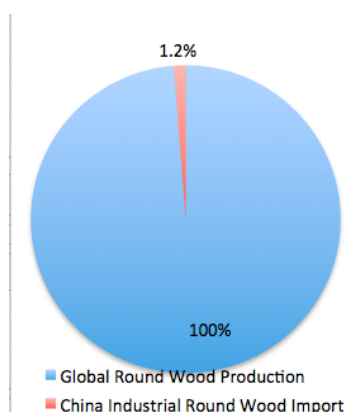


Figure 2. 14 Share of Chinese Round wood Import in the world
Source of data: *FAO Forest Products Yearbook 2011*

Table 2. 6 Share of China's Sawnwood Import in Global Sawnwood Products, in 2011

	1000 CUM	share
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Global Sawnwood production	406187	100%
Global sawnwood import	115858	28.5%
China sawnwood import	23119	5.7%

Source of data: *FAO Yearbook of Forest Products 2011*

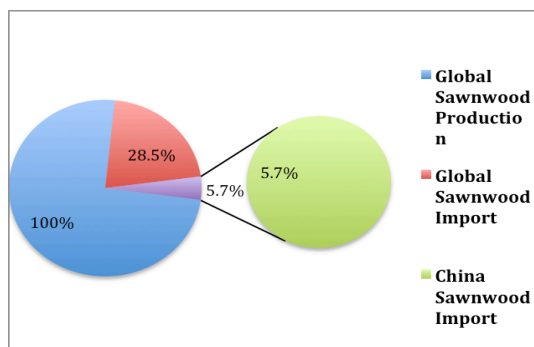


Figure 2.15 Global Swanwood Production and Import

Source of data:FAO Forest Products Yearbook2011

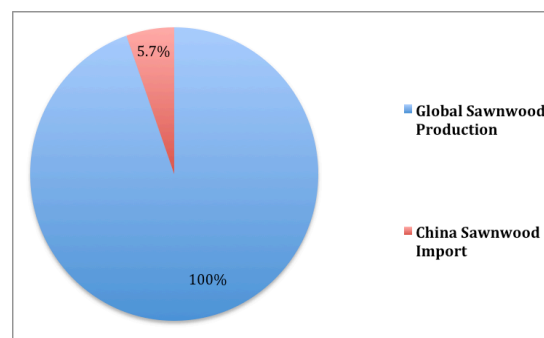


Figure 2.16 Share of Chinese Swanwood Import in the world

Source of data: FAO Forest Products Yearbook2011

Global Swawnwood production from 2006~2011 were between 0.36~0.44billion cubic meters, Chinese import in 2011 was 23 million cubic meters account for 5.7%of total global swanwood production.

2.2.6 Dominance of SMFEs in wood product exports

It can be determined from Customs data for 2012 that for most enterprises' their monthly export values are less than 0.2 million US dollars.

From the Customs statistic of December 2012 hardwood solid wood flooring, bedroom wooden furniture and solid wood door sectors, for example, SMFEs comprised a high proportion of the 150 total enterprises. Enterprises with monthly exports of less than 0.2 million US dollars accounted for a 75 percent proportion of all enterprises; those whose exports ranged from 0.2 – 0.5 million US dollars account for 23 per cent while those exporting from 0.5 – 1 million US dollars were only a 3 per cent proportion. There were no enterprises with monthly exports higher than 1 million US dollars (see figure 2.17).

When examining enterprises exporting wooden bedroom furniture, of which the total number was 1,677, those with monthly exports of less than 0.2 million US dollars were 83 per cent, those ranging from 0.2 – 0.5 million were 11 per cent, those ranging from 0.5 – 1 million were 4 per cent and those with higher than 1 million US dollars monthly were 2 per cent (see figure 2.18). Of the enterprises exporting wooden floors, 92 per cent had monthly exports less than 0.2 million US dollars and all had exports lower than 0.5 million.

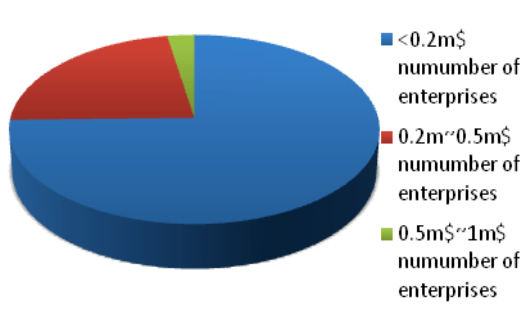


Figure 2. 17 SMFEs Share of Enterprises with Solid Wood Flooring Exports

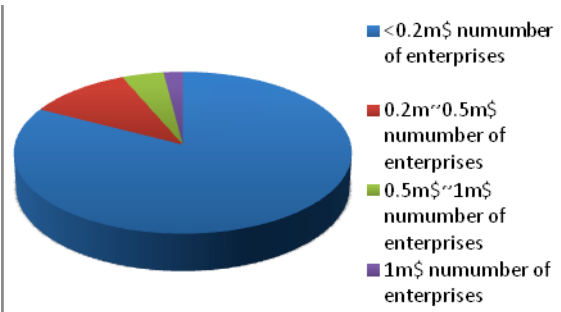


Figure 2. 18 SMFEs Share of Enterprises with Bedroom Wooden Furniture Exports

3. Methodology

3.1 Definition of Small and Medium-Sized Forestry Enterprises

In China, the small and medium-sized enterprises (SMEs) have been an important driving force for the national economy (Chen Changzhi, 2011). China's total number of SMEs in all sectors in 2010 exceeded 0.1 billion, accounting for 99 per cent of the national total number and 60 per cent in terms of the total value of their final outputs or services. The total tax paid by SMEs account for almost half of the national tax revenue. The SMEs provide more than 75 per cent of urban jobs for China.

A uniform definition of the scale of small and medium-sized forestry enterprises has not been reached in studies across various countries. All the definitions are based on number of employees, sales revenue, and total assets, and then categorize SMFEs into large, medium, and small scales. Practically, different definitions apply to different cases (Kozak, Robert, 2007).

For example, Macqueen (2008) defined SMFE as “an enterprise whose business purpose is to obtain profits through forest-related activities, having full-time employees of 10-100 or annual sales ranging from US 10,000 – 30 million dollars, and annually consuming logs of 3,000 – 20,000 cubic metres”. Spantigati and Springfors (2005) provided a more general definition, as “a forest-based enterprise which is mainly individual or family managed, and usually employing family members or relatives and neighbours with trivial wages”. In addition, the State Forestry Administration categorized forestry enterprises into large, medium, and small sized forestry enterprises according to levels of fixed assets (State Forestry Administration of China, 2000), as shown in table 3.1.

Table 3.1 Scales of Forest Product Processing Enterprises, by Fixed Assets(Unit: 10,000 yuan)

Industry	Large		Medium		Small
	I	II	I	II	
Timber harvesting	≥15,000	6,000-15,000	4,500-6,000	3,000-4,500	≤3,000
Timber processing and timber products	≥10,000	5,000-10,000	3,500-5,000	2,000-3,500	≤2,000

Note: An ultra-large sized forestry enterprise refers to enterprise with fixed asset value no less than 0.6 billion yuan.

Source of data: Sun, and Chen (2003).

Compared to the definition given by Spantigat and Springfors, Macqueen provided uses of specific indicators such as number of employees and sales revenue, thus the definition is more operable.

Due to different background from other countries, the State Economic and Trade Commission, the State Planning Commission, the Ministry of Finance, and the National Bureau of Statistics of China have revised and defined SMEs according to number of employees, sales revenue, and asset scale, which is also of great practicability (State Economic and Trade Commission of China, 2003).

According to such criteria, SMFEs are defined as a particular type of SME in forestry areas, with either employees less than 2,000, or annual sales revenue less than 0.3 billion yuan, or total asset value less than 0.4 billion yuan, as shown in table 3.2.

Table 3. 1 Scales of Enterprises by Sales Revenue and Number of Employees

	Large	Medium	Small
Number of Employees	≥2000	300~2000	≤300
Annual sales revenue (10,000 yuan)	≥30000	3000~30000	≤3000
Total asset value (10,000 yuan)	≥40000	4000~40000	≤4000

Source of data: State Economic and Trade Commission of China, 2003.

3.2 Number and distribution of small and medium-sized forestry enterprises

The forest products processing enterprises in China are large in number and widely distributed. The relatively concentrated areas with forest products processing enterprises include the following: Northeast China and the processing region along the Russia border, the Yangtze River Delta region, the coastal areas of Guangdong and Fujian, the Beijing-Tianjin Bohai Sea region, etc. the number of different sector and the distribution are showing in table 3.3.

Table 3. 2 Number and Distribution of wood products Manufacturers in China

	Number	Distribution
Wood-based panel	20000	Linyi of Shandong, Pizhou of Jiangsu, Wen'an of Hebei, Jiashan of Zhejiang
Wood floor	2000	The Pearl River Delta region, the Yangtze River Delta region, the Bohai-Sea region, Northeast China
Wood door	10000	The Pearl River Delta region, the Yangtze River Delta region, the Bohai-Sea region, Northeast China, Northwest China, Southwest China
Wooden furnitures	Around 80000	Guangdong, East China, North China and the Bohai-Sea region, Northeast China, Sichuan, Shaanxi

Source of data: Qian xiaoyu, 2013

In China the national statistics usually account for enterprises with turnover higher than 5 million yuan, but a considerable number of forest product processing enterprises are registered as individual and private, and with turnover less than 5 million yuan. Moreover, there are many family workshops which are not registered formally and are usually processing seasonally. Therefore, the statistics about the SMFEs in China are usually inaccurate.

The forest product processing industry is labor intensive and resource dependent, with low technical and financial barrier for entry compared to other manufacturing industries. Of their total output value, cost of raw materials and labor accounts for a dominant proportion. Thus, among all the forestry enterprises in China, SMFEs enjoy a ratio not lower than general manufacturing industries, i.e., 99 per cent. It can be inferred the number of SMFEs in China, as shown in table 3.4.

Table 3. 3 Number and Distribution of the SMFEs in China

	Number	Distribution
Wood-based panel	≥ 19900	Linyi of Shandong, Pizhou of Jiangsu, Wen'an of Hebei, Jiashan of Zhejiang
Wood floor	≥ 1990	The Pearl River Delta region, the Yangtze River Delta region, the Bohai-Sea region, Northeast China
Wood door	≥ 9900	The Pearl River Delta region, the Yangtze River Delta region, the Bohai-Sea region, Northeast China, Northwest China, Southwest China
Wooden furnitures	≥ 79600	Guangdong, East China, North China and the Bohai-Sea region, Northeast China, Sichuan, Shaanxi

3.3 Characteristics of the SMFEs in China

3.3.1 Dominated by Private Enterprises

The forest product processing industry is dominated by the private sector with a very limited involvement of state-owned enterprises. According to the FAO report “A study on the status of the small and medium-sized forestry enterprises in China” (2009), reported that the forest product processing enterprises in Yong’an of Fujian in 2008 and Anji, Nanxun and Jiashan of Zhejiang in 2009 (the project area for the current project) totaled 166 out of which 123 in Yong’an were privately owned (74 per cent); 36 were limited liability companies (22 per cent); 4 were collectively owned (2.4 per cent); 1 was owned by Taiwanese, 1 was foreign-funded and 1 was listed company, none of the enterprises were state-owned.

All the 44 enterprises surveyed for this project are privately owned, of which 48 per cent were limited liability companies, 23 per cent were individually managed, 16 per cent were of sole proprietorship, 11 per cent were companies limited by shares, and 1 Japan-funded company, as shown in figure 3.1.

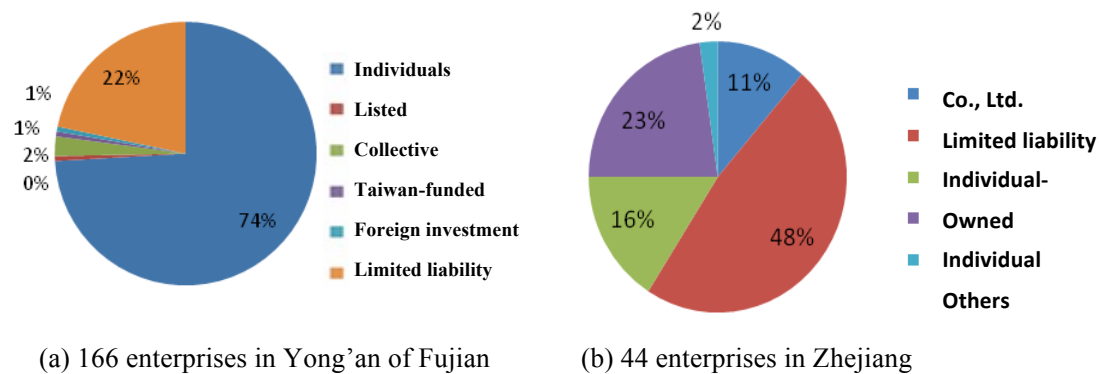


Figure 3.1 Nature of Forestry Enterprises in Yong’an of Fujian and Zhejiang

All the 133 forest product processing enterprises surveyed in the Yangtze River Delta region (i.e., 72 in Jiangsu and 61 in Nanxun of Zhejiang) were privately managed. No state-owned enterprises were surveyed.

3.3.2 Relatively small scale operations

In accordance with the criteria of the National Development and Reform Commission and the State Forestry Administration, small and medium-sized enterprises refer to those with either less than 2,000 employees or with an annual turnover less than 0.3 billion yuan, or with total asset valued at less than 0.4 billion yuan.

