

J. W. GOTTSTEIN MEMORIAL TRUST FUND

The National Educational Trust of the Australian Forest Products Industries



STRENGTHENING THE COMMERCIAL FORESTRY RELATIONSHIPS BETWEEN AUSTRALIA AND CHINA

PHIL TOWNSEND

2004 GOTTSTEIN FELLOWSHIP REPORT

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Joseph William Gottstein Memorial Trust Fund

The Joseph William Gottstein Memorial Trust Fund was established in 1971 as a national educational Trust for the benefit of Australia's forest products industries. The purpose of the fund is *"to create opportunities for selected persons to acquire knowledge which will promote the interests of Australian industries which use forest products for the production of sawn timber, plywood, composite wood, pulp and paper and similar derived products."*

Bill Gottstein was an outstanding forest products research scientist working with the Division of Forest Products of the Commonwealth Scientific Industrial Research Organization (CSIRO) when tragically he was killed in 1971 photographing a tree-felling operation in New Guinea. He was held in such high esteem by the industry that he had assisted for many years that substantial financial support to establish an Educational Trust Fund to perpetuate his name was promptly forthcoming.

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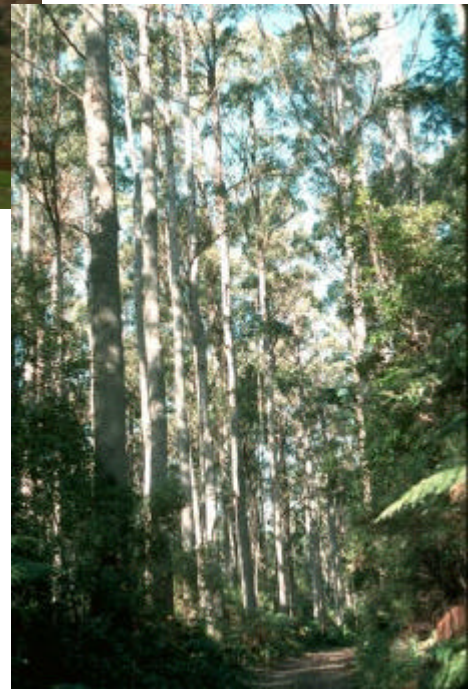
1. Fellowships and Awards - each year applications are invited from eligible candidates to submit a study programme in an area considered of benefit to the Australian forestry and forest industries. Study tours undertaken by Fellows have usually been to overseas countries but several have been within Australia. Fellows are obliged to submit reports on completion of their programme. These are then distributed to industry if appropriate. Skill Advancement Awards recognise the potential of persons working in the industry to improve their work skills and so advance their career prospects. It takes the form of a monetary grant.
2. Seminars - the information gained by Fellows is often best disseminated by seminars as well as through the written reports.
3. Wood Science Courses - at approximately two yearly intervals the Trust organises a week-long intensive course in wood science for executives and consultants in the Australian forest industries.
4. Study Tours - industry group study tours are arranged periodically and have been well supported.

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The contrasts between the forest industries in China and Australia are as stark as the differences in China's agricultural landscape (on the left) and the *Eucalyptus obliqua* (Messmate) forest in Australia. Both photos were obtained from www.fao.org/forestry

Background

In 2002, the Fujian Forest Industry Association and the Fujian Provincial Forestry Department requested that an Australian delegation attend the China International Fair for Trade and Investment (Xiamen City, Fujian Province). Following that meeting it was agreed that the National Association of Forest Industries from Australia and the Fujian Forest Industry Association should sign a Memorandum of Understanding to facilitate the transfer of information between Australia and China on forest management, forest products and investment opportunities. This Memorandum of Understanding was signed in 2003.

Through their membership, the Fujian Forest Industry Association has connections to some 80% of the forest and timber industry in China, which provided the opportunity to meet with many industry participants in China to discuss their future industry interests. To complete this fellowship, two trips were made to China, for the specific purpose of *identifying opportunities to extend and strengthen the commercial forestry relationships between Australia and China*, based around the following three key components:

- 1. Identifying the processes for facilitating forest products trade and market access, including the options for improving the level of consistency in Chinese and Australian product standards and specifications.**
- 2. Identifying the informational requirements that need to be addressed in order to attract Chinese interest in Australia's potential timber exports, and**
- 3. Identifying options for Government assistance to help with both Australian export market development in China (to counter extensive market promotion campaigns by the US and Canada) and the attraction of Chinese investment funds to finance timber growing and processing operations in Australia.**

This project complements the efforts of CSIRO and of the relevant Australian companies who have established and are building their relationships with their Chinese counterparts.

Information was gathered on the first of these trips by meeting with Government officials, researchers and company officials in the cities of Xiamen, Zhangzhou, Zhanjiang, Guangzhou, Fuzhou, Shanghai, Hangzhou, Nanjing, Beijing and Hong Kong. In each location, there was a considerable amount of interest in potential Australian investment in the Chinese forest industry.

The second trip to China was funded under the Australia-China Agricultural Cooperation Agreement (ACACA), with the primary purpose of understanding the Chinese processes for attracting investment to China. This trip centred around the southern port city of Zhanjiang, where there are opportunities for using a relatively non-congested port to ship Australian forest products into China and to supply a growing furniture industry that has a strong focus on the export of forest products.

I am extremely grateful to my forest industry counterparts in China, who demonstrated a considerable degree of hospitality and openness in discussions about the future opportunities for trade and investment, and to Pentarch Forest Products, who asked that I attend the second trip to China as a cross-industry representative. The National Association of Forest Industries generously supported this Fellowship by allowing me the time to visit China.

Executive Summary

Although the forest industries in China and Australia are considerably different in their scale and stage of development, the two naturally fit together at the present time. China's wood processing sectors are resource constrained, while Australia could competitively supply raw materials and finished products into the Chinese market. Exporting Australian wood products to China, particularly hardwood eucalypt resources and a range of softwood timber products that could replace the use of traditional sawntimber products, could open up new distribution networks for Australian suppliers. Chinese companies importing and exporting timber products also see an opportunity to work with the Australian companies on the basis of opening up new markets in Australia.

In each of the cities visited in China, local industry representatives identified trade and investment opportunities that were immediately available. Chinese companies are seeking investment partners from Australia who can bring with them expertise in species selection, forest management, wood harvesting and timber processing. This supply of technical information could extend into the future expansion of timber markets, where construction companies and furniture manufacturers are interested to know how they can use Australia's emerging timber products. A summary of the potential trade investment projects that could be immediately considered by Australian forestry and timber companies is provided in Chapter 2 of this report.

Where Australian companies may be willing to consider the trade and investment opportunities available in China, the information contained in the Zhanjiang case study (Chapter 3 of this report) outlines the investment processes facing foreign investors. It is essential that the investment proponents closely examine the possible tax arrangements, investment support policies and other forms of preferential investment policies (including access to low interest loans or production subsidies), before deciding on the physical location for their businesses. These combined policies can have a significant impact on project profitability as the national, provincial and local government agencies compete for investment in forest growing and value-adding enterprises.

China's forestry sector has limited knowledge of Australia's forestry resources, the industry or its products. However, all Chinese forestry companies expressed a strong interest in obtaining more information about the wood resources currently growing, the opportunities for investing in timber growing and processing in Australia, and the processes for undertaking that investment. It was recommended that the transfer of information should be organised between the national industry associations of Australia and China, with the Chinese companies and forestry agencies indicating the importance of having an industry representative located permanently in China.

To fund the preparation of material for the Chinese wood product markets and maintain an industry presence within the Chinese market (as proposed in Chapter 4 of this report), it may be possible to use some of the profits gained from organising trips by delegations between the countries (particularly from China to Australia) and by obtaining targeted support from the Commonwealth and State Governments.

With the Chinese timber markets being so large, relative to Australia's current production and expected wood availability, the Chinese industry recommended that Australian companies may be best served by developing their distribution networks through important trading centres outside of Shanghai and Beijing. Four areas where the Australian industry could have a welcome and immediate impact are the southern and eastern coastal cities of Guangzhou, Fuzhou, Xiamen and Zhanjiang. In markets to the north of China, the competitive pressures are intense and may restrict the opportunities for Australian companies to be long-term suppliers into those areas.

The best example of the competitive pressures was demonstrated by the differences in the prices for solid wood flooring between Shanghai and Fuzhou or Guangzhou. In Shanghai, the prices for solid wood flooring are some 30% to 50% lower than the prices in the other two wood flooring markets. Where Australia has limited volumes of high-value timber products, there may be opportunities to

service specialty markets, such as the fit-out market for premium townhouse developments or supplying manufacturers of high-quality furniture.

The opportunities for expanding the level of investment and trade between China and Australia are evident, yet challenging. The Chinese industry has indicated their willingness to support the Australian industry in seeking out these opportunities, especially where the capacity exists to simultaneously help China's industry to grow, with the activities falling into four main categories:

1. Addressing the information requirements (outlined in Chapter 2);
2. Assess the areas in China where there could be an immediate expansion of trade and investment, which may require an Australian delegation attending the next meeting of the China National Forest Industry Products Association to discuss these opportunities with their Chinese industry counterparts;
3. Improving long-term market access to China by bridging the cultural differences between the Australian and Chinese industries and building on the research programs, that have been based around species selection, plantation management, timber processing, and certification; and
4. Establishing a permanent market presence in China, with an industry representative located in China to provide information and address queries regarding the Australian industry and its products. Australian industry representatives could consider the value of locating this representative in one of the emerging markets of Guangzhou, Xiamen, Fuzhou or Zhanjiang.

Some of the world's largest timber producing countries, with funding from their respective Governments, have been building their presence and reputation in China's wood markets for the past five years. If Australia is to have any chance of competing with the timber suppliers from North America and Europe, it is essential that Government financial support is obtained to assist the Australian industry with its effort to improve the market recognition and perceptions surrounding Australian timber products in China. Given their growing influence over the global wood and paper markets, if China can be encouraged to use the same species and products as those available from Australia, then Australian companies may be in an improved position to meet the supply shortfalls in China and to access the international markets that China's industry will open up.

