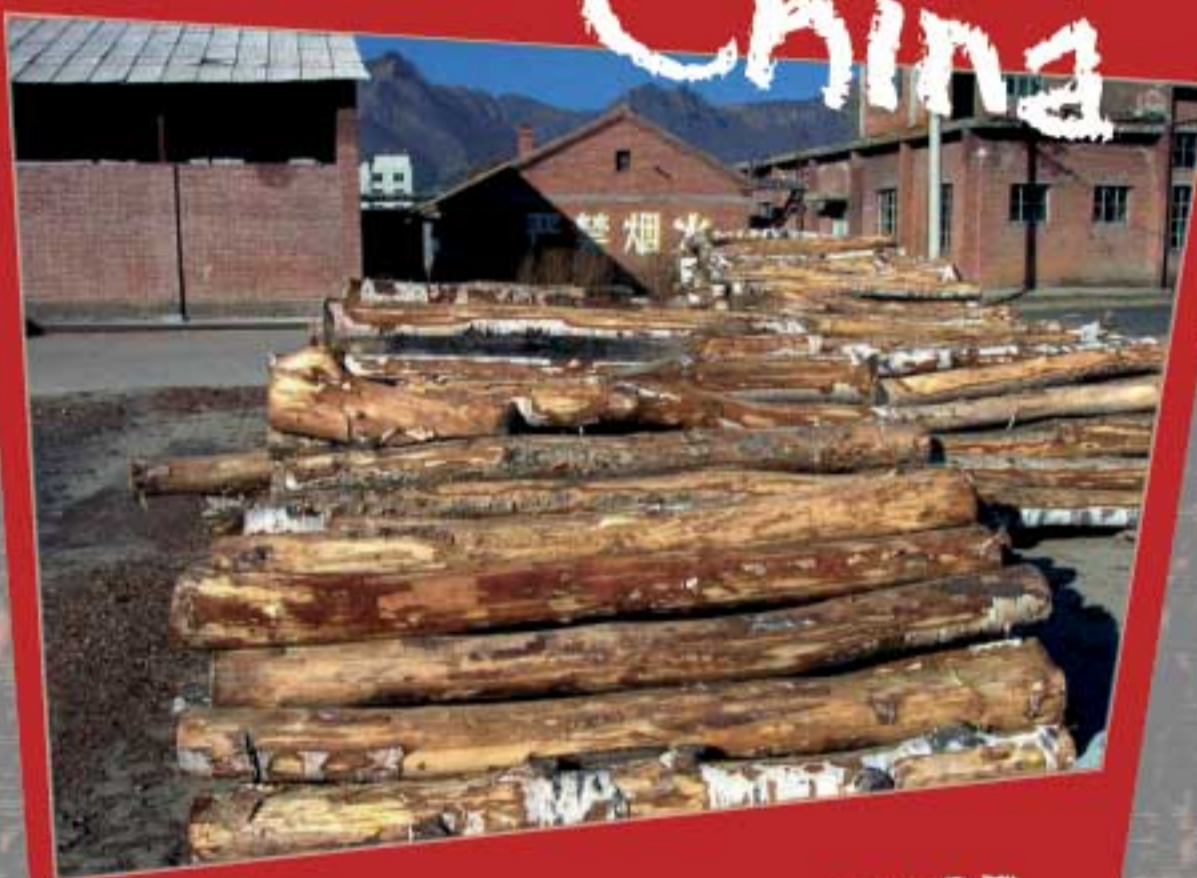


Small and medium forest enterprise

China



A discussion paper

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Discussion paper

Small and Medium Forest Enterprise in China

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Small-medium forestry enterprises for poverty reduction and sustainability

This study is part of a cross-country initiative coordinated by the International Institute for Environment and Development (IIED) with the above title.

Most international attention in forestry has been given to improving the conditions for large-scale or micro-scale forestry, and much less to the 'messy middle' - which produces a high proportion of forest product and involves huge numbers of people. Ways need to be found by which small and medium-scale forestry enterprises can better contribute to reducing poverty and improving the prospects for sustainability.

IIED, with partners in Uganda, South Africa, India, Brazil, Guyana and China have been investigating these issues. Country diagnostics show that the small and medium forestry enterprise "sector" is of major significance for livelihoods in these countries – the net effect of myriad small players represents a substantial part of local economies. Yet, these are largely "invisible" economies, and the SME sector is almost completely ignored in most policy and programme developments. Raising the sector's visibility such that its impacts can be better assessed, and then going on to explore how the positive links to sustainability, livelihoods and poverty-reduction can be enhanced, is a major challenge to which this initiative seeks to rise.

Reports in the series available from IIED on request, and downloadable from www.iied.org/forestry, include initial analyses of small-medium forestry enterprise issues in:

- Brazil
- China
- Guyana
- India
- South Africa
- Uganda

For a wide range of published reports from IIED's previous 3-year initiative on ***Instruments for sustainable private sector forestry*** see www.iied.org/psf/publications_def.html

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EXECUTIVE SUMMARY

Forest enterprise in China comprises some 14,907 entities of which 5,460 are at the township level or above. Approximately 87% of these are classified as small scale (based on an assessment of their fixed capital). The sector has been dominated over the recent past by the State. State control has extended to timberland ownership, timber and NTFP use rights and downstream processing activities, although different Government Departments have been responsible for upstream and downstream activities.

During the 1990s movement towards a market-based economy gathered pace. The State has maintained a substantial involvement in larger scale forest ownership, logging and primary industries. There has been rapid growth in non-state enterprise, however, particularly in the secondary and tertiary processing industries – although many elements of state control remain. The growth in non-state enterprises coincides with a high concentration of small and medium forest enterprises (SMFEs) in the secondary and tertiary-processing industries, such that 90% of the value of wood based furniture and wood-building materials is produced by SMFEs. China's accession to the WTO is likely to accelerate these free market orientated changes.

SMFEs have an important role to play in support of rural livelihoods, and have proved adept at absorbing labour within the mountainous 496 (out of a total 592) poverty counties in China where forestry is an attractive alternative to agricultural land use. SMFEs have also suffered from low technical efficiency and lack of market experience and non-state enterprises have been additionally prejudiced by a remaining bias towards state enterprise in taxation regimes (e.g. low rates of agricultural product tax and higher redistribution of forest regeneration fees).

The evolving policy environment for SMFEs in China presents a series of opportunities and challenges. On the one hand, China's transition to a market economy, its accession to the WTO and ongoing globalisation offer greatly expanded market access, especially where China's low labour costs are an important factor. On the other hand, market development brings a greater degree of market competition that will penalise inefficient producers –especially where producers are burdened by ideologically mixed messages regarding property assets such as forest land, high traditional tax rates, inadequate credit mechanisms and unequal incentive treatment. SMFEs have little market presence to help them overcome such hurdles, but sectoral associations provide one option to enhance market power.

China's major new ecological policy reforms (e.g. the National Forest Protection Program or the Sloping Farming Lands Conversion Program) also pose opportunities and challenges for SMFEs. The imposition of ecologically orientated logging quotas has opened up a vast gap of 150 million m³/yr between domestic timber supply and demand. This has had a drastic impact on many domestic production companies, but has simultaneously opened up many opportunities for SMFEs able to access international trade. Managing such market effects to ensure sustainability and the provision of stable livelihoods will require careful planning.