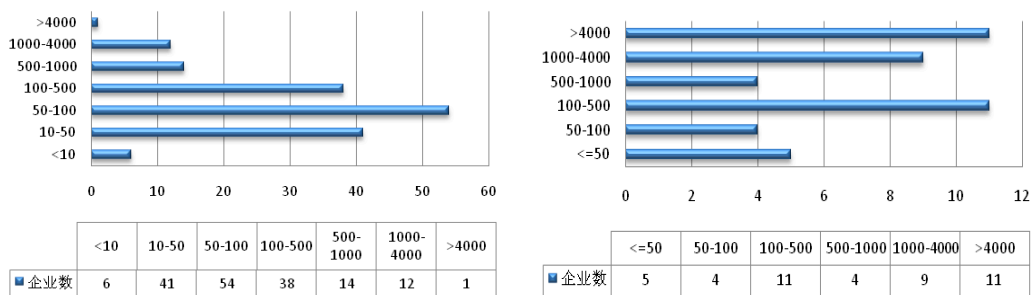
Among the forest product processing enterprises, scale of operation are quite different according to different products. In general, enterprises producing laminate flooring, fiberboard, and flakeboard are of a larger size due to higher investment requirements and technical economies of scale.

In the current survey such enterprises were mainly located in Jiangsu province. In contrast, enterprises producing plywood, lumber and solid wood flooring are of a smaller size in terms of scale of production, number of employees, and sales revenue. Such an enterprise requires lower levels of investment and there are few barriers to enter the sector. In these sectors the cost of raw materials and labor are a dominant

proportion of production costs. This is due to relatively simpler equipment, lower investment, and lower technology. In this survey such enterprises were mainly distributed in Zhejiang province.

(1) Total asset value

Of all the 166 forest product processing enterprises registered in Yong'an of Fujian in 2008, there were 101 enterprises with total asset value less than 1 million yuan accounting for 60.8 per cent of the total, while 139 enterprises had total assets valued at less than 5 million yuan accounting for 83.7 per cent of the total. There is only 1 enterprise with assets of 40 million yuan. Of the 44 enterprises surveyed in Zhejiang in 2009, 20 enterprises had an asset value no higher than 5 million yuan, which accounted for 45.5 per cent. There are 11 enterprises with total asset values exceeding 40 million yuan, as shown in Figure 3.2.



(a) 166 enterprises in Yong'an of Fujian

(b) 44 enterprises in Zhejiang

Figure 3.2 Asset Value of the Surveyed Enterprises in Yong'an of Fujian and Zhejiang

(2) Output value

Figure 3.3 shows the output value of the 133 forest product processing enterprises surveyed in Jiangsu and Zhejiang. Of the 72 surveyed enterprises in Jiangsu, 54 were with output value of less than 100 million yuan and accounted for 75 per cent of the total, 18 were with output value higher than 100 million yuan accounting for the balance 25 per cent. Twenty five of the enterprises out of the 72 were laminate flooring producers which are generally of a larger scale of operation.

Of the 61 surveyed enterprises in Zhejiang, only 47 responded with regard to their output value. The enterprises with output value less than 100 million yuan totaled 37 and accounted for 79 per cent, while those with higher than 100 million yuan totaled 10 and accounted for 21 per cent.

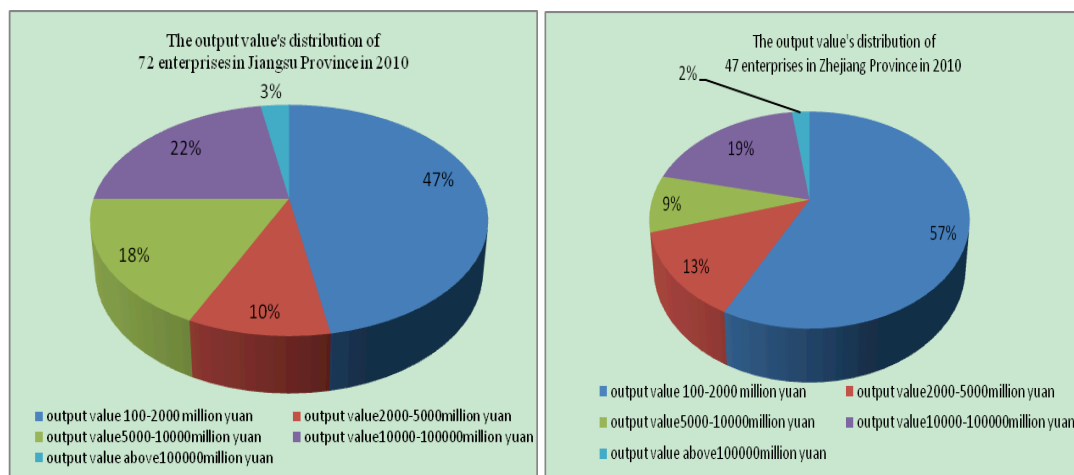


Figure 3.3 Distribution of Surveyed Enterprises by Output Value

(2) Number of employees

Of all the 133 surveyed enterprises in Jiangsu and Zhejiang, the number of enterprises with less than 300 employees was 122, (92 per cent). Among them, those with less than 100 employees totaled 50 accounting (38 per cent). The number of enterprises with more than 300 employees was 11, 8 per cent of total surveyed enterprises. No enterprise that had more than 2,000 employees.

Thus, in accordance with the definition on SMFEs given by the National Development and Reform Commission of China, all the surveyed enterprises are classified as SMEs

3.4 Investigation and Research Methods

3.4.1 Data sources

The report has sourced data from the following channels:

- Trade data are from the Chinese General Customs Administration and from US Statistic Bureau

- Data related to SMFEs situations are from questionnaires survey.

Questionnaires survey has been conducted by specialists and survey teams in different locations and support from Forestry Officials or associations in the region, including consultants based in Changzhou, Hengdian, Suqian, Zhangjiagang Jiangsu province, Nanxun, Jiuguan Zhejiang province, and Shanghai.

3.4.2 Phases of questionnaires survey

Questionnaires survey has been separated into three phases:

- Trial run of survey questionnaire with the international consultant and team members.
- Mail survey with questionnaire was helped by the SFA statistic vision.
- Face to face survey with SMFEs and the upstream suppliers and stakeholders.

3.4.3 Interviews and meetings with stakerholders

- Interviews with two pilot SMFEs' General Managers.

- Interviews with auditor used to work for rainforest FM and CoC.
- Interviews with upstream suppliers located in Shanghai and Zhangjiagang port.
- Meetings to discussions with different Associations from Shanghai Timber Associations, Chinese Forestry Industry Association, Guangdong Timber Associations.

3.4.4 Compiling the report and stakeholders research

In compiling the report, the consultants have utilized past project work in the project region and discussions with forest and Timber Industry Associations, officials from State Forestry Administrations of China, officials from local forest bureau, associations in local and participants

In the stakeholders research, we examined the supply chain for upstream suppliers of veneer, timbers suppliers, the timber market and port administration.

4. Results

Currently the global financial crisis has not completely receded, the recovery of the US economy has been slow, and the EU economy has still been unstable, thus the small and medium-sized forestry enterprises in China are facing unprecedentedly multiple challenges. Hence the Lacey Act of the United States and the European Union Timber Regulation has exerted heavier pressure on SMFEs in China, which have been struggling to survive in the fiercely competitive markets. In this section we attempt to elaborate on the confusions facing the SMFEs in China in response to the international regulations on timber procurement, based on our survey.

4.1 Basic information on surveyed enterprises

(1) Types of products

Table 4.1 lists number of employees, main products and market orientation of the surveyed forest product processing enterprises. Their main products included trade in tropical wood, tropical logs and tropical lumber plus manufacture of plywood, wood flooring, furniture and other products. Their raw materials were from almost all tropical timber supply regions, for example, the logs used were mainly tropical timber from Southeast Asia and partly tropical timber from Africa and South America.

Table 4. 1 Basic Information on Survey Enterprises

	Pizhou	Changzhou	Changshu and Zhangjiagang	Nanxun and Jiuguan	Shanghai
Number Of enterprises	27	27	22	66	8
Number of employees	30-40	110-120	40-50	15-700	
Main products	Plywood Wood , veneer	Laminated Flooring	Furniture, logs, tropical timber trading	Solid wood flooring	Tropical timber , veneer trading

Note: The survey results of this project.

(2) Use of tropical timber in processing enterprises

According to the survey the 133 enterprises utilized tropical timber logs in 2010 worth 570.19 million yuan and purchased 257,000 cubic meters; the procurement value of tropical timber board was 515 million yuan, of which plywood was 103.78 million yuan ; the procurement value of tropical veneer was 93.5 million yuan; the procurement value of furniture components was 20.1 million yuan; and that of particleboard, fiberboard, bamboo materials did not exceed 5 million yuan.

A total of 49 of the surveyed enterprises used tropical logs in 2010. Among them, 15 enterprises had an annual log procurement value of no more than 5 million yuan, accounting for 31 per cent of the total and on average their monthly procurement of logs was valued at 238,000 yuan for each enterprise; 18 enterprises had annual log procurement values ranging from 5 to 10 million yuan and their average monthly procurement value of 623,000 yuan; 9 enterprises had annual log procurement value between 10-20 million yuan; 7 enterprises had annual log procurement value greater than 20 million.

It is worth noting that the 7 enterprises whose annual log procurement was greater than 20 million yuan were wood flooring manufacturers and of larger scale. Their average monthly log procurement was around 3.1 million yuan.

A total of 18 enterprises used tropical board materials, with annual value of procurement ranging from 1.7 to 290.1 million yuan. Among them, 11 had annual procurement value less than 10 million yuan, accounting for 61 per cent of the total; 4

had annual procurement larger than 20 million yuan, of which 3 were with annual procurement less than 50 million yuan.

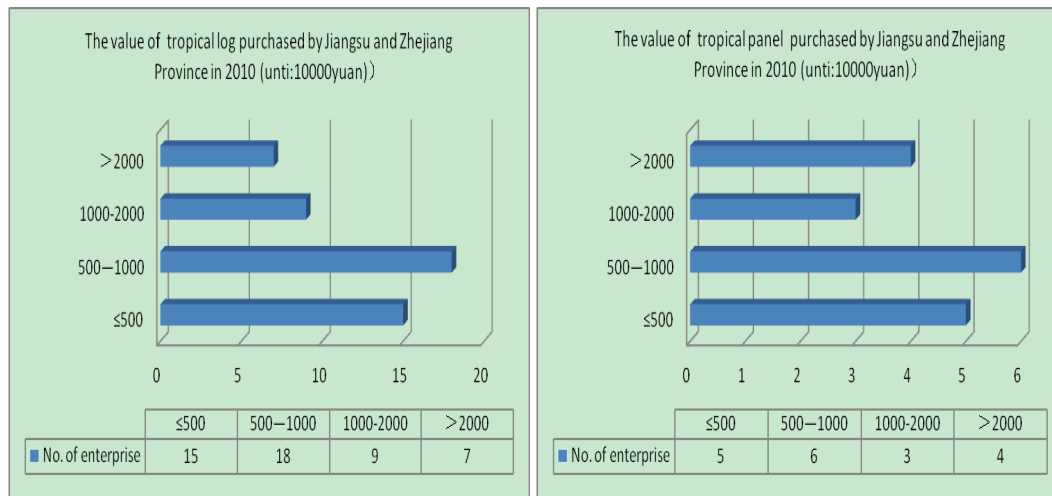


Figure 4. 1 Value of Procurement on Tropical Timber in 2010 of the Surveyed Enterprises

(3) Ratio of domestic and export sales

The products of enterprises in Pizhou city were mainly sold in the domestic market, accounting for about 90 per cent of the total products. In Changzhou city, more products were sold in international markets with exports accounting for about 60 per cent. Some 95 per cent of the products in Changshu were sold domestically. In Nanxun export sales accounted for 18 per cent (i.e., there were merely 3 enterprises selling their products abroad) and accounted for 4.9 per cent; there were 8 enterprises selling their products in both the domestic and export markets and accounted 13.1 per cent), while sales in domestic markets accounted for 82 per cent.

Nanxun is known as the “City of Solid Wood Flooring in China”, and mainly processes solid wood floor using tropical timber (see table 4.1). The main export markets included the United States, Canada, the European Union and Russian.

4.2 Knowledge and understanding of the international legality regulations

(1) Percentage of the enterprises having heard about the US Lacey Act and the EU Timber Regulation

Of the surveyed enterprises, only 28 per cent reported that they had heard of either the Lacey Act or the European Union Timber Regulation (see graphic below). These enterprises purchase timber raw materials from local timber markets and do not import themselves. Buying from the local timber market means they are several steps down the supply chain (maybe 2-3 steps from the original importer). As the timber is purchased in a domestic timber market the issue of legality does not arise in the mind of the purchasing enterprise.