Recommended actions

From the meetings held with the Chinese industry and government stakeholders, the following recommendations provide a framework to strengthen the commercial forestry relationships between Australia and China:

- An Australian delegation to attend the next meeting of the China National Forest Industry Products Association (usually held in March each year) to gauge:
 - a. The value of supporting the transfer of technical information between the national industry associations on resources, species selection and management, wood products, wood product specifications, and potential investment opportunities,
 - b. The benefits from establishing a permanent industry presence in China to support the transfer of information to members of industry and government officials, including those agencies with responsibility for China's building code, and
 - c. Identifying the key area(s) for targeting Australian forest product supplies, developing distribution networks and assessing joint venture investment opportunities in China.
- In response to the strong competitive pressures from China and to compete with the marketing and promotional campaigns being used to assist major timber producing countries from North America and Europe, Federal and State Government funding commitments be sought to assist the Australian industry to improve the marketability and market recognition of Australian timber products in China.

- The Australian industry considers the immediately-available opportunities for investment in China's timber growing and processing industry, as outlined in Chapter 2 of this report.
- That a project be undertaken to assess the degree of equivalence between the Australian Forestry Standard and the draft China Forest Certification Standard, as a precursor to China seeking mutual recognition for their certification standard through the PEFC (Program for Endorsement of Forest Certification standards). The equivalence study would compare the forest management and chain of custody components of the standards, especially where the application of an effective Chain of Custody standard in China would be an important component in starting to limit the extent of illegal logging.
- Ensuring the close association between the researchers of both countries are maintained. The key areas of research are in species selection, plantation management and wood processing, with the potential for expanding the research activities to include the methods for carbon accounting. As an important step in maintaining the research links, the Australian industry could trial some of the eucalypt hybrids produced by the China Eucalypt Research Centre in northern Australia. Australian researchers should also be encouraged to become members of the China Eucalypt Society.

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Chapter 1 – Introduction

China has rapidly established itself as the world's largest 'wood workshop'. It is now the leading importer and second largest consumer of industrial roundwood, the fifth largest consumer of sawntimber, the second largest consumer of wood-based panels, the second largest consumer and producer of pulp and paper, and the second largest exporter of forest products in the world (Sun et al, 2005; White et al, 2006).

The potential future growth in Chinese demand for forest products and the likely dependence on imports of forest products, may present many opportunities for future trade and investment in forestry, timber and wood processing between China and Australia. As the Chinese often state, there is the potential for *increasing the level of cooperation to deliver mutual benefits and greater prosperity for the enterprises from both countries.*

The purpose of this project was to assess the capacity for future investment and trade by Australian and Chinese companies across the full breadth of the forest industry. These opportunities will arise where one of the countries has a comparative advantage in growing and/or processing timber. In many industries, including the forest industry, multi-national companies have invested in China to take advantage of the relatively cheap source of labour and to provide close proximity to their major markets. However, in the forest industry at least, the China-based wood processing companies are likely to be constrained by wood availability, presenting new opportunities for trade with, and possibly investment by, Australian companies.

This report provides an outline of the forest industries in both countries and those areas where additional information is required by Chinese companies, particularly with respect to the specific qualities and characteristics of Australia's forest products. The options for providing that information to underpin future investment and trade, and a detailed outline of the processes that could be followed to pursue investment opportunities in China, are the reasons behind this report and fellowship.

Australia has the capacity to develop these opportunities through the use of Government agencies (such as Austrade and Invest Australia) and by working closely with the forest industry associations in China, such as the China National Forest Products Industry association and the provincial industry associations.

A comparison of the forest industries in Australia and China

There are many contrasts and similarities between the forest industries in Australia and China. An outline of the respective industries is provided in Table 1. At the national level and behind these 'official' statistics of forest coverage and timber production, the growth of the forest industries in both countries are guided by broad policy settings that focus on sustainability and regional economic development.

In Australia, the National Forest Policy Statement (1992) led to the development of the Wood and Paper Industry Strategy (1995) and *Plantations for Australia: the 2020 Vision* (1997). The overall aim of these policies was to develop an internationally competitive forest industry based on sufficient native forest and plantation resources to support increased investment in domestic value-adding and to provide the scale of resources that will allow the domestic industry to reduce the trade deficit in forest products, which remains around \$2bn per annum (ABARE, 2006).

For China, forestry policies are established within a framework of five-year plans that are developed on a national basis. For example, China's 10th Five-Year Plan on National Economy and Social Development covered the period 2000-2005 and incorporated the six key forestry programs (State Forest Administration, 2002). The key forestry programs include the Natural Forest Protection Program and the Forest Industrial Base Program, where the primary focus is on investment in fast-growing, high-yielding timber plantations in particular regions. To be self-sufficient in timber

resources by 2015, a target of establishing 13.3 million hectares of plantations under the fast-growing, high-yielding program was introduced in 2000, with the expectation that the new plantings would include 5.9 million hectares of pulpwood, 5 million hectares of resources for the wood-based panels sector, and 2.5 million hectares to produce logs of 18-22cm in diameter (American Forest and Paper Association, 2004).

The overall importance of forestry to China's national economy was again demonstrated through the Resolution by the CPC (Communist Party of China) Central Committee and the State Council (25 June 2003) on Accelerating Forest Development (CPC Central Committee, 2003). This resolution recognised the importance of the forest industry as part of a relatively more-affluent society where sustainable resource management could provide a balance between 'improved productivity, prosperous livelihood and sound ecology'. Major tasks and basic principles were described in this Resolution for accelerating forest development, reinforcing the importance of the six key forestry programs incorporated into China's 10th Five-Year Plan.

Table 1. Official estimates of production and consumption

	Australia	China
Land area (ha)	768m	960m
Forest coverage (ha)	164.4m	197.3m
Plantation area (ha)	1.7m	53m
Timber harvest (cu.m.)	27.4m	95.1m
Sawntimber production (cu.m.)	4.7m	9.4m*
Sawntimber consumption (cu.m.)	5.3m	15.7m
Wood based panels production (cu.m.)	1.9m	24.7m*
Wood based panels consumption (cu.m.)	1.8m	27.6m
Paper and paper board production (tonnes)	3.2m	37.9m*
Paper and paperboard consumption (tonnes)	4.2m	44.3m
Value of imports (USD, 2004/05)	3.1bn	19.5bn
Value of exports (USD, 2004/05)	1.6bn	5.2bn

Information obtained from FAO ForestryStat and ABARE (2006). *Estimates provided of China's wood product consumption and production are for 2002. In 2004, sawntimber, panel and board, and paper and paper board production were 12.2m cu.m., 30.2m cu.m. and 53.5m tonnes.

The process for supplying wood to the timber-processing industries and the final products to consumers are quite different in both countries. Australian processors rely heavily on direct supply arrangements with wood growers (who use nearly all domestically-grown resources) and distribute their products directly to the major retailers. In China, domestic timber resources may be supplied directly to large mills or are acquired through the timber markets by the very high proportion of small factories operating in the major forestry areas. With the imported resources, traders may import logs to meet their own needs and/or sell logs off the docks to the many small factories. These small factories may be purchasing just 5-20 cubic metres at a time off the docks.

A very large proportion of China's finished products are then sold via the 344 wholesale and 641 retail timber markets operating throughout China (Sun et al, 2005). In general, these timber markets specialise in particular products. For example, the Nanxun timber market near Shanghai specialises in timber flooring and in Pizhou City (Jiangsu Province) the major timber product supplied is plywood.

Paper and paperboard consumption correlate with a country's standard of living (Meynink, 2003). For China, economic growth and the increase in paper and paperboard consumption have increased at approximately 9 to 10% per annum over the past decade. This growth has resulted in China now

being the world's second-largest producer and consumer of paper products, and future changes in China's supply and demand for paper products will most likely have flow-on effects to the wood fibre and paper markets in other parts of the world (He and Barr, 2004; Price and Mason, 2005; White et al, 2006).

Australia's forest products trade with China

China is an increasingly important trading partner, in terms of forest products, for Australia (table 2). Over the four years between 2000/01 and 2004/05, Australia's exports of forest products to China increased from \$88.2m to \$135.1m while Australia's imports from China grew from \$144.4m to \$286.4m (ABARE, 2002; ABARE, 2006). Out of Australia's overall trade in forest products, China currently supplies 7% of Australia's imports and is an export market for 6.5% of our forest products, when measured in terms of value.

Table 2. Forest products trade between Australia and China 2004/05.

Products	Australian exports (AUDm)	Australian imports (AUDm)
Roundwood	21.0	-
Sawnwood	19.9	2.7
Miscellaneous forest products	4.0	86.3
MDF, particleboard	1.5	-
Paper and paperboard	30.4	131.4
Paper manufactures	10.2	66.0
Recovered paper	38.0	-
Woodchips (hardwood)	9.6	-
Wood pulp	0.5	-
Total	135.1	286.4

It is important to note that some of the imports from China represent higher value products than those exported from Australia. For example, the average price of sawntimber imports from China is approximately \$1,000 per cubic metre compared to an average of \$443 per cubic metres for Australia's sawntimber exports to China. Similarly, the average price of paper and paperboards from China is \$1,634 per tonne, while the average price for Australia's exports to China is \$507 per tonne.

The 'unofficial' size of China's forest products industry

There are many discrepancies between the 'official' size of the wood and paper industry in China and the domestic industry's assessments of overall wood availability, wood consumption and the manufacturing of wood-based products. Officially, it is claimed that there are 690,000 people employed in China's 3,868 timber processing enterprises (excluding the pulp and paper mills). According to industry sources, there are over 30,000 wood processing enterprises (American Forest and Paper Association, 2004). Determining the volume of industrial roundwood that is actually processed in China is even more challenging.

According to the official statistics, as obtained from the FAO Forestry Statistics database, the volume of industrial roundwood harvested in China in 2005 was 88.8 million cubic metres. In addition to the domestic supplies, up to 28 million cubic metres of roundwood was imported for processing (White et al, 2006), making a total of approximately 115-120 million cubic metres of industrial roundwood. Industry sources, from the associations and major timber markets, indicated that the volume of industrial roundwood processed in China was approximately 430 to 460 million cubic metres per annum. The true volume may lay somewhere in between these figures.

If the reported volume of domestic industrial roundwood supplied in 2005 was 140 million cubic metres and the 'unreported' volume was 116 million cubic metres of timber harvested outside of the logging quotas set by the forestry bureaux, the domestic supply of logs to industry would have been 256 million cubic metres. The total volume of log imports for 2004/05 was recorded as 25.5 million cubic metres (Sun et al, 2005). However, there are indications that the volume of logs imported from Russia alone was a total of 26.8 million cubic metres (with 12.2 million cubic metres of official log imports and up to 14.6 million cubic metres sourced illegally) (Muran and Petry, 2004).