The scale of SMFEs and their potential contribution to environmental sustainability and rural livelihoods at this crucial transition period in China has prompted a call for a concerted program of action learning. Major steps forward are needed in the collection of baseline data on SMFEs and their contribution to the Chinese economy. Engagement with the key policy actors involved with a series of policy, market and management challenges for the sector will also be crucial. Pilot initiatives are needed to test options which deliver environmental and livelihood benefits.

1. INTRODUCTION

1.1 Objectives

This study focuses on sustainability and livelihood impacts of Small and Medium Forest Enterprises (SMFEs) in China. It forms part of a broader initiative coordinated by the International Institute for Environment and Development (IIED) entitled "Bridging the gap between big business and small livelihoods enterprise in forestry". The study is based on the premise that most international attention in forestry has been given to improving the conditions for large-scale or micro-scale forestry, and much less to the 'messy middle' - which produces a high proportion of forest product and involves huge numbers of people. Some of the reasons for this include:

- The complexity of establishing and monitoring links with multiple small and medium sized enterprises in diverse locations, often without formal associations or networks.
- The diversity of constitution of these enterprises which complicates lesson-learning and diffusion of relevant solutions
- The small individual scale of each enterprise (compared with large enterprises) which reduces the per-unit impact of development interventions
- The lack of formal incorporation and collateral by which such enterprises might attract investment capital

The China country study conducted by the Research Center for Ecological and Environmental Economics (RCEEE) had a number of specific aims which can be summarised as follows:

- Provide an objective assessment of the current status of small and medium forestry enterprises (SMFEs) in China, on the basis of detailed surveys - covering the distribution, scale, value of output, ownership and technical levels of SMFEs.
- Identify and characterise the determining factors that affect the development of SMFEs in China, including property rights arrangements, organisational arrangements, taxation and credit/financing arrangements.
- Analyse the positive and negative impacts of governmental policies on the development of SMFEs and the mechanisms through which such impacts are realized. Particular attention will be given to the changing role of forestry in China and the implementation of the six major national forestry programs.
- Analyse the impact of SMFEs in terms of the provision of forest goods and services, as well as contributions towards local livelihoods.
- Analyse the challenges and opportunities that the development of free markets has brought about for SMFEs. Particular attention will be given to the fact that China is rapidly becoming a major global assembly base for wood products and new rules are being practiced in a post-WTO era for China's forestry sector.

1.2 Justification

This new research aims to contribute towards the broad goal of sustainable forest management. SMFEs in China have been accused of resource use inefficiency and over logging. This study will help to determine if such accusation is justifiable and identify ways to improve wood use efficiency among SMFEs and mobilize SMFEs as a force for good forestry.

Research is needed to provide an information platform in support of the on-going adjustment in ownership structures in the forest industry in China. Currently the reforms in China are geared toward the development of non-state economies so that a diversified ownership structure can be developed. During the planned economy era, the forest industry was one of the sectors that had the highest portion of state ownership in timberland management and resource utilization. SMEs (Small and medium enterprises) are promoted as being the best entities for non-state enterprises. It is proposed that developing SMFEs would greatly promote the transition toward a non-state economy in the forestry sector, and this study provides valuable information about how that might be achieved sustainably and to the benefit of rural livelihoods.

This research will generate ideas on how to promote healthy growth of the SMFEs in China, from the perspectives of both public policy and market development. The six major government programs in forestry and the WTO entry are all important forces that are shaping the environment for SMFEs growth in China and therefore warrant careful research.

In addition, this research will help to test the proposition that SMFEs have an advantage over larger and more micro scales of business (cottage industry) in terms of resource use efficiency, sustainable resource use and livelihoods development.

2. BACKGROUND INFORMATION ON SMEs AND SMFEs

2.1. Defining SMEs and SMFEs

SMEs are defined by the US SMEs Administration as firms with less than 500 employees and less than 5 million dollars annual sales. In Japan the SMEs Law defines SMEs as manufacturers with less than 300 employees or less than 100 million Yen in capital; commercial distribution firms with less than 100 employees and less than 30 million Yen in capital; or retailing and service firms with less than 50 employees or less than 10 million Yen in capital. In China, firms with annual sales less than 50 million Yuan are all classified as SMEs (China Statistics Bureau, 2000). However, firms in China are more often classified by the size of the fixed capital they own or command (see the table below for details).

In China forestry enterprises in their broadest sense cover three different industries, namely:

1. Timberland management-based primary industry;
2. Forest industry-based secondary industry such as logging, wood processing, forest chemical industry, pulping and papermaking industry.
3. Forest services-based tertiary industry.

A detailed classification of SMFEs is provided by the “Classification Criteria of Large, Medium and Small Industrial Enterprises” as follows (State Forestry Administration, 2000):

Table 1. Classification criteria for large, medium and small industrial enterprises in China in units of 10,000 Yuan fixed capital.

Industry	Large		Medium		Small
	I	II	I	II	
Timber logging	15000 and up	6000—15000	4500—6000	3000—45000	3000 and less
Wood processing and forest chemical industry	10000 and up	5000—10000	3500—5000	2000—3500	2000 and less

Note: Super-large forest industry firms refer to enterprises with fixed capital of 600 million Yuan or more.

2.2. Existing literature on forest enterprise

Our review of accessible literature reveals little existing research on the subject of SMFEs, and no evidence of systematic research being done. The few studies identified concentrate on the internal management of forestry enterprises. These scattered studies may be grouped into four key thematic areas, including:

- Transformation of forest enterprises, particular ownership structures
- Corporate management of forest enterprises
- Financing issues
- Incentive mechanisms

2.2.1 Transformation of forest enterprises.

The majority of the literature in this thematic area relates to the transformation of ownership structures, mainly the introduction of shareholding arrangements and the transactions governing related property rights/shares. Key references include the following:

1. Bao Guozhan: Adjusting ownership structure of forestry enterprises. *Chinese Forestry*. 1999(4).
2. Cui Jingpin: Property organisation of small and medium forestry enterprises in China. *Mongolian Forestry*. 1999(8).
3. Song Jinsong: Share cooperation mechanisms and small and medium forestry enterprises reform in China. *China Forestry Business*. 1998(2).
4. Sun Qingyun: Transform of forestry enterprises' property in China. *China Forestry Business*. 1999(6)
5. Wang Youhong: Full prerequisite of share cooperation reform of state-owned forestry enterprise. *Issues of Forestry Economics*. 2000(4)
6. Xie Zhizhong; Ye Feiguang: Capital operation and forestry enterprises reform. *Issues of Forestry Economics*. 2001(4)
7. Zhang Zhiguo: Property reform of forestry enterprises in China. *China Forestry Business*. 2001(6)
8. Zhang Shiyuan: Small and medium forestry enterprises reform in China. *Protection Forest Science and Technology*. 2001(4).