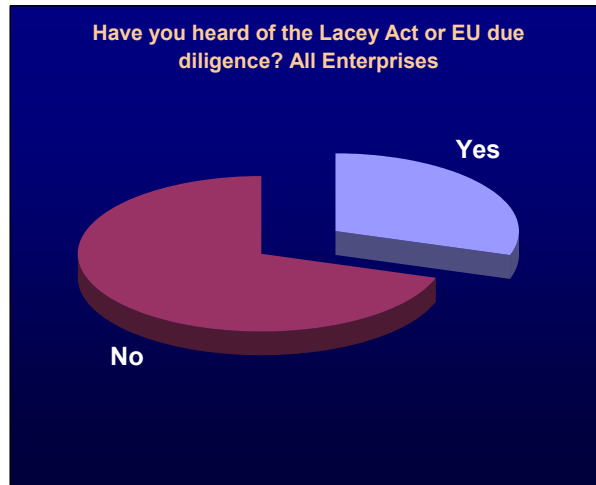


Figure 4. 2 Have you heard of the Lacey Act or EU due diligence?

The survey results show a larger proportion (i.e., 52 per cent) of the forest product enterprises in Henglin township of Changzhou, Jiangsu had heard about at least one regulation of the new international regulations (see Table 4.2).

Pizhou is located in northern Jiangsu and it is difficult to collect information in this area and information from outside does not circulate smoothly. Enterprises in this area had little knowledge of the international regulations on timber and only 1 per cent of respondents had heard about them.

In Changshu of Jiangsu, production is oriented to the domestic market so no enterprise had heard about any international regulation on timber.

In Nanxun of Zhejiang, 24 out of the 61 surveyed enterprises had heard about the US Lacey Act and the EU Timber Regulation (i.e., 39 per cent).

In Zhangjiagang of Jiangsu and Shanghai, the surveyed enterprises were mainly engaged in processing tropical timber trade for the domestic market and they had not heard about either the US Lacey Act or the EU Timber Regulation.

Table 4. 2 Number of Enterprises Holding Procurement Contracts or Having Heard about International Timber Regulations

Region	Holding PC (only)	Having heard about TR (only)	Both	None
Pizhou	9	1	1	16
Changzhou	11	13	1	2
Changshu and Zhangjiagang	15	0	0	4
Nanxun	22	24	0	15

Note: The survey results of this project

As a result of the surveys in Pizhou, Changzhou, Changshu and Zhangjiagang, Nanxun and Shanghai it can be speculated that, in addition to a small number of larger-sized enterprises, the majority of surveyed enterprises are SMFEs and are engaged in the processing of tropical timber. Those enterprises whose production is oriented for domestic sales had very limited knowledge of the US Lacey Act and the EU Timber Regulation.

(2) foreign importers' request proof of legitimacy

In response to the question “are overseas buyers requesting proof of legality”, the response rate was rather low. The response number from flooring manufacturers was around 60 but only less than 10 indicated that buyers were asking for proof of legality. As will be seen in the graphic plywood, furniture manufacturers were not experiencing such requests from buyers.

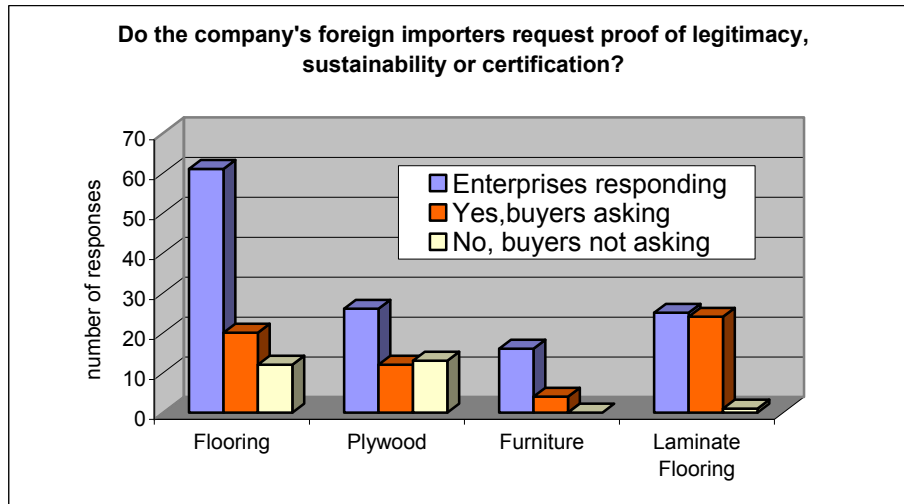


Figure 4. 3 Company’s foreign importers request proof of legitimacy, sustainability or certification

4.3 Enterprises training on sustainable forest management

Some 66.2 per cent of the surveyed enterprises indicated that their employees participated in training in a variety of certification systems (e.g., ISO9000, ISO9001, ISO14001, CEC, FSC, CARB, China Environmental Labeling Product Certification and the Measurement Management System Certification).

Thirty per cent indicated that their employees had participated in training for legality/legitimacy (including legal/legitimate operation and management).

A mere 6.2 per cent reported having their employees participate in training for sustainable forest management, as shown in figure 4.4.

The survey responses show that small size enterprises generally neglect training of workers. The reason cited by enterprise management was that training would increase costs and reduce profit margins. Most of the enterprises stating this were primitively equipped, of low technology and the level of output had stagnated for a long time.



Figure 4. 4 Employees have received training

4.4 SMFEs knowledge of sources of timber

Forest products processing enterprises mainly procure raw materials from timber markets (about 75 per cent are through such purchases). At present the timber markets in China can be divided into three categories: the primary market, the secondary market and the tertiary market, of which the primary and secondary markets are principally engaged in wholesale and the tertiary market is dominated by retails(Huyanjie,2008).

- The Primary market, also known as ‘timber market at origin’ is for imported timber. The primary timber market the first sales point after timber has entered the country. and it is from here that timber is purchased for resale at secondary markets.
- The secondary market refers to center for timber distribution, which is the connection between the timber market at origin and timber market for sales. The secondary market is an important link for the comprehensive utilization of timber.
- The tertiary market refers to timber market for sales. These markets are mainly located in or close to large centers for timber distribution or in large and medium-sized timber retail markets in cities where timber consumption is high.

In the survey area, the forest products processing enterprises procured timber raw materials from timber markets. The processing enterprises usually negotiate with a trade broker when purchasing imported timber. Enterprises are unaware of issues of legality in respect of tropical timber and consequently do not pay much attention to the legitimacy of timber they purchase assuming it is legal as it would not be on sale in the official markets. Enterprises are only concerned with maintaining production and processing, restocking timber and the fundamentals of securing the best possible price from suppliers and minimizing costs.

The survey results reveal that some SMFEs do not have procurement contracts (see table 4.2). The absence of records of transactions presents special challenges for chain of custody management.

Analysis of the survey results shows that the problems SMFEs face with regard to international timber procurement regulations can be summarized into the following four points: lack of awareness and understanding of the risks to export sales from the US Lacey Act and the EU Timber Regulation, this is because China lack of information channel for SMFEs to learn how to meet the US and EU market needs; lack of management capability and technologies to cope with meeting procurement requirements due to their small size and low profits; lack of experienced staff to deal with procurement and chain of custody management; Third party certificate organizations and auditor which providing services is not more than 10.

The survey results show that few enterprises are aware of the new market requirements and those that were aware do not understand the specific requirements of the US Lacey Act and the EU Timber Regulation making it impossible to for them to seek for measures in concrete to meet such requirements.

SMFEs processing tropical timber often face cash flow problems so allocating resources to response to international timber regulations adds a further burden on already hard-press companies trying to survive.

The cost of complying with the international regulations on timber procurement will cost enterprises much more than the potential extra return so for SMFEs who already face difficult trading conditions complying is seen as likely to make their

situation worse.

In response to the international regulations on timber procurement people with proficient knowledge of foreign trade and English are indispensable. Moreover, as wood products are produced from forest resources and closely related to environmental services, employees of forestry enterprises are thus required to manage forest resources in a sustainable way from the point of view of the ecological and environmental protection, in order to achieve a balance between the economic growth and the environment.

Personnel of specialty and high-quality are able to actively collect information on international markets, have concerns on the information published by the national government or industry, have connections with the actual operations of enterprises, and develop strategic plans for long-term development of their enterprises.

But actually, employees of the small and medium-sized forest products processing enterprises have low level of education and little capacity to cope with the changes required. The enterprises lack of talented and experienced personnel is a major handicap. While not well educated the owners of SMFEs are smart and can manage their operations because they fully understand business and can make good use of available information from within their local timber sector to assess risks and make a profit.

The biggest problem is that when it comes to legality/procurement etc the SMFEs are severely handicapped by:

1. The lack of available information in a form they can understand.
2. The lack of a support mechanism (Associations, Research Institutes etc, and local and national forest authorities) to aid them understand and make a judgment on how the enterprise should respond to legality demands.
3. The services of third party certification organizations and auditors are not readily available in China given the huge numbers of SMFEs. As of March 2013 there were only several private sector companies with no more than 10 (Third party verification organization, interview Deng,Hu,Xiao,Zhao,Wu,2013) which could offer legality verification for the timber sector.

Even the most popular internet search engine in China Baidu it is not possible to discover any information on third party legality verification services.

4.5 Weak capacity to assess risk

The SMFEs are mostly located close to forest areas or the townships or counties that are close to resources or where land rents are relatively low. A large number of the owners of SMFEs are originally from rural areas and their level of education is generally low.

(1) Educational level of owners and employees

Of all the 166 forestry enterprises registered in Yong'an in Fujian in 2008, owners with college level education or higher accounted for only 9.4 per cent, those with education no higher than junior high school accounted for 49 per cent, while those with education no higher than high school accounted for 90.6 per cent. Moreover, 94 per cent, i.e., the majority, of the owners were from Fujian.

In the present survey of 44 forest product processing enterprises in Anji and Jiashan (which are both county level) in Zhejiang revealed that all the owners were from the local county. Among them, 75 per cent had an education no higher than high school level and those with no higher than junior high accounted for 45%.

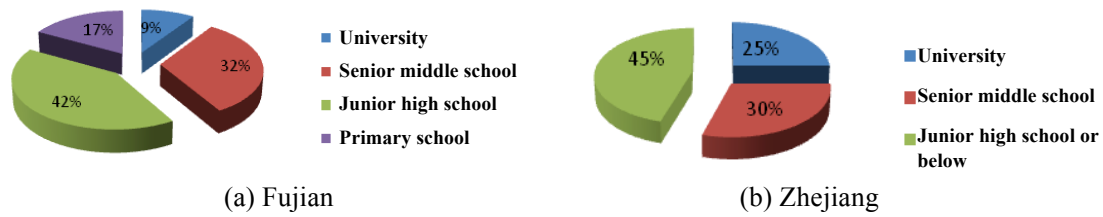


Figure 4. 5 Education Level of Owners of the Surveyed Enterprises in Fujian and Zhejiang

(2) No access to R&D or cooperation with technical institutes

Among the 44 surveyed enterprises in Anji and Jiashan in Zhejiang province in 2009, there were 22 enterprises which were involved in exports. However, almost all of them except for one were originally equipment manufacturers. For a very long time most output from wood product manufacturers, especially the SMEs, were copies of styles and designs already existing in the market, there was virtually no product development or R & D investment.

The survey found that while many enterprises experienced development problems the result of a variety of technical issues only a small proportion of the enterprises considered R&D and /or cooperation with universities or research institutes in order to improve their products and expand market opportunities.

4.6 Entrepreneurs lack and understanding of effective management

Most forest products enterprises are family businesses and the owners are the managers but these managers have little experience and only a basic level of education. While entrepreneurship is sound managers are unable to modernize their companies and have difficulty comprehending the global market issues of today. Family management is the most common model adopted by the majority of the SMFEs and this is a handicap to efficient management.

4.7 Sources of market and technical information

This study conducted surveys questioning the knowledge of SMFEs on information and their access to market and technological information. The results show that, a considerable number of SMFEs, while being aware of the importance of market information and information on new technologies, had very limited access to channels of information.

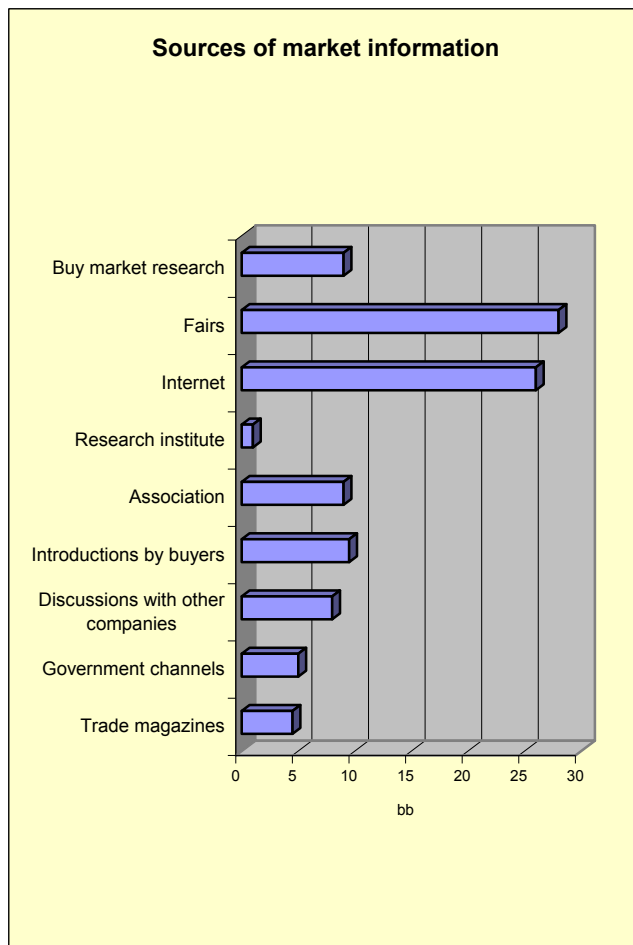


Figure 4. 6 Sources of market information

Of the survey respondents most obtained market information through visiting fairs while the second most common source of market information was from the internet. Of those responding almost 10 per cent secured information through communicating with their buyers and from buying market study reports, 9 per cent reported securing information from associations, 8 per cent mentioned information from other companies and mere 1 per cent identified governmental/institutional channels.