As further evidence of the unreliable estimates associated with China's industrial roundwood consumption, the Chinese Academy of Forestry estimated that 53 million cubic metres of sawntimber was produced in China during 2002, compared to the official volume of 8.5 million cubic metres. In terms of roundwood supplied to China's sawmills, this represents a variation of approximately 115 million cubic metres for that year.

It is difficult to obtain an accurate picture of China's total industrial roundwood consumption. However, from all domestic and imported sources, both legal and illegal, it may be reasonable to assume that the volume of industrial roundwood used by China's wood processing sectors is in the range of 260 to 330 million cubic metres per annum.

Future growth in China's demand for forest products

As China is now a socialist market economy that is very open to trade and integrated into the global financial markets, it could be increasingly vulnerable to external economic shocks (Prasad and Rajan, 2003). However, the economic growth prospects for China remain strong, given the fundamental characteristics of the economy (Australian Industry Group, 2004; ABARE, 2002; He and Barr, 2004). Those characteristics include the level of foreign direct investment, the continued growth in exports, the rapidly rising level of consumer spending, Government funding of major infrastructure projects, and the unlimited supply of relatively low-cost labour.

To maintain growth, China is aware that it will need to address certain bottlenecks in the economy, which include access to energy, infrastructure, good quality water and some resources, even though these bottlenecks are only likely to reduce economic growth to the range of 7 to 9% per annum for the foreseeable future. If they were removed, it is anticipated that China could maintain double-digit rates of economic growth (Australian Industry Group, 2004). Other changes, such as wages growth, are being off-set by improvements in labour productivity.

Strong economic growth and rising living standards should underpin the demand for forest products, although this will require China achieving more balanced growth across the rural and urban areas, and reforming the banking and financial sectors (JP Management Consulting (Asia-Pacific) Pty Ltd and Four Scenes Pty Ltd, 2006). An increasing level of demand for timber products is being driven domestically by demands for building and construction products, furniture and apartment decorations, and by the international wood product markets. In 2005, China's export of forest products exceeded USD17bn and it is the combined domestic and global demand for low-cost wood products which will continue to drive that country's growing demand for wood (White et al, 2006).

In 2002, China set a goal of quadrupling per capita income by 2020. To meet this target, the economy would need to grow by an average of 8% per annum. The fundamental structure of China's economy should allow that growth rate to be achieved and there are signs that it could be maintained until at least 2030 (Wood, 2006). If the growth in paper demand maintains the long-term global trend of growing with per capita income, it is anticipated that China's consumption of paper and paperboard will be approximately 65-69 million tonnes per annum in 2010 and exceed 100 million tonnes per annum by 2020 (Baker and Evans, 2002; Price and Mason, 2005; White et al, 2006).

New pulp mills, either under construction or planned for China within this decade, will depend on wood fibre. It is estimated that these new mills will require over 20 million cubic metres of fibre per

annum, with a significant proportion of the fibre supplied either as woodchips or market pulp (Price and Mason, 2005; Walker, 2004). Major changes to the world's market outlook for wood fibre, pulp and paper are indicating that there will be competing demands for southern hemisphere plantation resources, driven by North America and European resource requirements (Ekstrom, 2005; Flynn, 2003). When compared with the limited potential pulpwood available in China, there are strong indications that Australian woodchip and market pulp suppliers will have the opportunity to fill some of the future gaps in supply.

In addition to the significant investment in timber processing, there has been a rapid acceleration in the growth of China's furniture and decorations industries over the past decade. The growth of the furniture industry has been substantially driven by foreign direct investment, as companies close down their operations in high cost centres such as the US and shift to China, where the cost of labour for these labour-intensive industries is much lower (Midgley, 2005; Lei, 2004). As a result, the value of output from China's furniture industry was almost USD25bn in 2004, with USD7.3bn worth of products exported and China supplying one third of the global trade in furniture (White et al, 2006).

With a large number of residences built in China each year, requiring complete fit-out by the new owners, and rising disposable income for the growing middle class in China, the value of the interior decoration sector exceeds USD50bn per annum. Only a proportion of this money is spent on timber products, but timber is commonly used for flooring, doors, built-in cupboards and other features. As an alternative to individuals fitting out their own apartments, where there are concerns over the general quality of that work, the Shanghai Turnkey Project is being undertaken to encourage a better and more effective approach to fitting out the new residences (Bean, 2004). Through this project, homes will be sold as a finished product to the buyers.

If the Turnkey Project is successful, it is highly likely that future developments will have all of the fit-out undertaken by large companies, who can use the economies of scale and scope when purchasing decoration materials from suppliers. This may open up new opportunities for Australian suppliers of high-quality timber products to China, where in the past, it has been difficult for Australian companies to access the market with so many small buyers.

It is also expected that the Beijing 2008 Olympic Games and the 2010 World Expo will further raise the demand for wood products in China. The Government will be spending USD 2.7bn on venues and USD33.9bn on infrastructure projects (Lei, 2004). Of this total investment, between 5 and 7% of the funds will be spent on timber products.

Future changes in the supply of wood and wood products within, and to, China

The future expectations of wood demand in China, the possible limited supply of domestic resources and the potential decline in wood supplies from illegally-logged sources could provide opportunities for Australian suppliers of roundwood, wood chips and value-added products.

Within China, the fast-growing high-yielding plantation program, combined with the use of existing natural forest and plantation resources, was expected to supply almost 330 million cubic metres of wood per annum from 2015 (White et al, 2006). To achieve this target, the new plantation establishment rate would need to remain at close to 1 million hectares per annum between 2000 and 2015. Up to the end of 2004, only around 250,000 hectares of new plantations had been established under the fast-growing high-yielding plantation program. New establishment rates for the fast-growing high-yielding plantations were 59,000 hectares in 2003 and 87,000 hectares in 2004.

To overcome these problems, a number of reforms need to be put in place. At the present time, there are conflicting policies between forestry and crop production, with more land being required to supply food and concerns about the area of land that is being transferred over to forestry, especially with China no longer self-sufficient in terms of their food supplies (Australian Industry Group, 2004; Cossalter and Pye-Smith, 2003; Lei, 2004).

In China, pulp mill proponents are required to develop their own plantation resources, but it is extremely difficult to find the land to establish a large enough resource to supply those mills. Where plantations are being established on any significant scale, the concerns and additional conflicts over plantations are the same as in other countries, including Australia. That is, plantations are either removing traditional owners or replacing existing landuses, with subsequent impacts on rural communities (Cossalter and Pye-Smith, 2003). Local governments still have control over what crops can be grown on farm land, including timber plantations, which limits the capacity for expanding regional resources, and they set the quotas (in volume terms) on timber harvesting from plantations (American Forest and Paper Association, 2004).

Overall, these policies raise the costs and the risks associated with plantation developments. To overcome such problems, legally transferable rights need to be conferred on plantations. A mechanism is being developed to clearly establish the plantation ownership rights, which will need to be underpinned by an evaluation and accreditation system (Lei, 2004). These impediments will have to be addressed in order for the private sector to invest USD8.65bn in 5 million hectares of fast-growing high-yielding plantations over the next 10 years.

In addition to the problems of gaining access to farm land for expanding the plantation estate, and having clear ownership rights over plantations, the cost of delivered timber in China is relatively high. This is caused by a series of more than 20 fees and taxes being levied on harvested wood, representing between 50% and 70% of the landed costs of timber¹. As a result, the cost of logs delivered to the wood processing mills is at least USD50 per cubic metre.

A number of preferential policies have been developed to encourage a greater level of investment into plantations (American Forest and Paper Association, 2004). To support the plantation establishment program, the national government is willing to provide an interest subsidy that is equivalent to 20% of the project costs and is paid at the start of the projects, the China Development Bank and the Agricultural Bank will provide up to 70% of the capital in the form of loans, local governments will contribute 3% of the funds, and the remainder will have to be raised by the private sector.

To obtain these loans, the banks require the forestry companies to have a secure title and rights to harvest the plantation timber resources, once they are established. Yet, no wholly-owned foreign enterprise can develop plantations – they must have a joint venture partner.

Domestic plantation investors face additional constraints. They are unable to obtain loans from the commercial banks to provide project financing for periods as long as 5 to 8 years, and the banks have limited funds available to invest in long-term projects that they consider to be relatively risky investments. As a result, there is likely to be little domestic investment in new plantations.

The problem of lower-than-expected planting rates is exacerbated by the relatively poor performance in general of the new plantations and a structural wood supply problem where much of the existing industry uses large-diameter logs that are not grown in China's forests or plantations (Butterworth and Lei, 2005). For the larger diameter logs, there is no capacity to grow those resources in China, where the current genetic material, silviculture and management approaches are, on average, producing under-performing plantations (personal communication, China forest industry representatives, October 2004).

If these matters are not addressed, it is anticipated that China will only have the capacity to supply approximately 200 million cubic metres of wood to the timber processing sectors by 2015, indicating

¹ Taxes on harvested plantation logs include Central Government taxes (ie. farm produce tax, agroforestry tax, value-added tax, circulation tax, municipal construction tax for road maintenance and repairs, school tax, other taxes) and regulatory fees set by the State Forestry Bureaux and local governments (such as a forestry fund, forest maintenance fees, forest construction and protection fees, and quarantine fees).

that China will continue to rely heavily on imported raw materials and forest products (White et al, 2006).

Adding to the uncertainty surrounding the future supply of timber is the current over-harvesting of China's natural forests and plantations. In China, the wood supply from State-owned forests is determined through logging quotas. At the present time, the volume of domestic wood harvesting is estimated to be between 75 and 116 million cubic metres of logs per annum above the quotas (Butterworth and Lei, 2005; White et al, 2006). These sources of 'illegally' logged wood undermine the future sustainable wood harvests, particularly from the natural forests.

The Russian Far East is now an important supplier of softwood resources into northern China. To improve the utilisation of this resource, the Chinese government reduced the VAT on logs imported across the Sino-Russian Border and encouraged investment in new sawmilling enterprises. There is now more than 100 sawmills operating along this border (Katsigris et al, 2005) and the volume of sawlogs exported from Russia to China in 2002 was officially 12 million cubic metres (Muran and Petry, 2004). However, the volume of illegally-logged timber that is sold from Russian suppliers to Chinese companies may be as high as 14.6 million cubic metres per annum (Muran and Petry, 2004).