2.2.2 Corporate management of forest enterprises

The literature in this thematic area concerns the management of forest enterprises, including general management, technical innovation, corporate culture and human resources management. The key references are as follows:

1. Liu Yanna and Huang Yuxin: Green management and sustainable forestry enterprises development. *Ecological Economy*. 2001(3).
2. Liu Yanna and Xing Xiufeng: Knowledge Management and Forestry Sustainable Development. *Issues of Forestry Economics*. 2001(5).
3. Wang Liyun: Characteristics of forestry enterprises culture in a knowledge economy. *Issues of Forestry Economics*. 2001(3)
4. Wang Liyun and Zhang Shuisheng: Reinforcement of human capital accumulation of forestry enterprises. *Issues of Forestry Economics*. 2002(1).
5. Wang Bo and Zhang Xianao: Countermeasures of human resource development and management in forestry enterprises. *China Forestry Business*. 2002(4).

6. Xiao Youzhi: New ideas of culture management of forestry enterprises. *China Forestry Business*. 2002(4).
7. Xu Junjie and Wang Wei: Changing management model of forestry enterprises under a knowledge economy. *China Forestry Business*. 2001(6).
8. Zhang Yu: Strengthen management power of forestry enterprises in China. *China Forestry Business*. 2000(6).

2.2.3 Financing issues for forest enterprise

Within this thematic area the main areas of study have covered capital mobilisation, investment and accounting issues. The key references are as the following:

1. Dong Zhihua: How to strengthen the audit system of small and medium forestry enterprises. *Forestry Finance and Accounting*. 1999(2).
2. Fu Yunliang: How to improve the capital quality of forestry enterprises. *Jilin Forestry Science and Technology*. 1995(5).
3. Ke Jianhua: Asset appraisal of forestry enterprises. *Forestry Investigation and Design*. 2000(3).
4. Liu Changling: Accounting plays an important role in forestry enterprises management . *Hebei Forestry Science and Technology*. 2001(2).
5. Meng Quansheng: The exploration of establishing a new accounting system for forestry enterprises. *Journal of Northwestern Forestry College*. 1995 (10).
6. Meng Quansheng: Establishing accounting system of new forestry enterprises. *Journal of Northwestern Forestry College*. 1996 (1).
7. Shen Jingping and Liu Danhui: How to improve capital management of forestry enterprises. *Forestry Finance and Accounting*. 2002 (3).
8. Zhou Yanchang, Wang Binhui: How to analyze financial statements of forestry enterprises. *Forestry Finance and Accounting*. 2001 (1).

2.2.4 Incentive mechanisms of forest enterprises.

While there are only a few references linked to incentive mechanisms, some significant progress has been made. Key references are:

1. Miao Hong, Property incentive of state-owned forestry enterprises. *Liaoning Economy*. 2002 (1).
2. Sun Xuejun: A comprehensive evaluation on the capacity of sustainable development of forestry enterprise bureau in Yichun. *Journal of Northeast Forestry University*. 1995(5)
3. Zhong Jianguo: How to assess forestry enterprises by labour productivity. *China Forestry Business*. 2000(4)

2.3. The background context for SMFEs in China

2.3.1 The macro-economic context

Forest industries form the economic core of the forestry sector and remain the major means of realising the economic value of forest resources. In terms of economic revenue, the leading value chain is timberland management / logging enterprise / forest products industry. Increasingly, however, forests are being managed for their ecological, biological, social and environmental values.

The term “Forest enterprise” refers to the many different types of commercial entity involved in the management of forests and the related value chain. In China, state-ownership has dominated the forestry sector and the forest industry for a considerable period of time (Zhang Shiyuan, 2001). This domination has included the universal public (state or collective) ownership of timberland and the standing stumpage on timberlands, as well as wood/fibre processing and distribution facilities downstream. At its zenith, the production and distribution of every single log in China was formally controlled by state plans (Wang Youhong, 2000). For instance, logging is controlled by government quotas, and transportation of timber and timber products require transportation permits which are checked by a network of state-controlled checking stations all over the country against actual physical movement of timber. This state-ownership has been found notoriously inefficient (Wu Yanli, 2000).

An addition problem has been occasioned by the fact that state ownership is also split across different sectors. For instance, while forest land management, timber production and primary processing of timber has been under the jurisdiction of the Forest Department, fibre production (pulping and paper-making), furniture production and the manufacturing of wood building materials has been under the jurisdiction of the (so-called) Light Industry Department. This has resulted in a lack of coordination between forest management and market demand. In short, forests have not been planted and managed according to market demands.

Beginning in the 1990s SMFEs started to enjoy opportunities for growth in China (State Forestry Administration, 2001). They emerged mostly as non-state or private entities. Unlike SMFEs in developed economies, SMFEs in China have been able to grow fast in the space created by the transition toward a market-based economy. Yet they also have had to face some of the uncertainties, irregularities, restrictions, unfair competition with state owned enterprise or prejudices associated with such an inherently chaotic process of market development. Those who were good at adapting to a semi-market and semi-planning business environment survived, while others perished.

Recently, new opportunities and challenges have been brought about by China’s accession to the WTO. While easier market access to both domestic and international markets is now

being developed for these SMFEs, more intense competition is also anticipated (Zhou Shengxian, 2002). Surviving the globalised market is now the new challenge for many of these SMFEs.

Yet another challenge comes from the strengthening environmental movement. Since the devastating floods of 1998, the Chinese government has initiated a number of ambitious programs in the forestry sector that aim to strengthen ecological forestry. These include the Natural Forest Protection Program and the Sloping Farming Lands Conversion Program. According to these programs, in the first 10 years of the 21st Century, the annual government quota for commercial timber production will be reduced by some 20 million m³ (including 12.39 million m³ for the upper reaches of Yangtze River and middle and upper reaches of the Yellow River, and 7.515 million m³ in North-eastern China)(State Forestry Administration, 2002).¹. The availability of reduced commercial timberland is certainly a challenge to the development of some SMFEs while it may generate opportunities for other SMFEs who engage in timber import and wood products export.

Overall, market transformation, globalisation associated with the WTO entry and the erosion of timber production base associated with strengthened ecological forestry are the three most powerful macro forces that shape the business environment for SMFEs in the past decades and they will continue to affect the survival of these SMFEs in the foreseeable future. Their forces and their related processes are discussed in more detail below.

2.3.2 The process of free market growth

This section deals with the development of market growth around forest resources management rights, timberland use rights and forest resources as market assets. This market expansion is the basis for the development and growth of SMFEs in China. In the process of market-based transformations, the role of policies and plans in resource allocation in the forestry sector has diminished while the role of market has increased. Today, the timber distribution market has been fully opened, and markets are also being developed for other factors of production such as land and the standing forest resource.

Forest/timberland as an important production factor or asset and has begun to be introduced to market forces with the introduction of timberland use rights auctions and transactions relating to standing stumpage (Yao Xinzhang, 1996). Following on from the 1984 forestry “three fixes”² and the 1990s auction of use rights for the “four wastes”³, factor markets have

¹ Year 2001 China Forestry Development Report, State Forestry Administration. China Forestry Publishing House, 2002.1. Beijing.

² In March 1981 the State Council promulgated the “Decisions on Issues Pertaining Forest Protection and Development” and put forward the famous “three fixes” policy of encouraging landholders to manage forests. Major elements of the policy are: a) stabilising and fixing the use rights and tenure of timberlands and forests; b) clearly defining and demarcating family hills (timberlands contracted to individual households for management); c) establishing forestry responsibility system. These changes in tenure arrangements were an extension of the successful family contract responsibility system in agriculture and greatly encouraged household investment in timberland management.