The majority of surveyed SMFEs had admitted to having limited knowledge on how to access government for information sources and they had very limited knowledge of policy development procedures or current policies.

Hardly any SMFE reported using the services of research institutes for information except for two and this demonstrates the almost complete isolation between the tropical timber processing enterprises and the specialized research institutes as well as a huge weakness in the functioning of central and regional government information services.

Of the 133 surveyed enterprises in Jiangsu and Zhejiang, 30 per cent obtained information on the most updated processing technologies via the internet, while 40 per cent identified information from their buyers, other companies, or introductions by sales people. A mere 25 per cent mentioned information from research institutes.

Such results reflect the serious isolation between R&D and application in SMFEs, which means technological developments are slow to reach the SMFEs

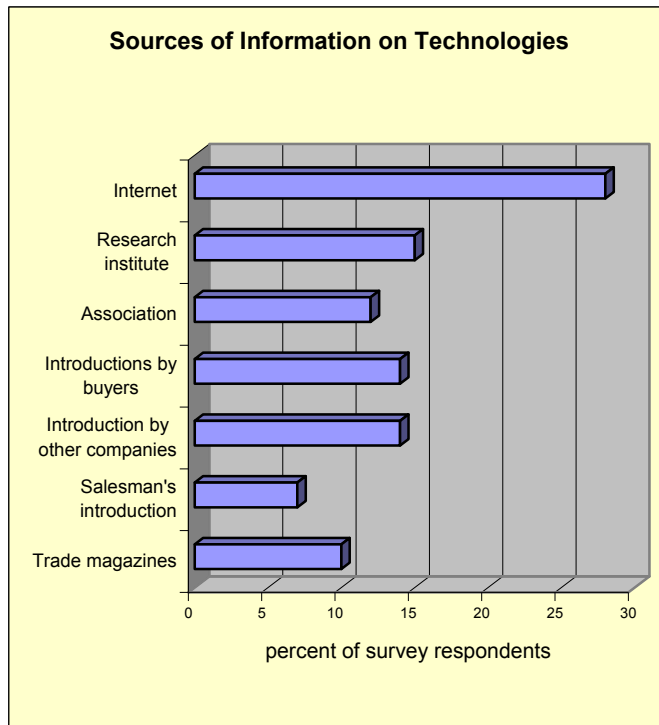


Figure 4. 7 Sources of information on Technologies

4.8 China's SMFEs in Response to the International Regulations on Timber Procurement issues

Currently the global financial crisis has not completely receded, the recovery of the US economy has been slow, and the EU economy has still been unstable, thus the small and medium-sized forestry enterprises in China are facing unprecedented and multiple challenges. The Lacey Act and European Union Timber Regulation is exerted exerting considerable pressure on SMFEs in China which are already struggling to survive in fiercely competitive markets.

This section will elaborate on the responses in the survey of SMFEs to the new international trading requirements on legal timber procurement.

4.8.1 Situation of the Survey Sites

(1) Pizhou of Jiangsu

In Pizhou city we firstly conducted thorough spot checks in Zhancheng township and Guanhu township, finding that the level of production in each town was quite different.

The production conditions in Zhancheng were relatively poor, with mainly small workshops for processing, while the scale of production was larger in Guanhu.

In terms of registered forest processing enterprises in Guanhu in particular, there were 138 enterprises having annual sales income of more than 20 million yuan. The enterprises in Zhancheng were mainly engaged in timber processing and plywood production with limited use of tropical timber, but more poplar and pine-based processing.

The forest product processing enterprises in Guanhu mainly produced furniture,

plywood, and wood flooring. The number of forest products processing enterprises in Guanhu was 1307, of which 800 were veneer producers, 140 were plywood producers, 2 were wood flooring manufacturers, 5 were wood furniture producers, and 360 were producers of other forest products. These enterprises are concentrated in the Guanhu Industrial Park and broadly distributed in Xinhua Village, Shuanggou Village, Huanan village, Zhoujia Village and Dunshang village. According to statistics, the annual production of plywood is around 2.8 million cubic meters.

(2) Changzhou of Jiangsu

Zhenglu township and Henglin township are the two main sites surveyed in Changzhou city. Through discussions with industry respondents it was learned that, the economic output value of all forest products processing enterprises in Changzhou City in 2010 was about 18 billion yuan. The forest products processing enterprises were mainly distributed in Henglin. At the end of 2009, the Henglin flooring cluster had 175 enterprises and 229 service enterprises. The major items produced in Changzhou include solid wood flooring, laminate flooring, and furniture of rosewood.

In Wujin District of Zhenglu township, solid wood flooring was the main output, while in Henglin township laminate flooring was the major product. Henglin of Changzhou has been very effective in brand building and technological innovation. At present in the industrial cluster over 500 companies have their own trademarks.

(3) Changshu of Jiangsu

The forest product processing enterprise in Changshu city are mainly located in Haiyu township, with wooden furniture and wooden doors the main products. In this region, the number of forest products processing enterprises with annual output value exceeding one billion yuan was 50.

The tropical timber processing enterprises in this region were mainly distributed in Haiyu, of which those with larger output value were located in Wangshi, Dongzhang, Xushi, Xieqiao, Fushan, and Zhouhang.

The major raw materials of these enterprises were imported logs, i.e., mainly from Southeast Asia, and African countries. The main countries supplying lumber were Laos and Vietnam. The view was expressed that the use of logs from tropical sources will increase.

(4) Zhangjiagang of Jiangsu

The Zhangjiagang Port in Jiangsu province has been the port of entry for tropical timber in recent years with the largest shipping amount of timber. Mainly tropical logs have been imported along with a small amount of lumber.

Now Zhangjiagang has become the country's largest distribution center for imported tropical logs, with an annual turnover volume more than 2 million cubic meters. The main countries of origin of the imported tropical timber are Malaysia, Gabon, and Papua New Guinea. These imported tropical timbers are used for the production of veneer, furniture, wood flooring and decoration materials were mainly distributed to provinces and cities in East China. The volume distributed to Shanghai, Zhejiang, Linyi of Shandong, and Northern Jiangsu accounted for more than 85 per cent of the total imports. The rest, i.e., 15 per cent of imports, were distributed to other provinces in southern China(Huyanjie,2008).

(5) Nanxun of Zhejiang

Nanxun has developed its industrial clusters with regional characteristics, e.g., furniture, plywood, flooring, decorative wood moulding and other types of wood products processing enterprises which total around 2,000.

In Nanxun four leading industries have initially been formed; furniture manufacturing, solid wood flooring manufacturing, plywood manufacturing and

decorative wood mouldings processing.

Of these 400 enterprises were wood flooring manufactures, with total sales volume of nearly 140 million square meters and sales revenue of 19 billion yuan.

The timber market in Nanxun is well developed having nine specialized markets with turnover of more than 100 million yuan each. The Nanxun building materials market, whose main products are wood flooring, had annual turnover around 8 billion yuan and was regarded as the largest building materials market in East China.

Currently wood flooring production in the entire region includes solid wood flooring, composite wood flooring, and laminate flooring with a total output accounting for about 35 per cent of the country's total.

The production of solid wood flooring accounted for over 60 per cent of that of China. The three products have been distributed to 31 provinces (and autonomous regions and municipalities). Basically the image of "Look in Zhejiang for Chinese Flooring, and Look in Nanxun for Flooring of Zhejiang" has been created in the flooring sector.

(6) The Furen Market of Shanghai

Shanghai is the largest distribution center for timber imports and exports in China. The Furen Market (Group) of Shanghai, CO., Ltd. Owns five branches including the Furen (International) Center for Timber Trade and the Furen Distribution Center for Forest Products at Taicang Port.

The group occupies a total area of 800 acres, with an operating area of 280,000 square meters. The Furen Center for Timber Trade covers an area of 500 acres with a total operating area of more than 200,000 square meters and stocks around 300 types of high value lumber, veneer, flooring raw materials from nearly 100 countries and over services 500 enterprises. The so called 'valuable timber trade zone' covers an area of 20,000 square meters with about 100 trade enterprises; the timber board zone covers an area of 50,000 square meters with around 150 trade enterprises and was regarded as the largest wholesale center for furniture and decorative board materials in East China; the wood zone covered an area of 40,000 square meters with more than 100 trade enterprises and was regarded as the largest specialized market for luxurious wood pieces in East China.

The Furen flooring materials distribution center operates on an area of over 50,000 square meters with more than 160 trade enterprises and was known as the largest specialized market for wood flooring materials. The Furen Distribution Center for Forest Products at Taicang Port covered an area of 100 acres, with an operating area of 30,000 square meters and has been built as a specialized wholesale market for timber with sales, exhibition, transport logistics, processing and information all-in-one

4.8.2 Result of interviews with a tropical wood veneer traders operating in the Furen Timber Market in Shanghai:

The trader is one of the oldest trading companies in Shanghai, whose main products are tropical wood veneer from timber from Bolivia, Gabon, Ghana, Germany, Italy, France, Spain and other countries. Ninety per cent of the company's products are used for interior decoration and furniture.

The company generally has 30 suppliers, including longterm suppliers totaling 7-8 and accounting for 70 to 80 per cent of its total supply.

It has downstream buyers of 100 to 200, with about 30 who were long-term and account for 70 - 80 per cent of its sales.

Almost half of its products were sold in the Yangtze River Delta region. 70 per

cent of the company's downstream buyers are processing enterprises.

The following results from the question and answer survey in the Furen market were obtained

Q. Have you ever heard about the US Lacey Act or the EU Timber Regulation?

A. Neither.

Q. What documents are you required to submit to the Customs when you import timber?

A. In accordance with the China Customs, the following documents are required when importing timber: certificate of origin, phytosanitary certificate of imported plants, and harvesting permit. Otherwise entry will be rejected.

Q. Do your buyers generally require you to provide documents showing legality?

A. Domestic enterprises do not require this. If they require this the price of the wood will be higher.

Q. If your downstream enterprises require you to provide third-party verified legitimacy certificate, how would you do?

A. We can provide the relevant documents but if they need we will increase price. If they accept, we can make the deal.

Q. What measures are you going to take in response to the international regulations on timber procurement?

A. If you want to enter the US and EU markets and earn some profits, you have to follow their requirements and provide relevant certificates.

Q. What is your opinion on legality verification?

A. We do not have any problem. To carry out legality verification will inevitably increase costs. But we are not going to bear the costs, but the downstream ones will. Who buys, who should bear the costs.

Q. When facing the impacts brought by the Lacey Act and the EU Timber Regulation, what are you going to do?

A. We have a lot of timber suppliers that we can choose from. If timber from one country is not suitable, we can turn to other suppliers; if timber business is not operable we can transfer to other transactions.

4.8.3 Result of interviews with a trading company of tropical timber in Zhonglian Wood Center of Zhangjiagang:

This company is mainly engaged in the trading of timber coming from Africa and Southeast Asia, of which two thirds come from Africa and the rest from Southeast Asia. The products are mainly sawnwood of 50-60 tropical species.

Q. Have you ever heard about the US Lacey Act or the EU Timber Regulation?

A. I heard about the US Lacey Act, but not clear about its details. I have never heard

about the EU Timber Regulation.

Q. What impact do you feel that the international regulations will have on the industry?

A. I believe that it is the enterprises that are facing the US and EU regulations and need to take measures in response.

It is the finished products that are exported. For some exporters, they are not directly exporting, but work through a foreign trading company who has connections with domestic exporters.

The EU and US importers should explain their requirements precisely to the Chinese exporting enterprises (its suppliers) in order for the Chinese enterprises to know what to do.

Taking imported American timber as an example, Chinese enterprises process such timber into furniture and then export products to markets in the United States. Thus, as the raw materials are from the United States, the timber suppliers in the United States should provide certificates to the Chinese dealers. And what certificates are needed should be addressed by the purchaser of final products of the United States.

There are a large number of timber suppliers to China. Importers require suppliers to provide proof of legitimacy otherwise they will change suppliers. China as an international supplier to the international market does not want to lose either side.

Foreign suppliers are more concerned with these issues and they usually turn to their own governments for assistance. However, for some African and Southeast Asian countries, their government departments and management systems are not perfect. Hence, even if their enterprises require help it is difficult to meet their needs.

Q. What measures do you believe that your company should take in response to the international regulations on timber procurement?

A. At this moment, there seems to be no practical effect on the company. So we have not conducted any specifically in-depth responses for the regulations.

In general, for beech and European timbers the documents are complete, with certificate of origin, quarantine certificates, and so on. According to China's laws and regulations for exported goods the China Customs laws are strictly enforced.

Indonesian logs can not be exported to China and the China Customs has a list for Indonesia logs that they will not accept. Because of the strict application of the law by China Customs if an enterprise faces the risk of having imported goods seized by Customs then the company will give up on risky suppliers that are not able to provide a certificate and instead, turn to other countries which can provide relevant certificates.