These additional resources are supplied from timber poaching, high-grading of forests (to remove just the high quality logs) or logging outside the concession areas. In the longer term, the excessive exploitation of these resources is expected to lead to significant increases in the cost of logs and timber from Russia, particularly with the more accessible forests having already been logged.

The demand for wood in China, based on either the official or unofficial figures of wood supply, indicate that China's requirements may lead to increases in illegal logging, either directly or indirectly. For example, China's wood demands are so great that Chinese traders are buying wood from legally logged sources. But to then supply other markets, opportunities arise for dubious suppliers to obtain wood from illegally-logged forests. Where timber may be reaching China from illegal or even uncertain origins, there is a requirement for the final product market to place some pressure onto the wood product manufacturers to ensure that their wood comes from legally, and possibly legally and sustainably, managed forests in the future (CIFOR, 2006).

It is possible that timber procurement policies in Europe, Japan and the US will force the suppliers of wood products to certify the origins of the wood they use. This has important implications for the wood-growing sector, as illegal logging is estimated to have deflated log prices by between 7 and 16% (White et al). If this is the case, then reducing the volume of illegal logging will raise the demand, and most likely the prices, for legally-logged timber resources.

Even where the timber is supplied to China from legally-logged natural forests, the future outlook for those supplies is diminishing, in volume terms. According to log traders and flooring manufacturers in China, the volume of tropical hardwood timber supplies reached their maximum levels in 2002/03. Since that time, the supplies have been falling quite rapidly with a corresponding increase in log prices. For Asia-Pacific countries supplying hardwood logs to China (such as Myanmar and Papua New Guinea) it has been estimated that at current harvesting rates, these wood sources will be exhausted within 16 years (White et al, 2006).

If China's domestic wood supply deficit reaches 130 million cubic metres per annum in 2015 and 200 million cubic metres in 2025 (Muran and Petry, 2004), the whole dynamics of the international markets for logs, woodchips and value-added timber products will change considerably. In addition to these changes in the Asia-Pacific region, Europe and North America are showing an increasing interest in obtaining hardwood resources from South America. This will only add to the changes in demand for wood resources that are currently being experienced in countries such as Brazil and Chile. In Brazil, the costs of delivered logs have increased 3-fold between 2000 and 2004, while Chile will be using more of their domestic resources to supply their own recently-established pulp mills (Price and Mason, 2005).

Climate change as a driver of timber production and generating carbon credits

In 2001, China released some 15% of the global greenhouse gas emissions and this is expected to increase to almost 27% by 2050 (Fisher et al, 2006). As a demonstration of China's commitment to the environment and addressing the problems of climate change, China is both a signatory to the Kyoto Protocol and a member of the Asia-Pacific Partnership on Clean Development.

Both the protocol and the partnership could be used to encourage a greater use of plantations as a means of reducing China's total greenhouse gas emissions. By recognising the carbon stored in wood products and the sequestration of carbon (as tradeable carbon credits) in plantation forests, it should be possible to raise the consumption of wood products, as opposed to using steel and concrete, and provide financial incentives for investing in timber production.

From a financial perspective, forestry should also be a cheaper alternative than some of the other emissions reduction technologies currently under consideration. For example in 2006, carbon credits trade for approximately \$14 per tonne of CO₂ abatement under the NSW Greenhouse Abatement Credit system (price obtained from the Greenhouse Gas Abatement Scheme Registry). An alternative and more expensive approach is the capture of CO₂ before it is released from coal-fired power stations, at a cost of \$33-40 per tonne of CO₂ capture (Fisher et al, 2006).

Australia also has the technology and expertise to assist China's forestry agencies and plantation growers to develop a system of estimating carbon sequestration in growing forests and the storage of carbon in harvested wood products, as the basis for buying and selling carbon credits.

The changing face of China's manufacturing industries

The considerable changes to the wood processing sectors in China and the significant flow of foreign direct investment into that country should be considered in light of the rapid pace of change that is impacting on all of China's, and subsequently, Australia's manufacturing sectors. With China's manufacturing sector growing at more than 15% per annum, the timber industry along with all other Australian industries, is feeling the pressure from China's exports. Australian companies are being forced to lower costs, adopt new technologies, relocate to China, or move within the supply chain to avoid direct competition from China.

However, Australian manufacturers who are interested in building a presence in their respective China markets, are having difficulties finding suitable investment partners and companies that they can use as importing agents. While the high start-up costs in China are also a concern, it appears that the major uncertainties stem from a lack of good market information on China (Australian Industry Group (a), 2004).

Developing these links and taking up the opportunities as they arise are important, as the economic activity in China is a major driver of changes in the Australian economy, and China's economic outlook is very strong, supported by:

- Continued exports growth;
- Capacity for increases in consumer spending;
- Domestic infrastructure spending; and
- An unlimited supply of relatively low-cost labour (Australian Industry Group, 2004).

The net impact on Australian manufacturing businesses from the economic growth in China, has been negative. A survey of Australian manufacturers found that almost 30% had declining profits, over 30% faced falling prices, 25% of firms had a fall in output, and that Australian companies were losing domestic and international sales to Chinese companies. To overcome these difficulties, Australian manufacturers have responded by accelerating their pursuit of production efficiencies and using

Chinese imports as inputs. If the manufacturers have a high requirement for labour, they are shifting their operations to China or other countries, where the labour costs are much lower (Australian Industry Group (a), 2004).

Given that China is already a strong competitor in Australia's timber and paper markets, there may be only limited benefits to Australia from the proposed Free Trade Agreement between the two countries. In association with the development of the Free Trade Agreement, the Australian Government should develop a forward-looking 'Advanced Manufacturing Program' to enhance the competitiveness of Australian companies (Australian Industry Group (a), 2004). A major component of such a program should include national government support for improving the marketability and market recognition of Australian products in China.

Promotional support for exporters of wood products to China

Although China has rapidly increased its consumption and imports of a broad range of forest products since 1996, one of the areas where very little timber is consumed has been the timber-framed construction market. Out of approximately 17-20 million residences that are completed each year, less than 20,000 new homes would have a timber frame (Weyerhaeuser, 2001; Lei, 2004). Most are multi-storey concrete constructions that suffer major acoustic and noise transfer problems between the walls, the floors and ceilings. It is possible to reduce the noise transfer, reduce the costs and improve the quality of residences through the use of timber framing (information available from www.timber.org.au). The technical information on Multi-Residential Timber Framed Construction could be of particular interest to Chinese developers and Governments, particularly where they may be considering three, four or five-storey housing developments in areas outside of the major cities.

Over the past five years, industry representatives from Canada, the United States and to some extent, New Zealand, have played important roles in attempting to increase the market's acceptance and use of timber framing in residential and light commercial constructions. To deliver these outcomes, the Canadian and United States industries have been strongly supported by their respective Governments. The Australian industry will need similar support if it is to compete against these major suppliers, in terms of product price and reputation.

Starting in 2002, the Canadian Government provided \$35m over 5 years to assist the Canadian industry associations in promoting the Canadian wood products (Canadian Forestry Bulletin, 2004). The costs of this program are shared between industry, the provincial Governments and the Federal Government, with funding used to support activities for increasing the market acceptance of Canadian wood products, including:

- Funding of permanent industry representation in China;
- Attendance at trade shows;
- Media campaigns;
- Provision of training seminars for construction professionals; and
- Technical support for updating building codes and standards.

Similarly, the United States industry associations and Government (through the Department of Commerce and the Foreign Agriculture Service) have undertaken a cooperative effort to promote their building materials in China. This China market development program is an integrated education and promotional program called US China Build, which contains many similar elements to the Canadian program. One additional element in the United States program is that funding is provided for taking Chinese construction professionals to America and helping them to gain some practical exposure to the new wood-framed building technologies.

In 2004, the New Zealand industry stated their intentions to work collaboratively in addressing market impediments over the use of their wood products in the construction, fit-out and furniture sectors (NZ

Herald, 2004). At that time, Trade and Enterprise NZ, a government agency, indicated their interest in establishing a wood and building products centre in Shanghai.

The United States, Canadian and New Zealand industry representatives were primarily responsible for having wood framing recognised in the Chinese building code. In 2003, China's Ministry of Construction included radiata pine and a range of other timbers in the Chinese Timber Structural Design Building Code (Code number GB 50005), although no technical details were provided at that time on the properties of radiata, the dimensions of radiata building products, or how they should be used. The North Americans have supplied technical handbooks to the Chinese officials covering the use of their timber products, which are recognised under the Chinese Code. New Zealand is currently completing a handbook to support the use of radiata as a construction timber under the Chinese code (NZ FIC, 2005). It will include information on product strength, durability, dimensions and the standard for machine grading of radiata stress-rated lumber.

Opportunities for Australian forest and wood product suppliers

The overall implications of the changing wood and timber product supplies for China should provide new opportunities for Australian companies over the coming decade, at least. Quite importantly, the rising diesel fuel and transport costs would indicate that there will be increasing demand for value-added products such as hardwood pulp as opposed to woodchips, for supplying the new paper mills in China.

Australia's hardwood plantation resources are a preferred species for making high-quality printing and writing papers. They are currently being grown as sufficiently-large regional resources to minimise the costs of production to support further investment in domestic value-adding. A range of other factors will determine if the cost of these resources is internationally-competitive, but they do represent future opportunities for the Australian industry.