³ Since 1993 the central government of China began to allow the auctioning of wastelands for afforestation. The so-called “four-wastes” include waste hills, waste slopes, waste valleys and waste riverbanks. These

been developed to mobilise farmers in tree planting and ecosystem restoration.

Recently, the state has implemented a policy of extending contractual rights to land including timberland for another 30 years. This would allow contractors time to manage timberlands for at least two rotations in fast-growing plantations (Xu Junjie, Wang Wei, 2001). The Forest Law and its implementation regulations also allow market transactions of land use rights for timberlands, economic timberlands and fuel woodlands (Chen Genchang, 2002). Rights so gained are guaranteed by the state and the management of these lands is at the discretion of contractors as long as the overall land use pattern remains unchanged.

In addition to changing timberland use rights, the monopoly of state ownership in forest management has also been changed by the introduction of private business. This diversification in ownership structure has been achieved mainly through a shareholding system, paralleling the widespread “family contract responsibility system” in agriculture in China (Song Jinsong, 1998). Labour inputs and existing stumpage or land use rights provided/owned by individual households can be accounted for as shares in share-holding companies set up by the collectives in their community.

A process has been initiated to constitute forest resources as market assets and to make them tradable in the market (Shen Jingping, Liu Danhui, 2002). Until recent times, forests in China were not accounted for as assets; being recorded instead as non-valued, stand-alone stumpages. Non-valued stumpages are based on the Marxist theory that resources without human labour inputs have no “value”, because trees naturally grown would not require human inputs. But now, some enterprises have started to record stumpages as market-assets and register them as such in their accounting books. Many of the functions that market assets might have had in a mature market economy would therefore not formerly have been applicable to forests in China. The new process of market expansion into forest stumpage reverses that situation but is just beginning and far from being completed in China.

2.3.3. Globalisation of markets and capital investments

The globalisation of markets and foreign direct investments have brought both opportunities and risks to China. China is both a major producer and consumer of forest products, but its per capita forest resources are tiny in international terms. The domestic market is not as strong as comparable other regions. In the next 10 years demands for wood and wood products are forecasted to grow steadily in China. It is estimated that by 2005 total timber demand will reach a record 340-350 million m³, of which 110 million m³ will be fuel wood; demand for man-made boards will reach 26-28 million m²; and demand for wood-pulp and

wastelands account for 5.6% of China's total land area. Farmers can obtain such wastelands via auctioning instead of administrative assignments, and wastelands obtained in such a way have more secure and longer term use-rights by the winning families. By 1996 China has already auctioned 370,000 ha (1 ha=15 mu) of wastelands for afforestation. Since the revision of the Forest Law in 1998 this practice has been further expanded to auctions of use rights for forested lands such as new planting sites, young forests and mature forests.

wood-pulp based paper will reach 8.5 million tons. By 2010, it is estimated that total demand for timber will climb to 400 million m³, and man-made board to 36 million m² (FAO, 1998).

Since 1998 the implementation of the National Natural Forest Protection Program has further decreased domestic wood supply and widened the gap between domestic supply and demand in domestic wood market. Today, aggregate domestic demand for timber has already reached 300 million m³. However, the logging quota stipulated by the state government for the 5 years during the 10th five year plan (2001-5) is only 150 million m³. A gap of 150 million m³ would exist (Chinese Academy of Forestry, 2002)⁴, if this logging quota were strictly observed. In many other wood product categories, similar gaps exist. These gaps represent huge market potentials for SMFEs in China, especially those attuned to the overseas products market.

Globalisation of markets realised via China's WTO entry will certainly impact the development of domestic SMFEs, particularly in the secondary forestry industry. We assess the major opportunities and challenges below:

Opportunities: Globalisation will expand China's market access for furniture, bamboo products, and NTFPs. Such products require substantial labour inputs, and China has a reasonably trained low cost labour force. According to statistics by China Furniture Association, Chinese furniture exports have achieved a 15% annual growth in recent years. In 1999 China replaced Canada as the No. 1 exporter of furniture to the US (Xu Changbo, 2000). China also has an advantage in rosin and other NTFPs. Annually China produces some 0.4 million tons of rosin and exports, as the largest exporter, about half of this production. China also exports some 20-30 thousand tons of fragrant oil, particularly oil made from eucalyptus (Xu Changbo, 2000).

Challenges: After the WTO entry most forest products will lose the tariff protection they currently enjoy. Logs, sawn timber and wood pulp already have a zero tariff rate. However, other wood products, wood panels and furniture are still levied by a 15%-20% tariff (Bao Hui, 2002). By 2002 the average tariff rate on wood and wood products has been lowered to 8.9%, and the import quota on plywood and foreign exchange restrictions on wood products importing have been lifted. It is predicted that by 2005 average tariff rate will be lowered by a half to below 5% (Yao Changtian, 2002). The wood processing industry and panel industry will face tough competition, given their overall inefficiencies.

2.3.4 Impacts of governmental ecological programs on SMFEs development

Opportunities: Government ecological programs such as logging quotas linked to the Natural Forest Protection Program and the Sloping Farming Lands Conversion Program impact the livelihoods of millions of workers and community residents in the project regions.

⁴ Year 2002 Market Report for China's Timber Industry, Unpublished report, Information Institute, Chinese Academy of Forestry.

Many of these regions are economically underdeveloped. In an effort to develop alternative livelihoods and industries, many new forms of enterprises and economic entities have been developed, particularly in the business of developing raw material bases in connection with these government programs. In Muchuan County of Sichuan Province, for instance, a joint venture of 5 million Yuan on forestry and bamboo development was established by Yongfeng Paper Shareholding Company and the County Forestry Bureau. In 2002, this joint venture leased 25,000 mu⁵ of timberlands from individual households to develop plantations. These lands were being leased for 28 years. In the first 5 years, these households are entitled to a company subsidy of 6-20 Yuan/mu per year, in addition to the subsidy provided by the government under the Sloping Farming Lands Conversion Program. In the following 23 years, the leasing households will continue to receive a company subsidy of 6-20 Yuan/mu. These households are also paid for the planting, caring and logging the plantations. Similar arrangements between the Hong-Kong based Kaile Corporation, the County Forestry Bureau and individual households have been pursued in establishing an edible bamboo shoots plantation of 5,000 mu.(State Forestry Administration and Planning Department, 2002).

In conclusion, a better understanding of SMFEs in China is particularly important given the unique business environment they are facing. The process of market development, globalisation and environmental conservation has given SMFEs in China a range of unprecedented opportunities. These SMFEs, mostly privately-owned, will be instrumental to the transformation of a forestry sector that has been traditionally dominated by the state. This may in turn have positive impacts for the sustainable management of forests that have been seriously depleted in the past five decades by state logging firms, and for the generation of livelihoods for many forest dependent communities in China.

Challenges: The reduction in domestic timber production resulting from government ecological programs may, however, restrict growth of those SMFEs located in regions that are put under the so-called logging ban on natural forests as part of the Natural Forest Protection Program. For instance, in Sichuan Province the logging ban has resulted in a reduction of panels from 0.23 million m³ in 1998 to 0.132 million m³ in 2001, a 42.6% reduction. Similarly, decorative panels have decreased from 0.386 million m³ in 1998 to 0 in 2001(State Forestry Administration and Planning Department, 2002).