Based on the above interviews, the following can be summarized:

1. The related laws and regulations, as well as the legal documents required By China Customs for imported timber are not consistent with the requirements by the US Lacey Act or the EU Timber Regulation;
2. The legal documents required by the China Customs are not consistent with the procedures for third-party verification;
3. Most overseas timber suppliers are willing and prepared and submit the legitimacy documents according to purchaser's requirements;

4. Downstream purchasers need to bear the costs stemming from legitimacy verification;
5. In the case of timber, suppliers being unable to provide legitimacy documents due to the management system of their own countries the importer have the option to give up on the uncertified timber and turn to other timber supplying countries or regions.

5. Discussion and Conclusions

5.1 Challenges Facing the SMFEs in China

The SMFEs in China face many challenges and these are outlined below.

5.1.1 China's rapid economic growth has created a favorable macro environment

The relaxed and stable macroeconomic environment in China is seen as an assurance for the development of small and medium-sized enterprises. Benefiting from the steady progress of the Chinese macro economy, the average annual growth of

GDP in China has been maintained at the rate of 10.7 per cent since 2003. China's economy is ranked second globally and stable and rapid economic development has been achieved. Industrialization and urbanization impelled by the economic development, in association with the policies to expand domestic consumption, have provided a broad basis for the development of small and medium-sized enterprises. China's socialist market economy has been constantly improved with gradually perfected support policies providing the SMEs with a favorable environment for development. The deepened development of economic globalization, fast changing technological advances and rapid adjustment of the world's industrial structure have provided SMEs with good opportunities for development in an open economy.

To establish a comprehensive public finance system the Chinese government continued to increase efforts to support small and medium-sized enterprises through improving fiscal policies and other measures. Thus, a SMEs-friendly system of fiscal policies that reduces fees, provides exemptions and provides financial support or public services has been created and is providing a favorable macroeconomic environment for the development of SMEs.

5.1.2 Investment in infrastructure and growth in real estate have led to increasing demand for forest products

The expansion in output of building materials, flooring, plywood and furniture is closely linked to the development of the real estate sector. Real estate development in China has achieved rapid growth since 2003. Although the Chinese government has implemented rigorous measures and regulations to suppress the excessive rise in the price of housing, the overall aim has been oriented to expanding residential construction, and investment in the construction of public-rent housing, economically affordable housing, and housing with limited price.

During the "Eleventh Five-Year" period, China started construction of a total number of 16.3 million units of all types of affordable housing. In the "Twelfth Five-Year" period China aims to accelerate the construction of various types of affordable housing, to 36 million units, which is more than twice of that in the "Eleventh Five-Year" period. This initiative will greatly increase the demand for wood products such as flooring and other home furnishing and building materials providing huge opportunities for the development of the forestry industry. Because the demand for affordable housing is strong it will drive the demand of the entire wood products and forestry sectors.

5.1.3 Policy developments

(1) Trade policies

Due to China's reform and opening policies, as well as its accession to the Asia-Pacific Economic Cooperation (APEC) and to the World Trade Organization (WTO),

major changes have occurred in Chinese trade policies over the past 15 years, the most notable of which has been the continuous reductions in trade barriers and tariffs.

For example, for the entry into the WTO, which is requirements of a tariff decrease, China introduced a zero tariff on imported of logs, lumber and pulp, and waste paper in 1999. These changes resulted in significant changes in trade flows. Today, China has become a key component of the industrial chain of the global forestry. The growth of the export market for China's forest products has been driven largely by demand for wooden furniture, plywood and paper (since 1999). This trend is closely related to the guidelines from the Chinese government on encouraging exports of high value-added products. Among all the exported forest products of China, a majority of them are produced by the SMFEs located in the southeast coastal areas. Guided by the favorable export conditions and the international policies on market development, the SMFEs in China are increasingly involved in the global market.

(2) The policy of providing building materials for the countryside

The Central Document No. 1 in 2010 promoted the policy of providing building materials to residents in the countryside to support growth of rural housing and the supply of building materials in order to facilitate the expansion of domestic demand for rural housing. This is to encourage farmers to build their own homes according to related law and regulations. Such a policy provided enterprises producing home furnishing and building materials new markets with enormous potential. According to estimates by the China Building Materials Circulation Association, since the launch of this policy annual consumption of building materials has increased by 100 billion yuan.

The policy of providing building materials for countryside residents will drive large-scale consumption of raw materials and decoration materials and will be conducive to the revitalization of manufacturers of building materials which are vulnerable to unstable export demand and will accelerate the development of SMFEs. It is reported that the Wood Group in Heilongjiang, a major export-oriented enterprise, has extended its product range to meet domestic demand from rural areas in accordance with the guidelines to expand supply to the rural domestic market.

(3) The old-for-new policy for furniture

Since large-scale construction of commercial housing began in China around 2000 there has been keen demand generated by the old-for-new furniture especially bedroom furniture.

The old-for-new furniture policy will be adopted in the automotive and home appliances sectors. At this moment the Ministry of Commerce is actively conducting pilots for local furniture trade. The old-for-new policy is good for the expansion of domestic demand and consumption. Once announced formally, the related policies will provide a huge market opportunity for the forest products industry.

As an example, Beijing officially started an experiment on old-for-new policy for furniture on November 1st, 2012, aiming for a period of one month. In June 2013 the policy will be tried as a second round and expected to be extended to six months.

According to statistics of the Beijing Municipal Commission of Commerce, within 30 days of the start of the pilot trial for the old-for-new policy (November 1st, 2012), the number of pieces of furniture sold by the five furniture enterprises that participated in the pilot exceeded 25,000, with sales revenue reaching 0.15 billion yuan, which accounted for 26.3 per cent of the total sales of the same kind of furniture, and increased monthly sales of furniture in Beijing by 11.9 per cent.

(4) Diversified industrial clusters

After years of development, the Yangtze River Delta region has formed its own industrial cluster of timber processing, with comprehensive support facilities. For example, the industrial clusters in Zhejiang include plywood industries in Jiashan, wood flooring in Nanxun, decorative wood moulding in Dongyang, wooden handicrafts in Huangyan, and wooden toys in Yunhe. In Jiangsu the clusters include plywood in Pizhou and laminate flooring in Henglin township in Changzhou, both of which are known as the largest bases for the production, sales and export of both wood flooring and laminate flooring.

The main features of the clusters include: being highly concentrated, with comprehensive support and with a steady supply of raw materials. Within each cluster there is clear industrial division in the enterprises, a high degree of specialization and a rich social benefit due to geographical relationships, kinship and friendships which strengthens the cluster effect. Industrial clusters can reduce production costs and capital inputs improve technological innovation. A cluster benefits from supporting policies for the local industrial cluster has an economic effect of scale providing a favorable regional economy for the development of SMFEs.

5.2 Threats and weaknesses of SMFEs in China

SMFEs in China exhibit the following weaknesses: low output thus weak ability in price negotiation, inaccessible finance, inability to invest in R&D, low market development, low added value, low level of education of managers, traditional family management style, imperfect organizational structure, and difficulty in attracting skilled and experienced staff of high quality. The SMFEs are also disadvantaged by poor institutional support, poor communication with authorities, weak and inexperienced sector associations and inaccessibility to information on technological developments, markets and global forestry and environmental developments. The SMFEs in China are faced with more challenges than their large-sized counterparts. In an environment with increasing market competition, survival is a key issue for all SMFEs.

5.2.1 Lack of exchange with governmental departments, weak policy outreach

Due to the fact that the SMFEs are small-sized, have inexperienced management and are widely distributed they lack any negotiating influence or representation of their own interests. SMFEs have great difficulties in reporting their problems in production and management to the governmental organizations so have to rely on representation through their large-sized counterparts in most cases. The SMFEs cannot rely on the sector associations which are mostly weak and ineffective. As a result, few support measures can be identified and adopted for the benefit of SMFEs during any policy decision-making process. Sadly the SMFEs expressed the view that they cannot expect any beneficial or favorable policies from either local or central government agencies.

Generally speaking, associations should be able to compensate for the disadvantaged SMFEs in terms of bargaining power and for facilitation of information flows of policy development but the associations, with a few exceptions, are poorly equipped for this. However, some associations working with credible intermediaries provide specific trainings for basic support for SMFEs (Macqueen, Figueiredo et al., 2006; Macqueen, Vermeulen, 2005).

However, there are no credible regional or national level associations that are

specialized for supporting SMFEs in China. SMFEs are usually attached to other agencies, departments or other association covering a larger scope of activities. Although these associations are classified as non-profit organizations, most of them belong to the government organizations. Driven by their own management models and with governmental guidance, these associations are far from the true membership-driven, non-governmental and social organizations common in other countries with a vibrant timber sector such as in China. Associations should be able to provide rich and beneficial information resources for industry. However, because of their high dependence on external support, limited and inexperienced staff and infrequent meetings and events they are not functioning well. The lack of understanding of market and technological developments and their weakness in negotiating with the government means that the effectiveness of the associations for forestry enterprises is low.

5.2.2 Rising price of labor leads to labor shortage

The availability of labor has become a common issue facing the manufacturing industries of China. It is reported that in the labor market, every 1.1 posts has only one applicant.

During the survey in Zhejiang, “high labor costs” was an issue reported by most of the enterprises. Workers’ wages have increased by 20 per cent annually in the past two years and the average monthly wage for a general laborer ranges from 3000 and 4000 yuan.

The first generation of migrant workers in the wood product manufacturing industries are close to retirement age and the new generation of migrant workers born in the 1980s and 1990s now entering the workforce have many more employment options. Because work in the timber industries is tough and dirty the sector cannot attract workers who prefer working conditions in, for example, the electronics industry. Wood product manufacturing enterprises both large and small have no advantage in competing with electronics enterprises in attracting talented people. As a result, the gap of labor supply shortage that the SMFEs in China are facing with is growing.

5.2.3 Inability to secure bank financing

In all businesses sales must be financed until payments are received from buyers. In the timber sector and especially for the SMFEs securing finance is a common and serious problem.

For forestry enterprises, commercial credit is the usual option for financing support. However, Chinese SMEs have, for a long time, been in a disadvantageous position in securing credit from commercial banks. In particular, since the financial crisis, banks and other financial institutions have reduced access to loans and raised credit terms in order to reduce credit risk, which further increases the difficulty for forestry enterprises to borrow.

According to statistics, in 2012, medium and long-term loans in both domestic and foreign currencies reached 25.82 trillion yuan, of which the proportion of total loans held by small-sized enterprises businesses accounted for 28.6 per cent.

Amongst enterprises those who can most easily get loans are usually the medium or large-sized enterprises but in general these enterprises are not often in urgent need of short term finance. In contrast, small enterprises, especially those private and family-run micro-enterprises are usually in urgent need of cash in their initial stage of

construction and development, but they facing enormous difficulties in obtaining finance

Compounding the problem of securing a loan is the complicated procedures of loan application which raise the transaction costs for many enterprises. Some enterprises would rather borrow from individuals even at high interest rate in order to solve for their cash flow problems and when purchasing raw materials and equipment which increases the burden on enterprises.

Many owners of small family-run business believe that their difficulty in borrowing is because banks are suspicious of their ability to repay the loan and that is one reason why applications are rejected. Most enterprises agree that the reasons for their difficulties of getting loans lie in the small scale of their borrowing needs and the complicated procedures.

5.2.4 Appreciation of the Chinese Yuan raising the risk of exports

Fluctuations in exchange rates bring additional risk for the SMFEs in China. The economic recession in the United States and the response through the loose monetary policy resulted in the US dollar depreciating against the Chinese Yuan. The appreciation of the Chinese Yuan against the US dollar has led to a reduction in the competitiveness of Chinese manufacturers and a decline in profits and this has had a negative impact on the viability of SMFEs in China.

Since China began easing its control over the exchange-rate regime the Chinese Yuan has appreciated negatively affecting export-oriented forest products processing enterprises.

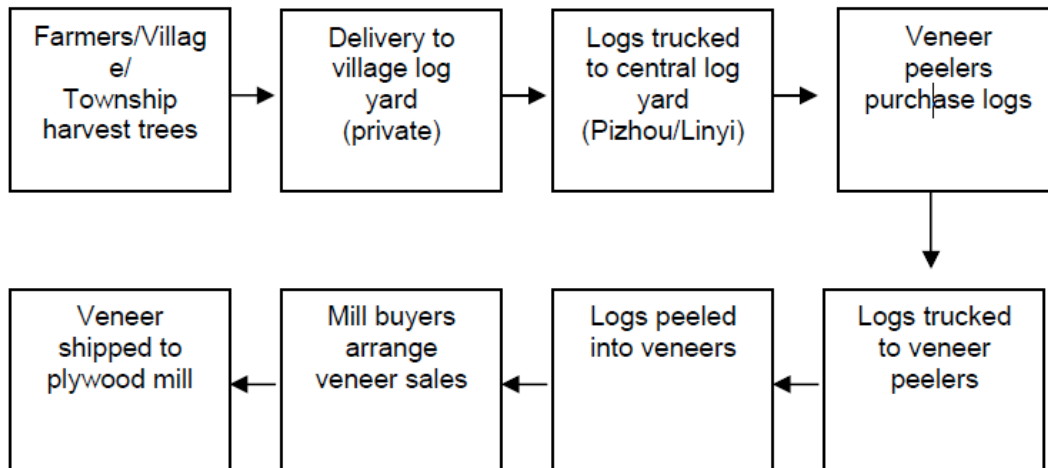
In responding to the survey almost all forestry enterprises agreed that the exchange rate is one of the most prominent problems facing them at the moment. The exchange rate of Chinese Yuan is a factor beyond the control of enterprises. Once the Chinese Yuan appreciates, enterprises will suffer heavy losses in exports. According to credible internal sources of the industry, during the global financial crisis period they had hardly any purchase orders, but currently the case is due to the excessive issuance of the US currencies, involving a slump in the US dollar and fluctuations in the Chinese Yuan against the US dollar. In a situation where the dollar was sliding continuously many of the enterprises are afraid to accept orders and this resulted in a disruption to trade.