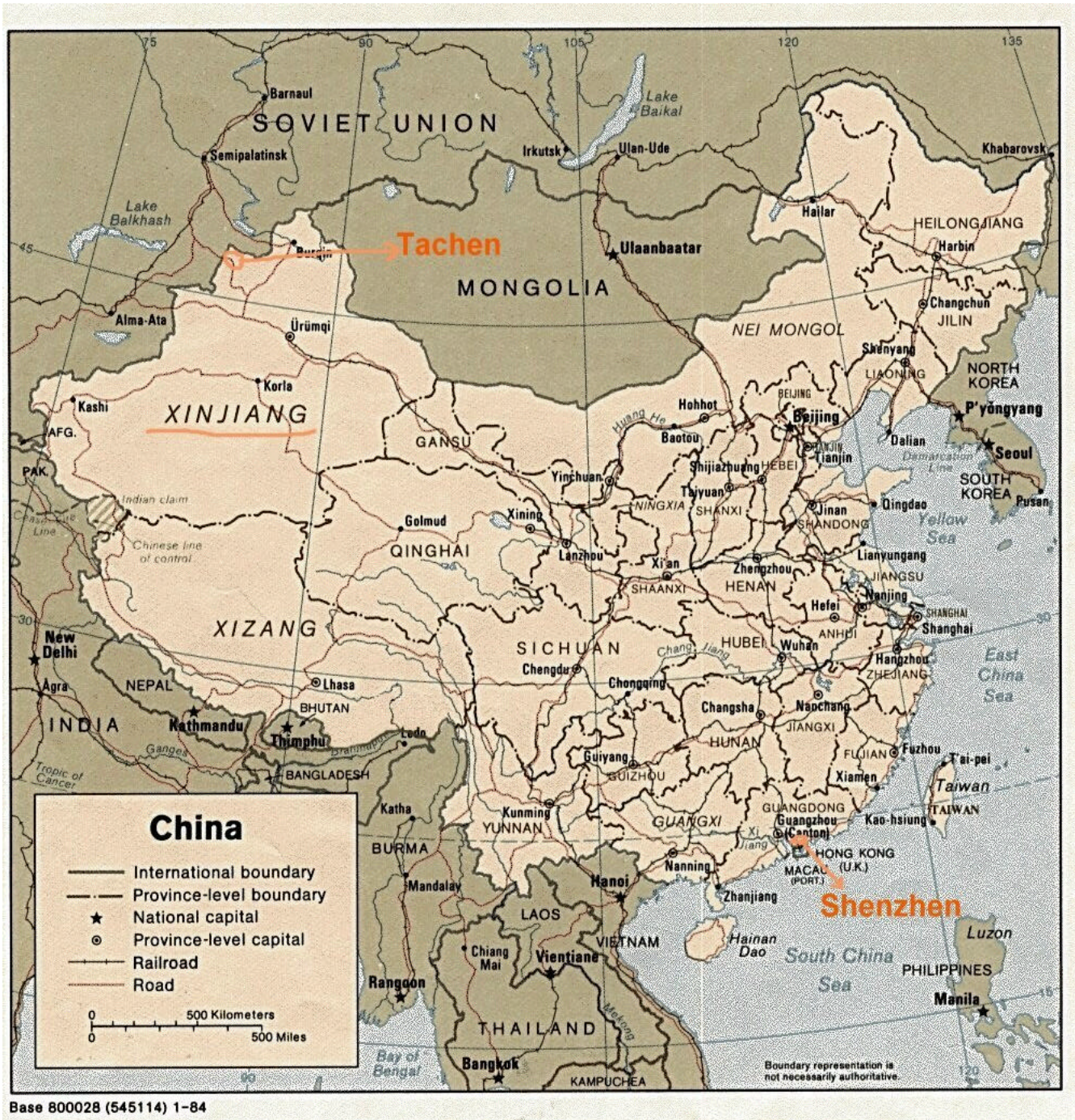
Additional opportunities are likely to arise for exports in the solid wood, reconstituted wood product and the engineered wood products sectors, if Australia can establish sufficient resources to satisfy the domestic and international markets. There are strong indications that Chinese companies are interested in obtaining information on the quality, specifications, attributes, and potential uses for Australian timber products, as well as investigating the options for investing in Australia's wood growing and processing sectors.

Beyond the investment and forest products trading opportunities that may exist between Australian and China, there is the potential for exchanging technical information between the countries. The Chinese industry is interested in the silvicultural management and productivity improvements for plantations, the standards and methods for carbon accounting, and the options for processing fast-grown eucalypts into flooring, furniture, construction and engineered wood products. Although these processes are already being developed in South America, there may be opportunities for Australian companies to form joint ventures with their Chinese counterparts through investment in either Australia or China, that is underpinned by the application of new wood processing technologies, as the basis for securing long-term access to the timber markets in China.

The purpose of this report is to outline the opportunities for trade and investment between the forest industries of Australia and China and to identify how those opportunities may be pursued.

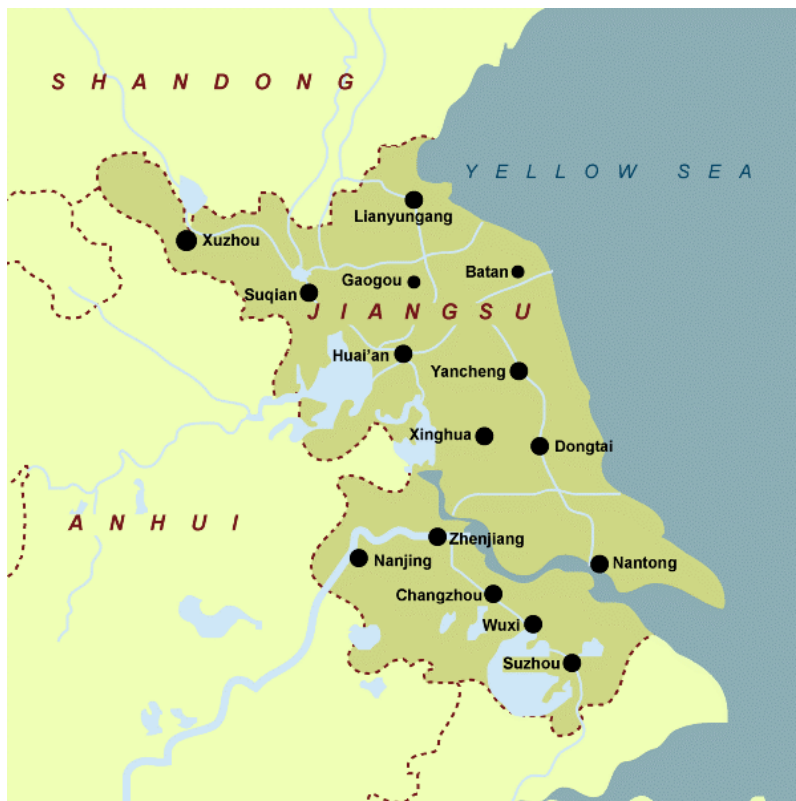
Chapter 2 – Areas visited and information collected from industry representatives

Meetings were organised with Chinese Government officials and industry representatives from key forest industry locations in Guangdong, Fujian, Zhejiang and Jiangsu Provinces, as well as Beijing and Shanghai. Given the difficulties and costs associated with transporting goods into the Chinese provinces away from the coast and with Russia, the US and Canada supplying relatively large volumes of timber into northern China, it is most likely that Australian timber companies would expand their future trade with the timber markets along the southern and east coasts of China.



Starting from the trade and investment fair in Xiamen City, meetings were held in Zhangzhou (Fujian Province), Zhanjiang (Guangdong), Guangzhou (Guangdong), Fuzhou (Fujian), Shanghai, Hangzhou (Zhejiang), Nanjing (Jiangsu) and Beijing. The locations visited can be more easily identified in the four maps below and a detailed summary of the meetings is provided in Appendix A.





Summary of research findings from China

While at the present time there is a very limited understanding of Australia's forest industries within China or of the Chinese forest industry in Australia, there is no doubt that the most exciting aspect of the future relationship between the forest industries of both countries lays in the breadth of opportunities for bilateral trade and investment. These opportunities could arise in terms of supplying unprocessed, semi-processed or value added timber products, Chinese investment in timber growing and processing in Australia, and Australian investment in timber processing in China.

Examples of the potential areas for increased cooperation, trade and investment between the forest industries of Australia and China were apparent in almost every one of the meetings held with Chinese companies, forest industry associations or Government officials. To strengthen the relationships between the forest industries of both countries and realise the potential opportunities that are on offer, the actions fall into the following categories:

1. Addressing the information requirements;
2. Areas for an immediate response;
3. Improving long-term market access; and
4. Establishing a market presence.

Addressing the information requirements

As noted previously, China's forest and timber industry has a marked influence over the global forest products markets. Following a significant domestic reduction in access to native forests and with imports of tropical hardwoods declining from the levels recorded in 2002/03, China is now focussing on securing their timber from alternative resources. It was envisaged that plantation forests would fill the supply gap for the expanding forest industry by 2015, with a large proportion of the new plantations expected to be eucalypts. However, the lower than expected planting rate (due to the problems of gaining access to land) and excessive harvesting of China's domestic forests would indicate that China's demand for roundwood and wood product imports is likely to increase.

When considering the alternative supplies of wood and wood products, the most important factor for Chinese companies is price. On this basis, some Australian companies have been successful in developing markets in China for woodchips, logs and a small amount of our high-value timber products. However, within China there is a very limited understanding of Australia's timber industry or the range of products available from Australia, and there is almost no information currently available (in Chinese) to explain how Australian timber products should be used, the standards those products meet or their performance characteristics.

To assess the potential for Australia to increase its volume of forest products exports to China, it was repeatedly noted that Chinese companies need to know more about Australia's forest resources, the forest industry and the options for processing and utilising Australia's timber species. For China to be more dependent on eucalypts as a source of hardwood timber to saw or to peel and manufacture reconstituted forest products, China would have to start growing and processing more of these timbers. Otherwise, there is the risk that the Chinese industry will turn to other species to grow, process and export, which may make it difficult for Australian suppliers to increase their sales of wood products in the international timber markets.

The main sources of information that the Chinese industry requires (and written in Chinese) are:

- A summary of Australia's commercial timber species, including those that grow in cold climates and in low rainfall areas (such as oil mallee, pinaster and sugar gum);
- The commercial volumes of timber resources growing and harvested in Australia each year;

- The wood products available from Australia, broken down into the volume of woodchips, logs, sawntimber, panels, boards and other engineered wood products, and preservation-treated timbers;
- The grading systems used for any exported forest products, including logs (some good information for this purpose is available at www.pentarch.biz/technical_info.htm#ach6);
- Technical information on those timber products that are suited to furniture, specialty flooring and specific construction purposes (including LVL or glue-laminated products that could be used to replace solid hardwood beams);
- Technical information on the in-service uses for Australian timber products – for example, to reduce the acoustic problems of noise transfer in concrete apartment blocks or the use of timber in multi-residential and single or multi-storey timber framed constructions (translated from the English versions found at www.timber.org.au);
- The wood processing technologies (sawing, drying, gluing, etc) employed in Australia;
- The treatments for finishing and protecting Australia’s forest products from the climate and pests;
- Company contact details for Australian wood and wood product suppliers;
- Investment opportunities in Australia for the growing and/or processing of timber; and
- Australia’s carbon accounting methodologies, silvicultural management options for plantations, and the use of trees for multiple purposes (land rehabilitation and commercial timber production).

In developing any long-term links with China’s forest industry, there will be an important requirement for information to flow back to the Australian companies on those factors affecting the timber markets and potential investments in timber distribution or processing within China.