⁵ 1 mu = 1/15 ha.

3. CAPACITY AND DEVELOPMENT PATTERNS OF SMFE IN CHINA

3.1. Current administration arrangements

3.1.1 Introduction

The Chinese government's role in business management is undergoing a transition from direct intervention toward indirect guidance and support. Today, the administrative functions of the government over forestry firms are still scattered across different sectors. In addition, forestry enterprises are being burdened with over-taxation, lack of credit and technical support and isolation from the mainstream market. Finally, these enterprises particularly state owned enterprises have been forced to assume many of the responsibilities that might be expected to be borne by government, such as employment and worker welfare. All these factors are hindering the streamlining of government administration of SMFEs and limiting their space for growth.

3.1.2 Sectoral administrative arrangements

Government forest agencies are prominent at all levels in China (Chen Rong, 1983). From the State Forestry Administration in the central government to provincial, prefecture, county and township administrations, there are departments or stations in charge of forestry affairs. These institutions enforce the annual logging quota system. They are responsible for checking all over the country to ensure all timber and timber products being transported have been legally logged and taxed. Over time, however, this system has developed many loopholes, allowing smuggling of illegally logged timber. Worse, this system itself has become a financial burden to operate and maintain, and has been used for over-taxation and rampant fee levying to the benefit of local government/department coffers. This is the result of a lack of a unified public finance system in China. Overall, this system has emphasised control over resource use, and has not favoured sustainable resource management.

3.1.3 Sectoral associations

Industrial associations are important arrangements for sectoral growth in established market economies. In China the tradition has been for industry associations to be managed as semi-government organs, serving upper level government mandates instead of meeting member needs. Much needs to be done to transform the various industry associations in the forestry sector in China into membership based and self-disciplined non-profit institutions (State Forestry Administration, 1999). Major associations in the forestry sector include:

- China National Forest Products Trading Association
- China Forest Industry Association
- China Wood Distribution Association

- Coordination Center for Forest Products Distribution under the State Forestry Administration.

China National Forest Products Trading Association—A Profile

The China National Forest Products Trading Association (CNFPTA) is registered with the Ministry of Civil Affairs and specializes in services for forestry enterprises in production, marketing and consumption of forest products, and in promoting sectoral development. CNFPTA conceives itself as being a bridge between enterprises and the government. Its activities include market and industry studies, advising the government on relevant industry rules, laws and regulations, promoting collaborations, providing consulting services, carrying out training and international exchange activities, coordinating the importing and exporting of forest products, and safeguarding member interests. CNFPTA has a Secretariat and two Subcommittees on Wood Chips and Marketing Coordination.

These associations, even though classified as non-profit organisations, are mostly semi-government organisations. With their management appointments and agenda driven by the government, these associations are far from being real membership-based and member-driven civil societies. They can be useful sources of information for the industry but their potential role in promoting SMFE development remains to be explored.

3.2. Current Status of SMFEs in China

3.2.1 Distribution and importance within the forest sector

According to the Third National Industry Census, there are a total of 5,460 forestry enterprises at the township level or above in the forestry sector in China. Among these enterprises, 780 are medium or larger, accounting for 14.3%. The rest, 86.7%, are small enterprises. (SFA Forest Economics Research Center Project Team, 1998). Among all the industries in the forestry sector, the wood processing industry has the highest number of enterprises, accounting for 37.7%. Next is the timber and bamboo logging industry, accounting for 21.9%, whilst the forestry chemical industry accounts for 13.3%. The remaining 27.1% is accounted for by forest machinery and repair, building materials, hydropower and other related processing enterprises. Over time, the number of enterprises in logging, the forestry chemical industry, machinery and repair, and hydropower has increased, while other industries in the forestry sector have experienced a decline in total enterprise numbers, with wood processing experiencing the largest decline.

In terms of output value, wood processing still tops all the industries, accounting for 44% of total value in the forestry sector (Ke Jianhua, 2000). Next comes the logging industry, taking up 34%; followed by forest chemical industry of 5%. According to current statistics, over 90% of the total value in the furniture and wood products industries (i.e., wood based furniture and wood building materials) have been generated by SMFEs. In terms of

employment, state workers are mostly employed in logging and primary wood processing enterprises, while the furniture and second wood processing industries employ a disproportionately large share of non-state workers.

In terms of distribution over industries, SMFEs are mostly distributed in the Secondary and Tertiary Industries of the forestry sector. These include wood processing, plywood, particleboard and furniture industries. Few SMFEs are as yet engaged in timberland management. This has much to do with the fact that the management of timberlands, particularly existing natural timberlands, has long been dominated by state/collective forest farms. Little access has been provided to non-state entities (Liu Dachang, 1998).

3.2.2 Productivity and Capacity of SMFEs

Few studies have been done on this topic. One study (see Table 2) has indicated that SMFEs are less efficient than larger firms due to their lack of scale economies. However it should be pointed out that this conclusion has two qualifiers: 1) most of these firms surveyed are state-owned (the comparison may generate very different results if private SMFEs are used); 2) these state SMFEs are located mostly in logging and primary processing where the capital economy of scale is significant.

Table 2 Year 1998 Forest Enterprises Performance Comparison

Scale	Total capital contribution rate %	Debit ratio ⁶ %	Working capital turn over rate ⁷ times/year	Cost-profit ratio ⁸	Labour productivity Yuan/Person.year	Product Sales rate %
Large	8.7	71.2	1.06	3.32	14963	98.4
Medium	4.6	73.6	1.12	-4.01	27070	89.0
Small	5.8	68.4	1.05	-0.68	22234	88.0

Source: An analysis of forest enterprises development pace and financial performance in China's forestry sector. SFA Forest Economics Research Center Project Team (unpublished report), 1998.

3.2.3 Organisational arrangements and degrees of market development of SMFEs

There are still 60 million ha of "barren lands" that are considered suitable for forestry in China; over 14 million ha of these lands are suitable for timber production and about one third of these timberlands are suitable for fast-growing plantation development (China Collective Forestry Reform and Development Research Team, 2002). Overall, timberland

⁶ Liability ratio is also known as debt ratio: it is the ratio measured by the amount of a firm's liability over its total asset.

⁷ Working capital turnover rate measures the speed of circulation of working capital in a year.