5.3 Challenges to China's SMFEs from International Regulations on Timber Procurement

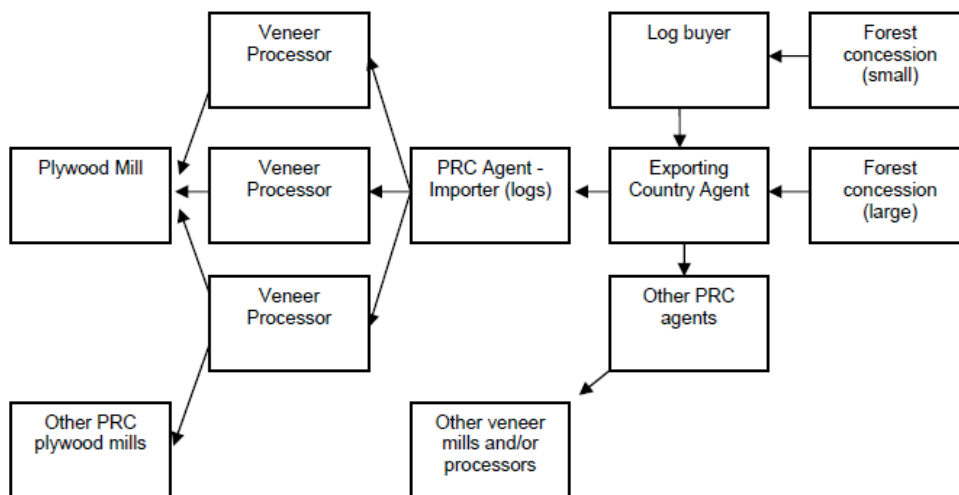
5.3.1 Chinese timber supply chain is very complex

Taking at least one tropical plywood manufacturer as an example (core board are poplar or eucalyptus from China, cover and back lays are tropical timber from abroad) the following is a typical supply chain. The diagram is from Tropical Forest Trust ([Http://www.tropicalforesttrust.com](http://www.tropicalforesttrust.com)).

1.core board china of supply which has eight link



2.cover and back lays ,which has atleast 6 link



The supply china for plywood is relatively straight forward compared to the very complex chain for furniture where multiple inputs are used

5.3.2 Substantially higher operating costs and risk of the SMFEs

On the one hand, the acquisition of information on international markets is complex and meeting new market requirements inevitably involves expense; on the other hand, in the early stages of enactment, it is difficult for SMFEs to fully understand and adapt to new market demands but if they cannot then market opportunities will be lost.

The high cost and potential for loss of markets could force those SMFEs which cannot adapt out of the international market and their competitiveness in forest products trading and exporting will continue to be substantially reduced.

In order to meet the market requirements in Europe and the United States enterprises can secure third-party chain of custody certification.

The survey conducted by this project found that SMFEs of China undertaking third party CoC certification are facing many difficulties, some of which are almost impossible to solve.

5.3.3 Information on CoC certification from CoC service companies

The following assessment is based on interviews with two consulting and training

companies providing legality CoC verification.

(1) The more complex the production line and more suppliers, the higher cost of verification

Taking as an example one of the two enterprises where this project conducted COC training. The company was founded in 2001, specialized in export-oriented solid wood flooring manufacturing and its main products were Pecan and wood solid wood flooring made of South American timber.

South American timber mainly includes Dibetou, Jatoba, Cumaru and Ipe. The products are sold to the United States, Canada, Europe, Japan, Pakistan, India, the Middle East and other countries and regions. The raw materials used by this company were Northern wattle, Pometia pinnata Forst, Merbau, Kempas, ThermoWood, Indian Rosewood from Southeast Asia; Okan, Kosso, Kassod tree imported from Africa; Dibetou, Jatoba, Cumaru, Ipe, Balsamo, Garapa, Sucupira from South America; Red Oak, Hickory from North American; and Chinese pagoda.

This company is not a huge one, so the products it sales is not too big mount and the goods it sales are in many batches, the container they shipment have many orders inside which come from several suppliers of the raw materials.

The sawnwood raw materials that the company imports from South America are produced in sawmill in the supply countries is traded to local exporters and then shipped. In China the sawnwood is handled by several entities before reaching the flooring company. In order to obtain a third-party legality/legitimacy certification, the company needs to undertaken the following activities:

Preparation:

- Looking for suitable consulting firm
- Sign for training agreement
- Training of company personnel by the consulting firm
- Personnel from the consulting firm provide guidance for designated officer of the company
- Prepare for the documents required for legitimacy certification with the assistance of the consulting firm

Verification for Legitimacy :

- Looking for right legitimacy verification company (generally the training and consulting firm can recommend)
- The verification company verify the legitimacy of timber supplier(s)
- The verification company verify the legitimacy of lumber processing companies
- The verification company verify the legitimacy of forest management
- The verification company verify the legitimacy of Manufacture.

Due to a weak cash flow, its small size and lack of storage capacity to complete an order the company has to undertake procurement in small lots. Generally the company has five direct suppliers for one purchase order, without any intermediate distributor. At least five certificates should be verified for each batch of export commodities.

According to the expense standards charged by Smartwood, the third party verification company, each verification procedure costs 2,000 US dollars, totaling 8,000 US dollars for the total five procedures.

Thus, in order to meet one purchaser, the cost for the company to undertake the

verification of legitimacy is at least 4 x 5 x 2,000 US dollars = 40,000 US dollars.

The validity of such a verification certificate is only one year. In the second year, the same procedures and cost should be taken for the enterprise to get the same certificate of legitimacy.

Speaking of the same enterprise, seven of their raw materials were from South America, 6 were from Southeast Asia, and 3 were from Africa and 2 from North America.

Assuming that the 9 species of timber are imported from Africa and Southeast Asia and all need to go through third party verification, then the company's cost on legitimacy verification for the 9 species of timber for one batch of a procurement contract would amount to 360,000 US dollar every year.

In Southeast Asia, Africa and some other countries, due to their different ways of management by the local governments, despite their legal sources of timber, it is usually difficult for them to be verified as legitimacy according to a third-party company's requirements by providing valid documents to prove the legitimacy of the sources of raw materials.

In these circumstances, although the project provided consulting and training services on legitimacy verification to this company, the company decided to give up efforts in inviting a third-party company to verify their legitimacy.

The reason for this decision was that despite the training the company found that, valid certificates could not be secured from the third-party verifier because of a lack of information on it's the suppliers. However, the company indicated that relying on raw material from the United States where origin certificates can be secured did not make any sense for its company.

5.3.4 Interview with certification company

The following information is provided based on an interview with an auditor who worked for Rainforest Alliance on verification consultancy and for Forest Management as an assessor for over ten years.

In the preparation period for legitimacy verification, the consulting firm will provide the following services:

- Introduction to FSC and CoC
- The assessing procedures of CoC verification
- Requirements of CoC verification standards
- The use of verification label
- Guidance by the consultant in the enterprises
- Training materials
- Technical Q & A on preparing for verification and the validity of certificates (5 years)
- Corrections on non-conformities after verification
- Contacting verification company for the auditing/assessing process

On completion of the above steps, the company can invite a qualified third party company to conduct the legitimacy verification and auditing.

Table 5.1 lists the costs and expenses that a company needs to pay on legitimacy verification. (Assuming the average daily wage of a production staff is 200 yuan, and the average monthly wage (20 working days) of a manager is 5,000 yuan.)

Table 5. 1 Expenses on Legitimacy Verification: Early Consultation and Training

Steps	Content	Time	Outcome/Output	Expense (Yuan)
1	Identifying the need for legitimacy verification	0	Decision on carrying out legitimacy verification	0
2	Looking for suitable consulting firm	2 days	Determining consulting firm and signing for consulting and training agreement	500, excluding communication cost
3	Training (2 days)	2 people * 2 days	Employees learning about legitimacy verification, file management, and internal management	500*2=1000, excluding venue expenses; And 3000, for accommodation of consultants
4	Consultation and training	Contacting consulting firm and preparing documents for verification	Establishing a file system for legitimacy verification	250*4=1000; And 15,000 for consulting service
Total				> 20,000

Table 5. 2 Direct Cost on Legitimacy Verification for One Batch of Goods for One Purchaser

Procedure	Content	Costs	Outcome/Output	Expense	
4 Direct Cost on Legitimacy Verification for One Batch of Goods for One Purchaser	1	Assessing forest land	Transportation and accommodation to the forests	FM auditing finished.	>USD 2000, Transportation, accommdation
	2	Assessing lumber processing	Transportation and accommodation to the lumber processing company	Auditing of lumber processing finished	>USD 2000, Transportation, accommdation
	3	Assessing supplier	Transportation and accommodation to the supplier	Auditing of the supplier finished	>USD 2000, Transportation, accommdation
	4	Assessing production procedures	Transportation and accommodation to the producing company	Auditing of production finished	>USD 2000, Transportation, accommdation
	Subtotal targeting on one supplier				>USD 8000
	Subtotal for one batch of goods				>USD 40,000

The above are direct costs, excluding the costs to a company to re-structure its internal management to meet the raw materials management according legitimacy requirements. In this process, potential and indirect costs are listed as follows:

- Original documentation system from production to sales is changed, need someone specialized in file management.
- A specialized personnel for legitimacy management, fulltime or part-time

- Trailer trucks if working at the same time, should be separated according to batches and different time periods or according to different orders.
- Production period may be longer than in the past.
- On the management of legitimacy materials, managers need to spend time in reception and communication.

(1) Due to the complexity of SMEs' supply chains, verification procedures are complicated and take a long time

Even if products are from legal sources it is also possible that their legitimacy might not be verified by a third-party company.

The same company as in the above is taken again as an example.

To meet the US customer's one purchase order, one of its containers may be equipped with five varieties of products made of five tree species, and these five tree species may come from five direct suppliers, of which each supplier may have an indirect supplier of their own.

For the reason of protecting trade secrets, the information on direct suppliers can not be obtained by the enterprises along the manufacturing line. This makes it difficult for the third party to trace the legitimacy.

In case a SME carries out legitimacy verification, his purchase is just a small part of its upstream suppliers, thus he has neither any pricing power on his suppliers, nor can he get assistance on a third-party verified legitimacy from his own suppliers.

As a result, the possibility to secure legitimacy verification is small. Further, the company cannot obtain information on the upstream suppliers which leads to a break in the chain of custody. Therefore, even if the timber purchased is legitimate a certificate for legitimacy verification can not be approved.

(2) Higher cost of legitimacy verification for SMFEs than large-sized enterprises

For large-sized enterprises, a batch of products is usually associated with a more concentrated and larger volume of purchase, thus they have more bargaining power on purchasing raw materials. But SMFEs are the opposite working on small lots with less storage and thus have weaker bargaining power.

Moreover, legitimacy verification is generally carried out by batch, thus certification costs for SMEs are much higher than those of the large enterprises. In addition, sources of raw materials or suppliers to large enterprises are relatively fixed, and traceability for verification is easier. But for SMEs, due to small amount of procurement and their weak bargaining power and variable and multiple suppliers the unit cost to carry out legitimacy verification is higher than in larger companies.

3) Enterprises will turn to alternative sources

In some developing timber-producing countries the domestic timber production and management systems are not perfect and it is difficult for these countries to provide documentary proof of legality. When this is the case and where a Chinese company intends to supply markets in the US and EU they cannot use tropical wood in their production processes and will be forced to turn to other verified legal sources of raw materials.

6 Conclusion and Policy Suggestions

The conclusions and policy suggestions generated as a result of this project are contained in a separate report entitled “Policy suggestions for promoting procurement of timber from legal and sustainably managed forest in SMFEs”.

The conclusions and suggestions address issues for Chinese government departments, for the restructuring of the competence of SMFEs, or developing timber producing countries, for developed countries such as the EU and US, for NGOs and for the International Tropical Timber Organization (ITTO).

ANNEX 1

Background to Requirements of the Regulations on Timber Procurement by the EU and the US

1 The Concept of Timber Legality

Since the 1990s when the world consumption of forest products started to grow, the imbalance between market demand, economic growth and forest resources has behaved as the shortage of forest resources. What is more important, the international market demand for timber has been blamed as a major reason for the global deforestation, which believed that it is timber trade that greatly exerted pressure on the global forest resources and exacerbated illegal harvesting in several tropical timber producing countries. In this background appears the concept of timber legality (Note: The FAO study in 2012 put “poverty” on top of the list of the reasons causing deforestation and degradation).

Box 2: Underlying causes of deforestation and forest degradation

During the deliberations of the United Nations Intergovernmental Forum on Forests, the global community agreed that the underlying causes of deforestation and forest degradation are interrelated and are often socio-economic in nature. Both the causes and the approaches to dealing with them are often country-specific and therefore vary among countries. The underlying causes include:

- poverty;
- lack of secure land tenure patterns;
- inadequate recognition within national laws and jurisdiction of the rights and needs of forest-dependent indigenous and local communities;
- inadequate cross-sectoral policies;
- undervaluation of forest products and ecosystem services;

- lack of participation;
- lack of good governance;
- absence of a supportive economic climate that facilitates sustainable forest management;
- illegal trade;
- lack of capacity;
- lack of an enabling environment, at both the national and international levels;
- national policies that distort markets and encourage the conversion of forest land to other uses.