In the last three years, the most significant change to China’s domestic timber industry has been the domestic reduction in demand for construction ply and the increase in demand for decorative timber products, especially furniture and doors. The Central Government of China sought to slow down the rate of housing developments within the major cities by reducing the amount of land that is released for residential construction and placed the emphasis for future economic growth on an increase in domestic consumption. As a result of the change to the land release policy, the demand for construction ply fell leading to a decline in the demand for radiata log imports (which are peeled to produce the core material for ply), which was further exacerbated by the sharp increase in log freight charges. At the same time, the increase in disposable income and introduction of policies to increase domestic consumption, have led to a marked increase in the demand for value-added timber products.

For Australian companies considering investing in joint venture projects and/or establishing a distribution network for their forest products in China, the taxation arrangements and various forms of Government support for new business activities, could have a significant impact on the overall profitability of those activities. The case study for Zhanjiang City, included in this report, provides information on some of the key policy issues that need to be considered by companies when assessing the opportunities to invest in joint ventures or foreign-owned enterprises in China.

Areas for an immediate response

Most of the information transfer could be fostered through the establishment of relationships between the Australian and Chinese industry associations at the national and provincial level. While those activities are proceeding, Chinese companies and government agencies indicated that there are areas of activity where an immediate response could lead to an increase in the volume of trade and investment between the forest industries of both countries. Areas identified for immediate consideration by the Australian industry include:

1. A comparison of the log, woodchip and wood product specifications for forest products manufactured in Australia and China.

2. Organise for a delegation of Australian timber industry and Government representatives to attend and address the next Conference of the China National Forest Industry Products Association (held in March each year). The Chinese industry has indicated their interest in having a delegation from Australia attend this meeting, providing a presentation on the Australian industry, and organising meetings between the Chinese and Australian delegates to discuss the opportunities for expanding trade and investment.
3. Supply information to the Australian industry on the investment and trade opportunities that are immediately available in China. The detailed summary of the meetings in China, provided in Appendix A, indicates some of the investment and trade opportunities that could be immediately pursued in China, such as;
 - a joint venture project for OSB manufacturing at Mawei (near Fuzhou);
 - log and timber imports into Zhanjiang for use in the local region and for establishing a distribution network in China, direct investment in timber milling in Zhanjiang, installing an Australian timber display at the Yuzu Timber Market (Guangzhou);
 - supplying high-quality flooring to specialty projects through companies based in Shanghai and Hong Kong, supplying preservative-treated products to the outdoor furniture and features market in Shanghai; and
 - potential woodchip supplies to Guangdong province.

Chinese companies are interested in pursuing joint ventures with Australian companies because they need access to high-quality resources and they need to understand the science behind the processing of these timber resources, especially when they are used to manufacture high quality timber products.

4. Pursue the development of a Commonwealth-State-industry funded program to promote Australian timber products in China. Forest products suppliers from the US, Canada and some European countries, with financial assistance from their respective national governments, have undertaken substantial timber marketing and promotion campaigns in China. Their marketing efforts had relied upon an exchange of information about the range of products available and the way those products could be used. The US and Canadian industries in particular are promoting the use of timber framing in new residences. New Zealand industry has made some committed steps to building a long-term relationship with the Chinese timber markets, working hard to obtain approval for a greater use of radiata timber in buildings. If the Australian industry is going to compete with the major wood product supplying countries, Government support will be needed to fund a reasonably large program of activity that raises the profile of Australian timber exports. The Australian Industry Group has recommended that to support Australia's manufacturing industries, the Federal Government should invest in a major program for improving the market recognition of Australian products in China.
5. China has drafted a national forest certification standard. As part of finalising that standard and prior to seeking mutual recognition through PEFC, China is interested in undertaking a study to compare the Australian Forestry Standard and China's draft standard. This comparison should include the forest management components and the chain of custody standards for forest products. A valid chain of custody standard for China's forest products would alleviate concerns over the origins of wood used by the timber processing sector. If timber suppliers have to demonstrate that the wood they supply and use is from legally and sustainably-managed forests, this should lead to a reduction in demand for timber from illegally-logged sources.
6. Translate technical information into Chinese, on how Australian timber products can be used in flooring, furniture and construction applications. For the construction materials, the technical information should be prepared in a manner that ensures the use of Australian products will conform with the regulations in China's Timber Structural Design Building Code (Code number

GB 50005). When the matter of using a greater volume of timber in residential constructions was discussed with China's timber processing companies, it became evident that they were unaware of this new building code, of the approved uses for timber in residential constructions, or of the ability of timber products to reduce the transmission of noise (improve the acoustic performance) within residential buildings, where timber framing is used to replace some of the concrete components.

7. Prepare an agreed approach to determining log volumes in export consignments. At the present time, the different approaches taken by Australian and Chinese companies to measuring the volumes of logs exported from Australia is leading to a degree of conflict between the suppliers and buyers. This could be overcome by having an agreed system for measuring the shipped log volumes.
8. Australian plantation companies could access genetic material (hybrids) produced by the China Eucalypt Research Centre for trialling in Northern Australia. These hybrids have been developed for rapid growth and to withstand the impacts of typhoons, with clonal material having no tap root (just lateral roots) and the trees having small crowns.
9. Expand the research linkages between the Australian and Chinese forest industries to cover:
 - a. Additional species selection programs, including the use of eucalypts that are cold tolerant and those adapted to low rainfall environments, and the use of casaurina species to rehabilitate degraded areas along the eastern and southern coast of China.
 - b. Improvements in silviculture and site management – it is of serious concern that the Chinese culture is to remove everything from the plantation sites (including stumps to produce charcoal, and leaves and small branches for cooking and heating fuel). This is mining the plantation sites of nutrients and in some areas where there has been a decline in growth rates during the second rotations, there is a perception that eucalypts and casaurina plantations are degrading the soils and reducing their fertility. It is therefore important to prescribe management regimes that will maintain the productivity of the plantation sites, based around soil protection and nutrient management.
 - c. Collaboratively develop new technologies for processing and using very young eucalypt timbers, including methods of sawing, drying, peeling, gluing and finishing the timber products.
 - d. The adoption of commercial-environmental forestry. That is, the use and management of plantations to provide commercial timber resources for industry while also repairing the environment.
 - e. Adoption and application of components within Australia's carbon accounting framework. The State Forest Administration is also seeking a joint venture partner to undertake a carbon sequestration project in Yunnan Province, with carbon to be sold under the Clean Development Mechanism of the Kyoto Protocol and the timber to be harvested and supplied to industry.
 - f. Consider the application of Australia's approach to forest protection developed through the Regional Forest Agreement process which provides a framework for balancing the economic, social and environmental outcomes derived from the use and reservation of native forests.
 - g. Australian researchers taking a more active role in the China Eucalypt Society.

Improving long-term market access

China's forest industry indicated the potential for a greater level of collaboration. Chinese companies are interested in knowing the range of products manufactured in Australia, the companies who are manufacturing those products and the opportunities for investment in timber growing and processing. They are also interested in the development of new technologies for processing Australia's plantation timber species, the nature of the timber markets in Australia and the capacity for Australia to supply roundwood, woodchips or finished timber products into the export markets. At a broad level, this

request can be filled by the exchange of information between the forest industry associations of both countries.

As noted above, there are numerous opportunities to promote investment and trade across the full spectrum of the forest industry. The developing status of this relationship is already demonstrated by the significant growth in imports and exports between the two countries over the last four years. To build the links that will support future investment and trade to the extent that should be possible between the two countries, it will be essential to understand and be wary of the differences in the industry culture between China and Australia. China's approach is one of building relationships slowly, such as ordering one shipment of wood at a time or utilising the spot market to purchase roundwood and wood products. However, as a resource supplier, Australian companies have to operate with a much longer planning and investment horizon that will allow them to be competitive in the international timber markets.

The Australian wood suppliers start from a long-term supply position so that they can, with a considerable degree of confidence, establish economies of scale in securing the resources ordered by buyers, in the logistical organisation of delivering timber, and in the freighting of timber products to export markets. For example, with the costs of freight being so high at present and such large volumes of timber being exported by other countries to China, it is difficult to find the ships to carry those materials. If only one shipment is required by the buyers, the costs of hiring a ship will be much higher than if a series of shipments were being organised, which in turn reduces the competitiveness of those timber suppliers.

Australia has attempted to build a long-term relationship with the Chinese forest industries on the basis of research and a highly focussed approach on gaining entry to particular markets. A significant amount of research has been directed at the selection of eucalypt species that could be grown across a whole range of the climatic zones experienced in China. More work is required in this particular area to encourage a greater use of Australia's hardwood timber species, which may then be broadened into China's markets accepting a greater volume of Australian timber products and possibly, bilateral investment in timber growing and processing. That is, Australian companies investing in China or Chinese companies investing in Australia.

To increase the effectiveness of the industry association relationships, the forest industries could utilise the expertise of Austrade and Invest Australia. Both Government agencies have a broad range of contacts in China, but in many cases, lack the general industry knowledge which is required to promote the meetings and discussions which can deliver the greatest potential improvements in trade and investment. If Austrade and Invest Australia were provided with key pieces of information by the Australian industry and if they know who they should speak to when there are Chinese enquiries regarding timber products or investment opportunities in Australia, they could play an important role in strengthening the relationship between the forest industries of Australia and China.

Establishing a market presence

To achieve a greater level of market interest and market penetration of Australia's forest products in China, the Chinese industry has strongly indicated the importance and value placed on the Australian industry having a permanent presence in China. While some Australian companies already have their own representatives operating in major timber markets such as Shanghai, China's wood and timber markets are so large that it is difficult to find and engage a large number of wood product buyers or potential joint venture investment partners.

The Chinese industry representatives indicated that the Australian industry would benefit enormously from having a representative based in one of the emerging markets in China, where that representative could answer queries on wood availability, potential suppliers, specifications and technical details on the qualities, properties, durability and susceptibility to pest attack of Australia's wood products.

As the interest in Australian timber products increases, it is anticipated that there will be additional questions on how the Australian products should be used and their effective service lives. This will require the preparation and delivery of generic product branding (that is, indications that the products have met certain manufacturing standards in Australia) and the capacity to talk the Chinese industry through the technical information available for the furniture, flooring and construction sectors.