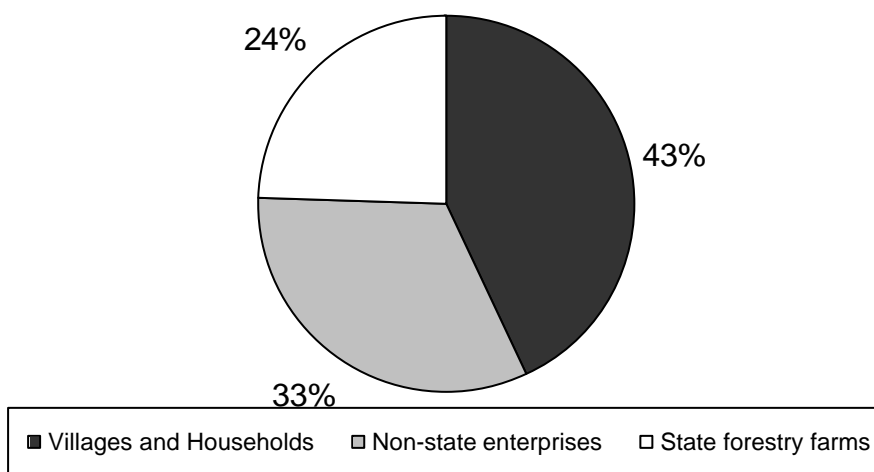
⁸ Cost-profit ratio = total profit/total cost.

management in China is still dominated by households, with community-company partnerships being developed in certain regions with large-scale industrial plantations (Bruce, J.W., Rudrappa, S., and Li Zongmin, 1995). The degree of market development in timberland management is in general lower than that in the wood processing industry. This is primarily because of two groups of reasons:

Firstly, the factor market for the timberland management industry is underdeveloped. Land ownership and forest use rights have for a long time not been clearly defined and actively traded (Li Yacai, 1996). This lack of security has resulted in a general lack of incentives in timberland management for private SMFEs. Similarly, peasant labour has been denied employment in state-owned forest management enterprises. Due to the fact that stumpage is not treated as a financial asset and the long production cycle in timber production, forestry enterprises have not had adequate access to financial resources and credits (stumpage is just being used as financial guarantor in commercial borrowing in recent years on a pilot basis). Finally, timber has been heavily taxed so that the rate of return on timberland investment has failed to encourage sustainable silvicultural regimes.

A second reason for slow development of markets in timberland is that state/collective enterprises have dominated timberland management in the past. Only recently have non-state enterprises started to engage in timberland management in the form of leasing, community-company partnerships and joint-venture arrangements. However, collectives are sourcing more of their production from villages or individual households. In 2000 the proportions of timber produced by villages and its sub-branches and individual households, by non-state forest enterprises and by state forestry farms were 43.1%, 32.5% and 24.4% respectively. The figure below illustrates this.

Figure 1. Timberland timber production by types of enterprise



Data source: China Forestry Statistics Yearbook 2001.

In the industries of primary and secondary wood processing, however, the degree of market development is significantly higher. Products such as sawn timber, plywood, pulp and

paper and furniture are being traded as market commodities or exported. This has resulted in a significantly higher proportion of private SMFEs in these industries. There is a great proliferation of cottage industry small mills. Their major problem is inefficient resource use, with a lack of basic equipment for wood processing such as drying kilns.

According to incomplete statistics, there are altogether 14,907 enterprises in forest management, logging of timber and bamboo, processing of lumber, bamboo and rattan products, wood furniture, pulp and paper processing industries. This number does not include foreign enterprises operating in China. According to a rough estimate by the authors, the ratio between medium to large enterprises and small enterprises is some 1:10 (Bao Guozhan, 1999). In terms of revenue, the forest industry generated a total of 21.93 billion Yuan in 2000. Of this revenue, the state owned sector accounted for 68% or 14.88 billion Yuan, whereas the non-state sector accounted for some 32% or 7.05 billion Yuan (Miao Hong, 2002). Because most large enterprises in the forestry sector in China are state owned, this ratio is also proximately the ratio of revenue generated by large versus SMEs in the forestry sector. From an employment perspective, at the end of 2002 there were a total of 1.06 million employees in the sector; of those some 0.392 million workers were in state forestry farms / forest management and the rest were in the forest industry (Wang Bo and Zhang Xianao, 2002). Current statistics on SMFEs in the wood processing and in bamboo and rattan processing only account for 44,000 workers and data on SMFEs in general appears to be weak (Zhong Jianguo, 2000).

3.3. Lessons from past SMFEs development in China

3.3.1 The ambiguity of property rights in timberland management hampers SMFEs growth.

Property rights ambiguity and insecurity has plagued Chinese forestry for decades (Zhang Zhiguo, 2001). Even for state-owned forests, it is not legally clear which government department actually owns the forest and which government department has the right and responsibility to generate added value and dispose of assets. Stumpage has generally been excluded from open market transactions - it has not been treated as a financial asset (Sun Qingyun, 1999). Legal uncertainties have hindered the development of timberland management as a profit-making industrial business. The end result is that investments have been focused on resource depletion, not the cultivation of young forests based on sustainable yields.

3.3.2 Over-taxation and discriminatory taxation against non-state operations

Forestry tax and fees account for some 50% of the total farm gate price for timber (Xu Zhengchun, 1999). Value added tax, forest cultivation fee and forest renovation fee, and special agricultural produce tax are the three major groups of taxes and fees. This extremely high level of taxation has made investment in forest management virtually non-profitable. Such a high level of taxation appears to be based on the reasoning that

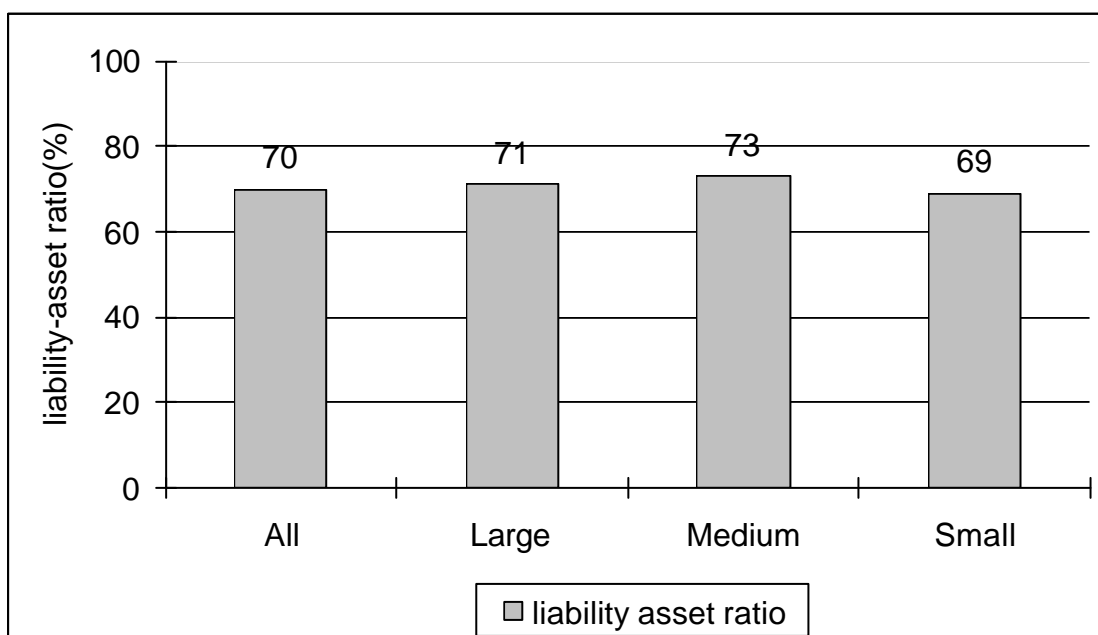
land rents (in the form of stumpage) form a part of the tax/fee level, and that such land rents when collected would be used for regenerating the logged over sites. In reality, however, this has resulted in discrimination against non-state entities. For example, the Special Agricultural Products Tax is levied at 17.6% of sale price for non-state entities, but only 8% for state forestry farms, and only 5% for state owned large forestry corporations (Liu Jinlong et al. 2002). Likewise, Forest Regeneration Fees and related fees are supposed to be used for forest regeneration and may be as high as a quarter of the total farm gate sales price of timber. In reality, if these fees are collected from non-state entities, they are not necessarily used for forest regeneration. If collected from state forestry farms, however, some 70% of these fees are refunded and used for reforestation at the farms' discretion. In the case of state-owned large forestry corporations, these fees are refunded 100% (Chen Shuquan, 2003).