Source: IFF, 2000.

2 International Attitude on Timber Legality

In the past 10 years, the international community has taken vigorous measures to combat illegal harvesting and related trade. From the government’s point of view, many countries and international organizations have adopted responsible and sustainable procurement policies to ensure legitimate sources of timber. From the international point of view, the European Union and the United States have introduced relevant regulations, and require the legitimacy of forest products in government procurement policies.

Each country has its own legal system and regulations on forest resources management, and own explanation on the legality of timber. Therefore, the interpretation of timber legality varies across sovereignties. In the following we elaborate focusing on the requirements by the United States and the European Union.

3 Requirements on Timber Legality by the United States

In the United States there is no special regulation on timber production, transportation, or processing, until it was defined in the amendment of the Lacey Act. If an enterprise violates any state or federal law/regulation of the United States in either collecting, or harvesting, or acquiring, or transporting, or selling, or exporting of any plants, or even providing false evidence or false trademark, it is regarded as violation of the US Lacey Act amendments.

The Lacey Act requires importers to provide basic reporting/declaration for each batch of shipment of plants or plant products. The purpose of declaration is to increase the transparency of the timber and plant trade and enable the US government to better enforce the law. Declaration must include the scientific name of the species, the value and quantity of the timber and the name of the country in which it was harvested. Reporting should be done by importers, and exporters should assist importers to complete the process of declaration. Exporters should also ensure that all exports of forest products are in compliance with the relevant laws or regulations of countries of harvesting/collection and of processing on processing, exporting, and taxation. The introduction of the amendment to the Lacey Act, the manufacturers and traders of forest product processing which are export-oriented to the United States have been alerted soundly. They are required to pay attention, from the source of timber harvesting, to ensure that the entire production and management process in line with relevant laws or regulations. Such laws and regulations refer to both the international laws and guidelines, and national laws or regulations of other countries.

4 Requirements on Timber Legality by the European Union

(1) FLEGT

In order to combat illegal logging and illegal trade, the European Union announced the “Forest Law Enforcement, Governance and Trade Action Plan (FLEGT)” in 2003, raising a series of measures aiming to combat illegal logging activities. However, there has not been a practical mechanism to identify and reject the entry of illegal timber into the EU market. Given this fact, the Forest Law Enforcement, Governance and Trade Action Plan (FLEGT) proposed to establish a voluntary partnership agreement (VPAs) between the European Union and timber producing countries involved in the FLEGT.

(2) VPA

The VPA is a binding agreement or commitment for cooperation between the European Union and its member countries. It requires the two parties to work together to support the FLEGT Action Plan and the implementation of timber certification system. Timber certificate functions as an approval of timber from the producing countries to be exported to the European market. The core elements of the VPA is to prove that timber is produced in accordance with the national law in producing countries through legitimate and reliable institutions with technological supporting system, thus illegal timber can be expelled from the markets of the EU member countries. The implementation of VPA is through the following four stages, i.e., collecting information and pre-negotiation, formal negotiations, approval and system building, then full implementation and certification. The overall objective is to implement the FLEGT certification system and to sustainably manage forests. By the end of 2011, the implementation of VPA in the world is as follows:

Six countries were in the stage of system building: Cameroon, Central African Republic, Ghana, Indonesia, Liberia, and Congo (Brazzaville);

Four countries were in the stage of formal negotiations: Congo (DRC), Gabon, Malaysia, and Vietnam;

15 countries were in the stage of information collection and pre-negotiation: Bolivia, Colombia, Ecuador, Guatemala, Guyana, Honduras, Peru, Cambodia, Laos, Myanmar, Papua New Guinea, Solomon Islands, Thailand, Côte d'Ivoire, and Sierra Leone.

(3) The European Union Timber Regulation

Due to the intensified problem with illegal timber, the international community

tends to crack down more rigorously on illegal logging by legislation. The implementation of the US Lacey Act set an example for the EU, hence the introduction of the European Union Timber Regulation. In July 2010 formed the final version of the Regulation, namely the “Due Diligence Regulation (DDR)”, which was planned to come into force in March 2013.

The EU Timber Regulations defined legality in accordance with the relevant laws and regulations of the harvesting country: harvesting rights within the statutory limits; taxations related to logging and timber production; environmental and forest legislations related to timber harvesting; legitimate rights and interests of the third party related to timber harvesting, such as property rights and use rights; forestry-related trade and customs regulations. Operators of forest products can choose to develop their own DDR or use a DDR provided by any regulatory body authorized by the European Union.

The DDR mainly includes the following three parts: (1) information collection: operators need to collect information on product description, harvesting country, number of suppliers and compliance with the national laws and regulations (of the harvesting country). (2) Risk assessment: operators should use the information collected to assess the risk of illegal timber entering the supply chain according to the standards required by the DDR. (3) Risk avoidance: once the existence of risk is found, further proof of legitimacy should be required from the supplier to avoid risks.

The DDR, aiming to minimize the risk of illegal logging and illegal trade activities in the EU market, is a supplement and improvement of the VPA, as well as a continuation of the FLEGT. Required by DDR, only timber and timber products with the CITES or the FLEGT certificate can enter the European market, which will stimulate and promote timber-producing countries to sign the VPA with the EU. The implementation of DDR will have significant and far-reaching impact on the countries of timber exporting and producing with regard to their related industries and markets, and their competitiveness.

The Lacey Act and the EU Timber Regulation in practice require the Chinese enterprises for two things. On the one hand, they require Chinese enterprises to understand their own status in the trading process of timber products. On the other hand, Chinese enterprises need to know whether the timber or raw materials supplied are from legal harvesting. If the upstream suppliers of any Chinese enterprises do not provide legal timber sources, they should consider changing the suppliers. This requires that the exporters targeting on the United States or the European Union market should have a complete system with enough considerations included in order to meet the requirements of the Europe and the United States. In addition to the origin of goods from their suppliers, the contract signed with suppliers should also include some additional terms regarding self-protection in the future. The China Customs requires importers to provide proof of origin of production, quarantine inspection, fumigation certificate, and so forth. Apart from these, the United States and Europe also need enterprises to provide harvesting permits, tax-paid proof, etc., which are not required by the China Customs.

5 Requirements on Timber Legality by China

The timber that is used by forest products processing enterprises in China can be classified as domestic timber and imported timber. China has clear management on timber according to its law and regulations. The differences of legality management between domestic and imported timber are as follows:

- (1) Legality of domestic timber

In China, it is regulated that enterprises can prove the legality of their use of domestic timber by providing “Three Permits”, i.e., harvesting permits, transport permits, and processing permits.

- ① The legitimacy of permits. Harvesting permit is under the timber harvesting quota system of China, requiring timber harvesting with respect to type, cutting, location, duration, area, species, volume, timber yield as well as reforestation, species, area and duration after cutting. Transport permit is a proof for the legality to transport timber. In the meantime when applying for harvesting permit, any enterprise is required to pay appropriate taxes and silviculture fees, plus processing permit. Generally speaking, the “Three Permits” can prove the legitimacy of domestic timber used by Chinese enterprises and meet the requirements by the international market.
- ② The acquisition of permits. Harvesting permits are issued by the county/city level government departments of forestry administration and resource management. When applying for a transport permit, harvesting permit is required by forestry administrations for retention purpose. In the case of re-applying for transport permit after processing, previous transport permit or a legal proof of timber trade is required to be submitted. Therefore, processing enterprises usually hold transport permits merely, but without harvesting permits, which can only be acquired from the local forestry administrations or forest management unit. As the application of transport permits for timber products requires the submission of harvesting permits and other legal proof, in principle, transport permits alone are enough for the proof of the legality of timber. In addition, some agricultural timber do not require permit to harvest, and in some provinces of China transport permits are not required for finished timber products, or plywood and other semi-finished timber products. In these cases it is difficult for enterprises to provide full and effective documentation on legal timber.
- ③ The traceability of permits. The transport permits of China specify in detail: name of the supplier, purchase units, origin of timber, origin and destination of transport, name of tree species of transported timber, classification, quantity, volume and expiration, which provide possibilities for traceability of timber. Due to the complexity of the supply chain of China’s forest products processing enterprises, many companies purchase timber directly from markets, leading to a difficulty in identifying the source of timber.

(2) Legality of imported timber

Regarding the management on imported timber, China requires importers to provide:

- ❖ **CONTRACT**
- ❖ **INVOICE**
- ❖ **PACKING LIST**
- ❖ **LOG LIST**
- ❖ **BILL OF LADING (B/L)**
- ❖ **CERTIFICATE OF ORIGIN**
- ❖ **OFFICIAL PHYTOSANITARY CERTIFICATE FROM EXPORTING COUNTRIES/REGIONS**

① Sign the timber legality verification agreements with the countries concerned. This is a verification mechanism led by the government, through signing bilateral agreements with the related timber-exporting countries and consumer countries.

Mainly between the governments of timber-producing countries and timber-processing countries or between the governments of timber-processing countries and timber-consuming countries, bilateral agreements are reached on: definition of timber legality, procedures of verification, management mechanisms, and export documentations. According to agreements, timber-producing countries ensure that, timber harvesting, processing and export are in line with their agreements, while timber-processing countries only accept timber with documents showing the legality from their member countries. Timber-processing countries should also establish a timber tracking system to ensure the traceability of imported timber to be processed in these countries and then for export. Timber products through the above procedures and exported to other timber-consuming countries can be regarded as legitimate.

② Establish a voluntary verification mechanism led by industry associations. That is, industry associations can introduce a “Responsible Procurement Policy”, and member companies on a voluntary basis comply with the provisions on timber legality through the establishment of a risk control system. When Chinese enterprises import timber products and process and then export their final products, they should comply with the responsible procurement policy of the industry associations they belong to, and provide exporters with necessary documents of legitimacy, and apply for a certificate of responsible procurement from the professional associations their risk control system belongs to. For products exports, all documents should be submitted to the customs enclosing the certificate. In case of any question by international importers on any of the above information, certificates can be referred to from industry associations.

However, as currently there has not established any timber legality verification system in China, in order to meet the requirements by the European and the US markets, enterprises are facing with the following three alternatives to verify the legality of timber.

① Forest certification. Forest certification, i.e., certification for sustainable forest management, is also known as timber certification or certification as collectively called. It is a tool to promote sustainable forest management and achieve the ecological, economic and social objectives through the use of markets. The certification process is that, an independent third party according to existing standards, verifies regarding the forest management (FM) and the chain of custody certification (COC), and finally issues the certificate. Forest certification systems can be classified as the global system and national systems. The global system, i.e., the FSC, has a higher degree of market acceptance, due to its concern for the environment and social aspects, thus respected by environmental organizations and trade organizations. The PEFC system is acknowledges the national forest certification systems in many countries, so that the PEFC label can be used by forest products from all these countries. National systems of forest certification are developed by each country and targeting on forests in their own territory. So far there are more than 30 national systems, including the SFI in the United States, the CSA in Canada, the AFS in Australian, the MTCS in Malaysia, the LEI in Indonesia, the CFCC in China, and so on.

② Verification of the legitimacy of third parties.

The legitimacy of a third party can be verified through a variety of authorities, which are usually independent certification bodies. For example, the following organizations have established verification procedures for third parties: the American Scientific Certification Systems (SCS), the Societe Generale de Surveillance (SGS), the Bureau Veritas International Inspection Group (BV), and the SmartWood (SW).

These voluntary verification schemes are adopted by forest management organizations and forest product manufacturers / traders in their supply chain in response to consumer demand on the legality of supplied products. However, the voluntary verification of the legitimacy is somewhat not well developed as forest certification systems. Furthermore, in the process of setting standards, identification, verification, and product tracing, international conventions (such as ISO Guidelines) are not complied. This means that there is no universal way for the verification of legitimacy. Each certification body has its own system for legitimacy verification, thus the definition and procedures of verification vary in different organizations.

③Enterprises can provide their own documents for legality

Enterprises can also take their own measures in the control of all aspects in the process of circulation from forest harvesting to products delivery, in order to prove the legality of their timber products. Enterprises should acquire relevant certification of legitimacy from suppliers in the purchase of raw materials, including a retrospective of the entire chain of production and supervision.