A number of locations were indicated as being suitable for the physical location of an Australian industry representative in China. These locations include:

- Xiamen or Fuzhou, in Fujian Province, where a significant volume of Australian logs have been sold to a market that is short of resources but interested in additional value-adding joint ventures, a broader use of timber and expanding their furniture industry. The distribution of wood products from Fujian Province could extend south into Guangdong or north through to Zhejiang and Shanghai.
- Guangzhou, the third-largest growth centre outside of Shanghai and Beijing. In the area around Guangzhou are the major timber flooring and furniture markets, as well as growing paper and wood panel and board manufacturing sectors. It has been suggested that the Australian industry should open a display area in the new Yuzu Timber Market.
- Zhanjiang in southern Guangdong Province is a growing timber market with opportunities for joint venture investments and could act as a potential distribution centre for Australian timber products, especially with the Central Government's recognition of Zhanjiang Port as one of the ten most important ports in China. Zhanjiang Port is the closest Chinese port to Australia with the capacity to import timber products and distribute them through the road and rail network to Guangzhou or inland to other provinces, including Guangxi. The furniture industry is growing rapidly in Zhanjiang, with most of the output exported to the US and Europe, and the interest in plantation eucalypt timber (which is stifled by difficulties with obtaining new land to plant) provides opportunities for Australian companies to consider joint venture investments in this region to complement the importing and distribution of timber products. More detailed information on Zhanjiang is provided as a case study for this report.

The information collected from China indicated a strong interest from the Chinese industry to obtain more information about Australia's forest industry and forest products. In every location visited there were indications of the potential investment and trade opportunities that could be pursued by companies from both countries combined with the importance of having any future trade and investment backed by the transfer of technical information and by expanding the strong research links that currently exist between the two countries. To promote the interests of Australia's forest industry in China and to engage the Chinese industry on a more formal basis, evidence was obtained to demonstrate the importance of establishing and maintaining a physical Australian industry presence in China.

Chapter 3 – Case Study

Forest Products Investment and Trade Opportunities in Zhanjiang (Southern China)

A separate trip was organised to Southern China by Pentarch Forest Products under the Australia-China Agriculture Cooperation Agreement (ACACA). That project was designed to assess the capacity of Zhanjiang City to act as a regional hub for the distribution of Australian timber products and to support investment by Australian companies in the further processing of Australian log and timber exports. The information gathered from this case study provides background information for other export and investment opportunities with China.

Key issues regarding future investment in the forest and timber industry of Zhanjiang centred around the physical location for any new business and the forms of Government support that might be afforded to foreign investments, where the companies utilise the port and whether the processing facilities might be located in the Economic and Technological Development Zone or the Special Economic Zone of Xiashan District in Zhanjiang city.



Zhanjiang City with the port, the Economic and Technological Development Zone and Xiashan District identified. The new site for manufacturing facilities established under the jurisdiction of the Economic and Technological Development Zone is on Donghai Island, located approximately 10km to the south of Xiashan District.

Characteristics of Zhanjiang City

Zhanjiang City is located in western Guangdong province. It has a population of more than 7 million people and covers an area of 12,100 km² (1.2 million hectares). The economic activities of Zhanjiang centre around the port, which provides an avenue for importing and exporting a broad range of goods into, and out of, southwest China. Out of the population of 7 million people, there is only about 700,000 who live in the CBD area. This is a reflection of the importance of agricultural activities to the city, as well as the recent investments in many heavy industries (petroleum, iron production) in the adjoining areas.

As with many areas of China, this region has maintained quite remarkable rates of growth in many industries over the past 7 years. This first growth stage was supported by the introduction of capital from Hong Kong and significant changes in Government policies. The next growth stage will most likely arise from the increasing demand for Chinese goods (both domestically and abroad) and the improvements in infrastructure, such as the road, rail and port facilities.

Strong support is provided from both the Provincial (Guangdong) and local (Zhanjiang) governments for any new investment activities in the city of Zhanjiang or the areas surrounding the city, but still within the jurisdiction of Guangdong. This support may include a reduction in taxes for new projects, access to low-interest rate loans from the development and/or agricultural banks of China, or the provision of infrastructure to assist with the development of the projects.

Zhanjiang Port is an important conduit to the sea routes used for exporting value-adding goods from the area around Zhanjiang. It is a natural sea port and is well protected by the surrounding islands. The port precinct covers an area of 200 km² and has 7 km of port frontage. The natural channel for the port is up to 40m deep, allowing large ships to use the port facilities. Zhanjiang also provides the shortest sea route to countries south of China (for the purposes of importing and exporting).

The port is surrounded by a vast hinterland and there is a strong relationship with the neighbouring provinces (Guangxi and Hunan), which are increasingly dependent on the port and improvements in the infrastructure linking them to the port facilities. Zhanjiang Port is growing as a major distribution centre, a transport hub, and a link to the global economy. It has recently been recognised by the National Government as one of the ten most important ports in China, giving the port managers access to additional Government funds to expand the port and its capabilities.

Around Zhanjiang, there is approximately 150,000 hectares of plantations, mostly eucalypts, which have been grown with the improved genetic material supplied by the Centre for Eucalypt Research (CERC) in Zhanjiang. The wood processing capacity is growing quite rapidly in the region, with at least two of the larger enterprises now exporting a significant proportion of their furniture to the US, Europe, and quite recently, to Australia. However, there is not enough wood being grown in this area to support the pulp, paper, MDF and furniture manufacturing sectors.

It has been suggested that the Australian industry could supply up to 1 million tonnes of timber resources per annum to this region. Timber processors are interested in purchasing plantation pine and hardwood materials as well as native forest products from Australia on a sustainable basis. Australian companies could also be involved in timber processing and establishing a network for distributing Australian processed wood products in China via Zhanjiang.

Opportunities for Australian companies in a rapidly growing market and industry

It is envisaged that Zhanjiang, with its relatively uncongested port, good infrastructure and growing timber processing and value-adding industries, could provide 'natural' business partners for

Australian companies who wanted to invest abroad. Logs and processed timber could be exported to Zhanjiang and distributed by road, rail or sea throughout Guangdong a lot more easily, and possibly a lot more cheaply, than if the timber was delivered to a major industrial area, such as Shenzhen or Shanghai.

The likely future growth of the timber processing industry in the Zhanjiang region, the industry's dependence on locally-grown eucalypt species and the future requirements for timber imports, were identified as the key reasons why it was an ideal time for the Australian industry to become established in this area. For the Australian industry, this provides a unique opportunity not only for investment and trade, but to assist the timber industry in China to gain a better understanding of Australia's timber species and products.

With softwood timber products, the major concern for the local industry is that the name infers that the timber products made from our pine species produce timber that is 'soft', and therefore has limited uses. There is little knowledge of the properties associated with the pine species available from Australia. Similarly, eucalypts are thought of as a low quality timber species because the locally-grown trees are used for low-grade manufacturing purposes. That is, MDF, plywood for concreting formwork, and plywood to line the floors of shipping containers.

Unfortunately, the poor name given to eucalypts in this region is more a reflection of the way that the trees are grown at very high stocking rates and harvested after 5 years. With such short rotations, the wood properties of the hybrids generated from species including *Eucalyptus europphylla*, *E. grandis* and *E. teratacornis*, fall well below the physical properties of the timber from trees that have been grown to produce sawlogs on rotations of 10-12 years. These effects are demonstrated by the relatively low pulp wood yields from eucalypt plantations grown on five-year rotations and the inability of the furniture industry to produce sawntimber that is of any use from trees that are so young and so small.

In terms of value-adding, a number of companies in Zhanjiang showed a strong interest in pursuing potential joint ventures with Australian companies for a number of reasons, which go beyond the taxation benefits associated with joint venture projects. The major furniture manufacturers and exporters in this area (Sun Win and Superwood) are well aware of the decline in tropical hardwood timber supplies and the inability of the local wood resources to supply sawmills. In response, Sun Win has commenced a program to establish 20,000 hectares (300,000mu) of hardwood sawlog plantations.

Their main interest in working with Australian companies is to gain a better understanding of how to saw, dry and process eucalypt timber species. This includes preparing new plantation management regimes, identifying the most appropriate mill design and equipment to install in plantation hardwood sawmills, the sawing patterns and drying protocols for the timber, and the methods for finger-jointing and gluing eucalypt timber species. It is believed that this information and the supply of additional logs and timber from Australia would help the industry to retain the phenomenal growth rates in wood processing and exports that have been achieved in recent times.

Summary of meetings

A series of meetings were organised by the Zhanjiang City Foreign Affairs Bureau, the Zhanjiang City Foreign Trade and Economic Cooperation Bureau and CERC, to discuss the potential timber industry investment and trade opportunities in Zhanjiang, and the potential role of the Government agencies in supporting any such activities. A detailed summary of these meetings is provided at Appendix B. CERC plays an important role in the local timber industry, given their links to all of the industry players with an interest in growing and processing eucalypts to produce paper, MDF, sawn timber and furniture.

From the meetings organised in Zhanjiang, it became apparent that different government agencies are responsible for investments delivered in the various parts of the city. In this particular area, the Foreign Trade and Economic Cooperation Bureaux of the Zhanjiang Municipal Government and Xiashan District Government represent separate agencies and all have responsibility for different government tax and funding approaches, depending on whether they are agencies of the Central, Provincial or Municipal (Local) Governments. A similar approach would apply to investments and the establishment of foreign company offices in other cities within China.