3.3.3 Financial performance of SMFEs has been poor for a variety of reasons

Weaknesses in human resources, management, technology and equipment all contribute to a general low level of financial performance by SMFEs (Fu Yunliang, 1995). For instance, the average working capital turnover rate is only 1.12 times/year, significantly lower than the national average of 1.62 times/year.

In terms of liability ratio (amount of a firm's liability over its total asset) the figures exceeding 50% generate alarm. For forestry enterprises in China, however, this rate is often as high as 70%, and in the plywood industry it runs as high as 81.9% (SFA Forest Economics Research Center Project Team, 1998) although these figures do not single out SMFEs as worse than larger forest enterprises. The overall liability ratio for forest industrial enterprises in China is given below in Figure 2.

Figure 2. Liability ratios for forest industrial enterprises in China



Source: An analysis of the development pace and financial performance for industrial enterprises in the forest industry in China (unpublished report). (SFA Forest Economics Research Center Project Team. 1998).

3.3.4 Restrictions on financing and harvesting quotas have hindered SMFEs development

Despite government calls for equal treatment of state versus non-state enterprises, the business environment facing private SMEs, including SMFEs, in China is still full of restrictions. The financing system in China has long been designed and managed to benefit the state sector only (Cong Shuhai, 1998). This makes financing of SMFE operations and accessing working capital a major challenge. Also, the state-dominated financial sector is in general reluctant to finance forestry activities because of the perceived long production cycles and high risks (Zhou Yanchang and Wang Binhui, 2001). Another major restriction is in logging quotas. Like taxation, the distribution of logging quotas has favoured state enterprises. Today, many of the private entities who have invested heavily in the wastelands and young forests they acquired via auctioning are finding it difficult to log their forests because they are not allocated logging quotas (Liu Lunwu and Liu Weiping, 2001). This seriously hampers efforts by non-state entities in timberland management.

3.4 Examples of the impacts of SMFEs in China

SMFEs have often had useful contributions in economic growth, sustainable forest utilization and local community development in China. Nevertheless, the contribution by SMFEs to forest use has in certain instances been negative. In the earlier 1980s immediately after the opening up of the timber market, many small processing mills were set up in forestry communities to do primary processing of timber or panel products (Liu Yanna and Huan Yuxin, 2001). Many of them had problems associated with low resource efficiency due to technical and financial reasons. Since the 1990s many households in forestry regions started to engage in forest cultivation through arrangements with larger forest products companies or paper companies (Zhang Yu, 2000). Such arrangements have allowed farmers to manage their timberlands while farming and some productive plantations have been developed (see box below).

Despite some negative examples SMFEs have also promoted local economic development and helped to alleviate poverty in some cases. Among the 592 state-designated poverty counties in China, 496 counties are located in mountainous regions - some of them in absolute poverty (Non-State Forestry Development Research Team, 2003). Forestry is one of the main local industries and source of local livelihoods where little else is available in many of these mountainous regions. How to continue developing non-state SMFEs that alleviate poverty is both a policy challenge and an opportunity.

Timberland in Hunan Province – a profile.

By Year 2001 60.14% of the timberland in the Province was owned by non-state entities. The total acreage of non-state timberland was 85.4422 million mu. Contract timberland management by some private business or households achieved good financial results. In Jinshiqiao Township of Longhui County villager You Zhengming invested 0.4 million Yuan in wasteland reforestation in 1997. Some 2,100 mu of pine and fir forests have been established along with fruit orchards. The asset value of these forests today is as high as 2.5 million Yuan. His investment has also encouraged other villagers to follow suit.

One successful example is that of the Yongfeng Paper Shareholding Company in Sichuan's Muchuan County. Here, attention has been paid to the protection of farmer interests. When the market price for pulping chips is high, farmers receive good returns. When the market price is low due to fluctuations such as the Asian Financial Crisis, a baseline price kicks in to ensure a reasonable return on the farmers' investment. Today the company manages a risk-hedging fund by depositing 2% of its company profits so that the fluctuations in chip price can be alleviated. In 2001 farmers in the county earned a total of 66.71 million Yuan from selling chips to the company, which was equivalent to 300 Yuan/person (Zhou Shengxian, 2002).

SMFEs are particularly suited in many respects for providing contributions to local livelihoods. For example, many communities in Shangdong Province have been promoting the growing and processing of dates. In some localities the date industry has become a major livelihood source.⁹

The development of SMFEs in Liaoning Province – a profile

In Liaoning Province, non-state SMFEs developed rapidly since 1980s. Up to year 2001, there were over 1450 non-state firms in wood processing, with 13,000 employees and annual turn over of 3.5 billion yuan. Hengreng County alone has had a wood processing related industry worth 1 billion Yuan in recent years. This industry accounts for 35% of the total agricultural revenue in the county. Average per capita income from forestry for farmers was 1258 Yuan in 2001, accounting for 46% of total per capita income in the county. Forestry and its related processing industries have already become a pillar in local economic development and farmer income increase.

SMFEs have also proven to be particularly adept at absorbing local labour in rural forestry dependent communities. In Heze Prefecture of Shangdong Province, there are some 300,000 people engaged in forest related industries year round (Wang Liuyun and Zhang Shuisheng, 2002). In Zhuangzhai Township of Caoxian, there are over 100 factories

²⁶ Processing of the Non-state forestry development Symposium, Beijing, January 2003.

specializing in processing locally grown Paulownia wood. Supported by these mills, the largest Paulownia wood trading market in Central China has been developed in this county.¹⁰

We have noticed the fact that forest rich regions are often poor and less developed regions in China. Most regions of this kind have hilly landscape and little arable farming land. The cost of crop farming is high. For instance, in Fujian Province per capita hilly lands are as high as 4.8 Mu, and in mountainous regions this is as high as over 10 mu. To increase farmer income, forestry has to play a major role. Forestry including timberland management therefore has a clear comparative advantage.

In such forest dependent communities, large-scale forest enterprises have far less impacts on local farmer livelihood than SMFEs. While large-scale forestry enterprises have advantages in technology, equipment and productivity, their interactions with forestry farmers are realized mainly by supplying raw materials (Zhang Lei, 1998). On the other hand, SMFEs are often run by farmers and they provide employment, income and a host of other benefits that are crucial to farmer livelihood.

²⁷ Processing of the Non-state forestry development Symposium, Beijing, January 2003.

4. AN OUTLINE ACTION LEARNING AGENDA

Based on the above analysis, the following agenda is proposed for the study of SMFEs in China. This agenda is more “action-learning” than pure research – such that knowledge is generated through ongoing action, integrated closely with practice, and can facilitate change. The focus will be on addressing real world issues and building capacities for relevant stakeholders. The major stakeholders targeted for this research will be SMFEs themselves as well as government departments in charge of SFME policy.