ANNEX 2 Table of survey \interviews activities

Period	sites	Participants	related organizations	Activities
September, 2011	Zhejiang and Shanghai	International consultants, Project coordinator and consultants, specialists	Bureau of Agriculture and Forestry of Nanxun, Zhejiang; Bureau of Quality Supervision of Huzhou, Zhejiang; Sunregard Wood Co., Ltd. of Zhejiang; Dayou Wood Co., Ltd. of Zhejiang; Tianlong Wood Co., Ltd. of Zhejiang; Baofeng Wood Co., Ltd. of Zhejiang; Jiaye Floor Co., Ltd. of Zhejiang; Timber Industry Association of Shanghai; Yueke Wood Co., Ltd. of Shanghai; Yiming Wood Co., Ltd. of Shanghai	Test on questionnaires; Survey on responses to legitimacy
September, 2011	Zhejiang and Shanghai	Project coordinator consultants, specialists	Shanghai Timber Association	Responds of SMFEs for TR Interview
December, 2011	Guangzhou and Dayong	Consultants,	Furniture companies Guangdong Forest Department Bureau	Furniture companies visit
January to June 2012	Jiangsu	Nanjing Forestry University, Consultants, specialists	72 enterprises in Jiangsu	Face to face survey in terms of questionnaires
January to June 2012	Zhejiang	Bureau of Quality Supervision, and Wood Inspection of Nanxun, consultants specialist	61 enterprises in Zhejiang	Face to face survey in terms of questionnaires
January, March, 2013	Beijing	Consultants	Third Party Legality verification organization	stakeholders Interview
January, March, April, 2013	Beijing	Consultants	Chinese Forestry Industry Associations	stakeholders Interview
March, 2013	Shanghai and Zhangjiagang,	Consultants	Tropical Timber trader	Upstream stakeholders Interview
November, 2011, February, 2012, September, 2012, January, 2013	Beijing,	Consultants	SFA	stakeholders Interview
September, 2012, Jan, March, 2013	Zhejiang Beijing, Shanghai	Consultants	Two pilot SMFEs	pilot SMFE of Verification status Interview

ANNEX 3

Questionnaire

Company details

Name of company

Address

Tel

Fax

Email

Web site

Company location

Name of person answering questions.....

Position in company.....

1. The value and quantity of tropical timber used by plant production in 2010

Log.....	Panel	Wood
strip.....		
Veneer.....	Furniture components.....	Plywood.....
Particleboard.....	Medium density fiberboard.....	Oriented strand board.....
Blockboard.....	Bamboo.....	Others.....

2. The value and quantity of non-tropical timber used by plant production in 2010

Log.....	Panel	Wood
strip.....		
Veneer.....	Furniture components.....	Plywood.....
Particleboard.....	Medium density fiberboard.....	Oriented strand board.....
Blockboard.....	Bamboo.....	Others.....

3. Products manufactured (please write yes or no)

Wooden floor	Plywood	Veneer	Furniture
Oriented strand board		Medium density fiberboard	
Joinery (Such as wooden doors, wooden windows, wooden lines)			Others

4. Output in 2009 (Unit: 10000 yuan / year)

Wooden floor	Plywood	Veneer	Furniture
Oriented strand board	Medium density fiberboard	Veneered plywood	
Joinery (Such as wooden doors, wooden windows, wooden lines)			Others

5. Output in 2010 (Unit: 10000 yuan / year)

Wooden floor	Plywood	Veneer	Furniture
Oriented strand board	Medium density fiberboard	Veneered plywood	
Joinery (Such as wooden doors, wooden windows, wooden lines)			Others

6. Production Quantity in 2009 (Unit: m²/year; piece)

Wooden floor	Plywood	Veneer	Furniture
Oriented strand board	Medium density fiberboard	Veneered plywood	
Joinery (Such as wooden doors, wooden windows, wooden lines)			Others

7. Production Quantity in 2010 (Unit: m²/year; piece)

Wooden floor	Plywood	Veneer	Furniture
Oriented strand board	Medium density fiberboard	Veneered plywood	Others
Joinery (Such as wooden doors, wooden windows, wooden lines)			

8. Where the company's products do mainly sold? (please write China or abroad)

Wooden floor	Plywood	Veneer	Furniture
Oriented strand board	Medium density fiberboard	Veneered plywood	Others
Joinery (Such as wooden doors, wooden windows, wooden lines)			

9. Do the company's foreign importers request the proof of the legitimacy or sustainability certification? (please write yes or no. If Yes, describe the details please)

10. Work force

Number of factory workers

in 2010

in 2009

Number of office staff

in 2010

in 2009

11. What are the main problems your company faces?

12. Do the employees participate in the training of related certification, legitimacy or the Sustainable Forest Management?

Certification	Legitimacy	Sustainable Forest Management	None
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13. Where do the company's employees get training?

Company factory	Hire the trained staff or skilled labor	Government training
institutions		
Association	Equipment suppliers	Other, please list

14. How do you get the processing technology the last time? (Please select the two most important)

Trade magazines	Salesman's introduction	Other Companies' introduction
Introductions of buyers who want to buy the product		Association
Research institute	Website	

15. How do you get market information? (Please select the two most important)

Trade magazines	Government channels	Discussions with other companies
Introductions of buyers who want to buy the product		Association
Research institute	Website	Fairs
		Buy market research reports

16. Have you heard of corporate social responsibility? (please write yes or no)

17. Has the company bought market information? (please write yes or no. If Yes, describe the details please)

18. Has the company hired experts for consultation? (please write yes or no. If Yes, describe the details please)

19. Does the company have the procurement policy? (please write yes or no)

20. Have you heard of the Lacey Act or EU due diligence? (please write yes or no. If Yes, how these bills affect your company)

ANNEX 4

Table of enterprises filling in the questionnaire

Jiangsu Province		Zhejiang Province	
No.	Name of company	No.	Name of company
1	Shenghe Wood Co., Ltd. of Xuzhou	1	Yuhua Wood Co., Ltd. of Huzhou
2	Tianbin Wood Co., Ltd. of Xuzhou	2	Linchang Wood Co., Ltd. of Zhejiang
3	Jiahe Wood Co., Ltd. of Pizhou	3	Jialv Wood Co., Ltd. of Huzhou
4	Qunxing Wood Co., Ltd. of Pizhou	4	Shiyou Wood Co., Ltd. of Zhejiang
5	Senyuan Wood Co., Ltd. of Xuzhou	5	Chuangxin Wood Co., Ltd. of Zhejiang
6	Baihuashan Wood Co., Ltd. of Xuzhou	6	Beiyake Wood Co., Ltd. of Zhejiang
7	Jiamei Wood Co., Ltd. of Xuzhou	7	Kanghui Wood Co., Ltd. of Zhejiang
8	Jimyuan Wood Co., Ltd. of Xuzhou	8	Ruicheng Wood Co., Ltd. of Zhejiang
9	Tianli Wood Co., Ltd. of Xuzhou	9	Geersen Wood Co., Ltd. of Zhejiang
10	Huadong Wood Co., Ltd. of Xuzhou	10	Fuma Warm Technology Co., Ltd. of Zhejiang
11	Furuida Wood Co., Ltd. of Pizhou	11	Honglifushi Wood Co., Ltd. of Zhejiang
12	Jiankun Wood Co., Ltd. of Xuzhou	12	Jiusheng Flooring Co., Ltd.
13	Junfeng Wood Co., Ltd.	13	Yongji Wood Co., Ltd. of Zhejiang
14	Hongyu Wood Co., Ltd.	14	Boer Wood Co., Ltd. of Zhejiang
15	Xinghe Wood Co., Ltd. of Xuzhou	15	Nuobeier Wood Co., Ltd. of Nanxun, Zhejiang
16	Yatai Wood Co., Ltd. of Xuzhou	16	Kaijia Building Material Co., Ltd. of Huzhou
17	Runhe Wood Co., Ltd.	17	Anlanmeijia Flooring Factory of Nanxun, Huzhou
18	Kaihua Wood Co., Ltd. of Xuzhou	18	Xinshiqing Wood Co., Ltd. of Nanxun, Huzhou
19	Hongyang Wood Co., Ltd. of Pizhou	19	Fangyuan Wood Co., Ltd. of Zhejiang
20	Taigang Wood Co., Ltd. of Xuzhou	20	Juanbao Wood Co., Ltd. of Zhejiang
21	Yuyuan Wood Co., Ltd. of Xuzhou	21	Honggaoliang Wood Co., Ltd. of Zhejiang
22	Tongxin Mill	22	Xinmao Wood Co., Ltd. of Nanxun, Huzhou
23	Yusu Wood Co., Ltd. of Xuzhou	23	Shenghuojia Baluoke Wood Co., Ltd. of Zhejiang
24	Xiaocheng Mill	24	Haomujiang Wood Co., Ltd. of Nanxun, Huzhou
25	Chunfeng Wood Co., Ltd.	25	Aopin Wood Co., Ltd. of Huzhou
26	Yushun Co., Ltd. of Xuzhou	26	Lingge Wood Co., Ltd. of Huzhou
27	Hesen Wood Co., Ltd. of Xuzhou	27	Liwang Wood Products Processing Plants of Huzhou
28	Guanxing Wood Co., Ltd. of Zhangjiagang	28	Shihai Flooring Factory of Nanxun, Huzhou
29	Chengxin Wood Co., Ltd. of Zhangjiagang	29	Linjie Flooring Factory of Nanxun, Huzhou
30	Huafeng Wood Co., Ltd. of Zhangjiagang	30	Daziran Lierkang Flooring Factory of Nanxun, Huzhou
31	Furniture Manufacturing Co., Ltd. of Zhangjiagang	31	Xingli Flooring Factory of Nanxun
32	Zhenyu Wood Co., Ltd. of Zhangjiagang	32	Huihuang Wood Factory of Nanxun, Huzhou
33	Yongan Building Materials Co., Ltd of	33	Niansheng Flooring Factory of

	Zhangjiagang		Nanxun, Huzhou
34	Haiyu Rosewood Furniture Co., Ltd. of Changshu	34	Yixin Wood Products Plants of Nanxun
35	Suyu Rosewood Furniture Co., Ltd. of Suzhou	35	Shengzheng Wood Co., Ltd. of Zhejiang
36	Haode Furniture Co., Ltd. of Changshu	36	Weilajia Wood Co., Ltd. of Huzhou
37	Fuyi Rosewood Plant of Changshu	37	Yingbin Daziran Wood Co., Ltd. of Huzhou
38	Fugui Rosewood Furniture Co., Ltd. of Changshu	38	Baofeng Wood Co., Ltd. of Huzhou
39	Qicheng Wood Processing Plants of Changshu	39	Lianrun Wood Co., Ltd. of Huzhou
40	JinlinWood Factory of Haiyu, Changshu	40	Ousheng Wood Co., Ltd. of Huzhou
41	Yaolong Rosewood Furniture Factory of Changshu	41	Hairun Wood Co., Ltd. of Huzhou
42	Shangmutang Classic Rosewood Furniture Factory	42	Jiupai Wood Co., Ltd. of Huzhou
43	Longbo Rosewood Furniture Co., Ltd. of Changshu	43	Fengjie Wood Co., Ltd. of Huzhou
44	Jinbianfu Arts & Crafts Furniture Co., Ltd. of Changshu	44	Chenfan Wood Co., Ltd. of Huzhou
45	Dongfanghong Rosewood Furniture Co., Ltd. of Changshu	45	Shuanglin Huade Wood Products Plants of Nanxun, Huzhou
46	Jieli Wood Co., Ltd. of Changshu	46	Senhua Flooring Co., Ltd. of Nanxun, Huzhou
47	Xianfeng Bamboo Co., Ltd. of Changzhou	47	Zhoujia Wood Products Plants of Nanxun, Huzhou
48	Kailai Wood Co., Ltd. of Jiangsu	48	Jintu Wood Products Plants of Huzhou, Zhejiang
49	Dongjia Decoration Material Co., Ltd. of Changzhou	49	Xinsheng Decoration Material Co., Ltd. of Jiuguan, Huzhou
50	Dewei Wood Co., Ltd. of Jiangsu	50	Zhijian Wood Decoration Material Factory of Jiuguan, Huzhou
51	Outai Decoration Material Co., Ltd. of Changzhou	51	Hupo Flooring Factory of Nanxun
52	Runchang Wood Co., Ltd. of Changzhou	52	Shanghao Flooring Factory of Jiuguan, Nanxun
53	Yimeijia Wood Co., Ltd. of Jiangsu	53	Lianfeng Flooring Factory of Nanxun
54	Ouqiang Wood Co., Ltd. of Changzhou	54	Yimu Flooring Factory of Jiuguan, Nanxun
55	Saili Wood Co., Ltd. of Changzhou	55	Fuyuan Flooring Factory of Jiuguan, Huzhou
56	Zhongxindesai Wood Co., Ltd. of Jiangsu	56	WEichang Flooring Factory of Jiuguan, Huzhou
57	Lingdian Wood Co., Ltd. of Changzhou	57	Hengjia Flooring Factory of Jiuguan, Huzhou
58	Shenzhou Wood Co., Ltd. of Changzhou	58	Huili Flooring Factory of Jiuguan, Huzhou
59	Dezhe Wood Co., Ltd. of Jiangsu	59	Meida Flooring Factory of Huzhou, Zhejiang
60	Senli Decoration Material Co., Ltd. of Changzhou	60	Senwang Flooring Factory of Jiuguan, Huzhou
61	Shuangqi Flooring Co., Ltd. of Jiangsu	61	Shenshi Flooring Factory of Jiuguan, Huzhou
62	Saiou Flooring Co., Ltd. of Changzhou		

63	Guangyu Decoration Material Co., Ltd. of Jiangsu		
64	Beier Decoration Material Co., Ltd. of Jiangsu		
65	Luoji Wood Co., Ltd. of Jiangsu		
66	Meiyida Wood Co., Ltd. of Changzhou		
67	Kelida Decoration Material Co., Ltd. of Jiangsu		
68	Ougangchangsheng Decoration Material Co., Ltd. of Jiangsu		
69	Feixiang Decoration Material Co., Ltd. of Changzhou		
70	Denghong Wood Co., Ltd. of Changzhou		
71	Mulan Wood Co., Ltd. of Jiangsu		
72	Oulong Flooring Co., Ltd. of Jiangsu		