4.1. A comprehensive background assessment of the status of China’s SMFEs

The first step in any action learning programme is to secure a sound baseline of evidence upon which to build. There has been no systematic survey and assessment of SMFEs in China. For example, there is not even any robust data surrounding the numbers of SMFEs, the revenues they generate and the people they employ. Such baseline information is considered essential for a better understanding of the role and potential, the constraints and opportunities, of SMFEs in China. SMFEs are distributed in different industries in the forestry sector. It is proposed that, in future surveys and assessments, SMFEs are classified into three major categories as follows:

1. Timberland management and logging industry: predominantly state-owned and state controlled by the logging quota system; i.e. with low levels of market development. The potential to generate value-added via market oriented transformation is huge, but would run into ideological barriers. Reforms could start with separating ownership from use rights, and starting to treat forests as financial assets. Joint-ventures and leasing arrangements could be pursued to encourage private involvement.
2. The fibre and secondary processing industries: mixed ownership pattern; state control is most strict in capital-intensive industries such as pulping and paper production (Cui Jingpin, 1999). An important challenge is to overcome the sectoral isolation between forest management and these downstream industries so that vertical integration can be pursued. Large TNCs (transnational corporations) in the paper and pulping sector are aggressively pursuing opportunities in China, including community-company partnerships. Whilst, this will help with market transformation, dangers lurk in the potential dominance of these TNCs over local SMFEs over time. TNCs are receiving favourable treatment (in comparison with domestic private businesses) in market access, credit and resource control, and these dangers will grow until government allows domestic private enterprises equal access to forestry business opportunities.
3. The industry in ecological forestry. Increasingly SMFEs are developed to tap into the huge business opportunities generated by enormous public financing of six large

forestry conservation programs. While these firms are involved in the production of public goods for the most part, they operate in a purely profit-making fashion. Also, international experiences indicate that many of the ecological services to be generated by these forests are actually suitable for market-based transactions.

4.2. Engagement with critical challenges affecting the development of SMFEs in China

A second important component in any action learning process is to begin to engage with the actors and institutions surrounding critical challenges. Greater understanding of these critical challenges is an important step in harnessing the opportunities and overcome the challenges faced by SMFEs in China. A number of challenges need to be the focus of this action learning approach – we highlight some of the more prominent below:

4.2.1. Policy challenges (state related)

a) Evolving the property rights policy

Property rights in land tenure and tree tenure need to be defined in the spirit of market assets and transactions. There is currently considerable political will to encourage the development of the non-state economy in China. This will generate momentum for SMFEs growth in China, particularly in the timberland management industries.

b) Reforming taxation policy

Current taxation practice in the Chinese forestry sector has failed to encourage investment in timberland management, notwithstanding the governmental intention to give favourable treatment to forestry development. It is essential that the taxation level be brought down to encourage SMFEs development in China.

c) Developing a workable credit policy

Direct financing mechanisms such as IPO in the stock market are almost impossible for most SMFEs to access in China (Xie Zhizhong and Ye Feiguang, 2001). Indirect financing mechanisms such as bank loans should be encouraged by preferential government credit policies toward SMFEs. The government can provide interest-subsidised loans, or help to develop guarantee services for SMFEs.

d) Pursuing equal and fair treatment between state and non-state entities

It is a general pattern that TNCs enjoy the most favourable policy treatment in China's forestry sector, followed by state owned companies. Private SMFEs enjoy the least policy support. However, they are large in numbers and critical to local employment and development. This order of preference should be changed. At the minimum, all

enterprises should be entitled to equal treatment.

4.2.2 Market challenges

a) Managing the gap between supply and demand

There is a widening gap between a dwindling domestic forest resources supply and growing SMFEs processing capacities. The growth in domestic market demand for wood products and in furniture exporting from China has stimulated growth in the number and capacity of SMFEs. However, domestic supply of timber has been on the decline. Increasing resource use efficiency and importing more timber will be the natural choice. However, this may have serious distributional effects. For instance, SMFEs located in the traditional forest regions may go bankrupt because of limited resource supply, further deepening poverty in these forest dependent communities.

b) Addressing the impacts of ecological programmes

The impacts of the six government forestry programs on SMFEs development needs to be better understood. In particular, these programs will further restrict the supply of available commercial timberlands. However, they may also generate market demand for intensively managed plantations, and may generate contract business opportunities in the field of ecological forestry.

c) Assessing the impacts of WTO membership

The impacts of China's WTO entry on SMFEs also demands analysis. WTO entry may create a wider space for SMFEs development, and may help to create a more open and transparent business environment for SMFEs. It may also help SMFEs to access overseas markets that are not accessible otherwise. However, it may also introduce more intense competition, particularly competition with those enormous TNCs—their market power can be devastating to some local SMFEs. Some of the factors at play include forest certification, and the reduction in production cost available to TNCs with globalisation.

4.2.3. Management challenges

Internal management, human resources, labour force skills and marketing ability are all factors that may affect the survival and growth of SMFEs in China. They therefore deserve research.

4.3. Action-learning pilot programmes

Building on the baseline assessments and engagement strategy described above, work will be needed in particular case locations where research, learning and policy experimentation

can take place with target SFMEs enterprises. The aim here will be to experiment with concrete policy opportunities where the time may be ripe for government to be receptive to policy advice.

Workshops and other forms of policy dialogue can be facilitated to build consensus around proposed policy changes and their implications, and to disseminate research findings. The aim will be to identify a cadre of change agents who are in the position to influence policy outcomes in these different areas.

In conclusion, a range of policy, market and management factors present challenges to the development of SMFEs in China. In particular, the large volume of imported timber and various forms of policy failures may constrain SMFE growth. These factors are, in turn, shaped by the three macro-forces of market development, globalisation and environmental protection. Studying these factors and their impacts on SMFE development against such a rapidly evolving general macro-business environment, and understanding the role of SMFEs in socio-economic development and sustainable forestry in China, are important exercises. More important still is to utilise and improve that understanding such that better practice results – with resulting benefits for SMFEs profitability, sustainability and contributions to poverty reduction. The action-learning approach outlined above presents the opportunity for such improved practice.

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Forest enterprise in China has been dominated over the recent past by the State. But the 1990s movement towards a market-based economy saw a rapid growth in non-state enterprise, particularly in the secondary and tertiary processing industries. Small and Medium Forest Enterprises (SMFEs) have an important role to play in support of rural livelihoods. They have proved adept at absorbing labour within the mountainous 'poverty' counties in China where forestry is an attractive alternative to agricultural land use. The evolving policy environment for SMFEs, has included major new ecological reforms (e.g. the National Forest Protection Program or the Sloping Farming Lands Conversion Program). The imposition of ecologically orientated logging quotas has opened up a vast gap of 150 million m³/yr between domestic timber supply and demand. This has squeezed domestic production companies, while opening up many opportunities for SMFEs able to access international trade. This study recommends the need to review the impact of such policies on sustainability and livelihoods.

This study was commissioned as part of a cross-country initiative coordinated by the International Institute for Environment and Development (IIED) on Small and Medium Forest Enterprise. Most international attention in forestry has been given to improving the conditions for large-scale or micro-scale forestry, and much less to the 'messy middle' – which produces a high proportion of forest product and involves huge numbers of people. The aim of these studies is to raise the visibility of SMFEs and assess ways by which they can better contribute to reducing poverty and improving the prospects for sustainability.

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