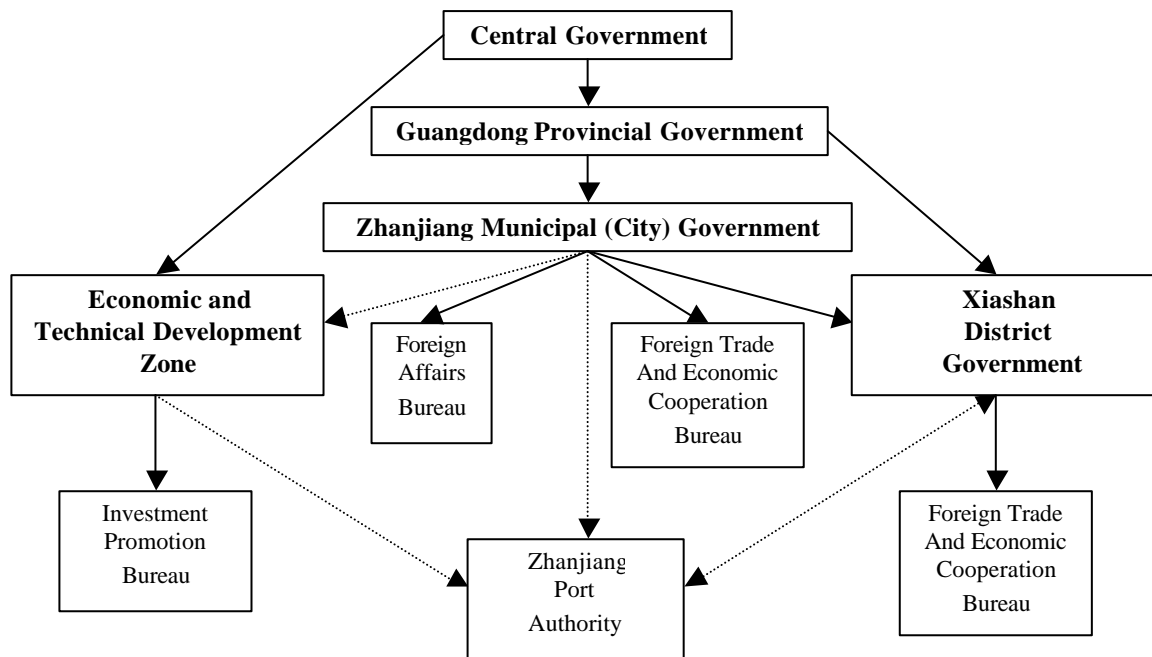
It is essential to work through this process of assessing the various policies supporting new investments, as there may be significantly different financial outcomes for foreign companies which will be determined by the physical location of their head office in China. For example, locating an office in an area of the city under the jurisdiction of the Central Government could mean that the company faces a preferential tax policy on their income tax (no company tax for two years, a maximum 15% tax rate on profits for the first three years after the project first makes a profit) but obtains only limited financial or infrastructure development support from the Municipal Government.

Government support for developing joint venture and foreign direct investment projects

Project development in China is driven by private sector investment and supported by Government agencies with varying responsibilities. Much of the initial private sector investment (during the 1990s) came in the form of direct financing from Hong Kong, where the investors are recognised in the Chinese system as foreign equity holders and their investment in projects often meant that there was some form of preferential tax treatment for both foreign investment and joint venture investment companies.

A new wave of foreign investment, involving companies from many overseas countries, is now driving economic growth in China. Government programs to support the private sector investments can be delivered through the Central, Provincial, Municipal, and District governments, or a combination of these governments. Within each level of government, there are agencies and bureaus to assist the investing companies. Interestingly, the programs set up under each level of Government continually lead to competition between the various agencies to secure the new investment.

The following diagram provides an outline of the government framework that regulates and manages the activities to support new investment projects in either the Economic and Technological Development Zone (the ETDZ, which covers the central economic zone) of Zhanjiang or in Xiashan District, the industrial centre of Zhanjiang.



Zhanjiang Port represents the primary distribution centre for southwest China, providing the transportation hub for importers and exporters into a rapidly growing area of the Chinese economy. The ETDZ and Xiashan District are two specific areas within the City of Zhanjiang that help to drive investment, attract foreign investment and provide new avenues for economic development, which is facilitated by the governing bodies in each area being able to offer potential investors a targeted set of investment attraction incentives that may be complemented by the actions of the Zhanjiang Municipal Government. Economic growth in this area should be accelerated by the Central Government's recognition of Zhanjiang Port as one of the ten most important ports in China.

Administrators in this region are seeking the Central Government's approval to establish a Free Trade Zone in Zhanjiang. In Free Trade Zones, export-oriented industries are supported through a range of policies, including the removal of all taxes (such as tariffs, value-added taxes and import duties) where goods are imported and used to produce exports. Even in the absence of the Free Trade Zone status, the preferential policies to support investment and to provide tax relief to foreign investments or joint venture investments in the ETDZ and Xiashan District can provide significant benefits to companies establishing new facilities within those designated areas. The degree of tax relief offered to foreign companies can be compared to the normal taxation arrangements applying to companies in China.

Normal company tax arrangements for businesses operating in China

Companies will face a myriad of income taxes (taxes on profits) and local government taxes on their business activities. For activities such as forestry, taxes and fees may account for 50% of the cost of wood delivered to a mill. In addition to the sector-based taxes and fees, the general taxes paid by companies operating in China are as follows:

- Value-added tax on inputs and imports of up to 17%;
- Import tariffs set at varying rates, although there is a commitment to have all tariffs reduced in accordance with WTO commitments;
- Customs duty on imports of capital goods;
- Company tax rate of 33% on profits;
- Company tax rate reduced for projects with an investment time horizon of greater than 10 years;
- Reduced company tax rate in Zhanjiang if projects are identified under the description of technology, port or infrastructure-related, as described in Municipal Government policies;

- A rebate of 40% of company tax where profits are re-invested into the business or to establish another enterprise; and
- If profits are re-invested in an export-oriented enterprise, then all company taxes may be returned, but companies have to apply for this exemption.

A proportion of the taxes paid to each Provincial Government are transferred to the Municipal Governments and this is one of the driving forces behind the local governments, such as the Municipal Government of Zhanjiang, being so active in attracting investment to their area. The Municipal Government also sets its own taxes and charges on business activities, although there can be variations in the local government tax rates for foreign-owned companies or companies operating in specific parts of the city.

Jurisdictional controls over the ETDZ

Policies and regulations guiding the development of each Economic and Technological Development Zone (ETDZ), such as the one in Zhanjiang are determined by the Central Government and are applied by an administrative authority with responsibility for governing the economic activities within that zone. However, the actual area set aside for this ETDZ within Zhanjiang City and the enlargement of the zone is determined by both the Zhanjiang Municipal Government and the ETDZ administrative authority. The level of influence between these bodies is demonstrated by the Zhanjiang Municipal Government having some control over who is appointed to manage the ETDZ and implement the broader Central Government policies.

A key issue for the various government authorities with jurisdictional control over part of Zhanjiang City, is the payment of local taxes, because where ever a business is registered, that will be the zone or district to whom the companies will pay local government taxes. The ETDZ sets its own 'local government' taxes, which are used to pay for administering the zone.

The ETDZ may provide exemptions or reductions in tax rates for certain types of foreign enterprises or businesses utilising advanced technologies. For example, a company will be regarded as employing hi-tech processing technologies if the value of output from a particular area of land is higher than the current value of output from the same area of land using existing technologies.

Supporting investment in the ETDZ

The Zhanjiang ETDZ was established in 1984 with the approval of China's State Council with direct policy and financial support provided by the Provincial Government of Guangdong. It is one of 54 such zones in China, which are designed to attract industries with a high degree of value-adding and those industries using high-tech processing technologies. Examples of high-tech industries being sought for these zones include pulp and paper mills processing wood fibre and recycled material, and sawmills with log optimisation systems that use laser scanners, twin edgers and multi-saws.

Companies in the Zhanjiang ETDZ provide 17% of the total economic output for Zhanjiang and earn one third of the city's foreign income. Recently, the Guangdong Provincial Government gave the Investment Promotion Bureau of the ETDZ full authorisation to issue approvals for companies to establish their businesses in this zone and to determine the tax rates and other assistance that would apply to each new project. As a result, foreign investment proponents will only need to work with a maximum of 8 government bureaux to have their projects assessed, instead of the normal 30 to 40 bureaux, prior to gaining an approval to establish a new business in the ETDZ from the Investment Promotion Bureau.

To determine the various forms of policy support that could apply to a new foreign investment proposal, investors are encouraged to work with the Foreign Economic and Trade Bureau of the ETDZ. This Bureau can assist foreign investors to identify the preferential loans that can be accessed from the policy banks, such as the capital bank or the agricultural bank, and whether the Central

Government provides grants, low-interest loans or loan interest subsidies to support particular types of businesses. These forms of financial support can be obtained for activities such as plantation establishment and purchasing capital equipment (for example, capital used in wood processing, building road and rail links to the port, or purchasing cranes to load and unload ships).

When considering the support options for new projects, the ETDZ will work closely with the Municipal Government to determine the:

- Likelihood of business certificates and import permits being issued in relation to the project;
- Potential for developing roads between the port and the new processing facilities;
- Capacity for funding the delivery of training programs, especially where overseas experts are brought in to train local employees in new processing technologies;
- Assistance for targeted R&D; and
- Assistance to local companies who are joint venture proponents with foreign companies in the new projects and enterprises.

The taxation policies applying to new enterprises operating in the ETDZ are quite complex and have the potential to make a significant impact on the profitability of those businesses, which may help to overcome some of the risks associated with establishing a new company in China. A number of the preferential tax policies can be combined for new foreign-owned enterprises or joint venture enterprises that include a foreign investment partner that registers their business in the ETDZ, including:

- No customs duty on imports of capital goods;
- No value-added tax on goods imported for processing by that enterprise;
- No company tax in the first two years of business operation and the company tax rate reduced to 15% for the following three years;
- If 30% of company profits are invested into R&D, the company tax rate is halved for that year;
- Further reductions in the company tax rate apply, down to a minimum of 10%, for companies supported by foreign capital and classified as either product export enterprises or advanced technology enterprises²; and
- A 50% reduction in the company tax rate for research centres.

An extension of the five-year period for reduced company taxes (two years of no company tax then three years at a company tax rate of 15%) for foreign-owned companies or joint ventures can be sought if the enterprise is involved in forestry, export 70% of output, or is recognised as an advanced technology enterprise.

If the foreign-owned or joint venture enterprises can access at least one of the preferential policies for lowering their company tax rate, they may obtain a partial exemption on the 'local government' taxes applying in the ETDZ.

Supporting investment in Xiashan District

The Foreign Trade and Economic Cooperation Bureau of Guangdong is responsible for facilitating investment in Xiashan District, the industrial centre of Zhanjiang City. This Bureau has a close working relationship with the Zhanjiang Port Authority, and they work closely with the Xiashan Investment Bureau to provide a one-stop shop for supporting new investment in Xiashan. This means that companies only need to negotiate the registration of their business and a package of supportive measures with just one government agency.

² Product export enterprises are those earning net foreign income from exports and advanced technology enterprises include companies using new or advanced technologies, recent innovations, or produce outputs that replace imports.

Xiashan District Council has developed its own set of preferential policies that are used to attract investment by foreign-owned and joint venture companies. These policies have been approved and are financially supported by the Municipal Government of Zhanjiang and the Provincial Government of Guangdong. For businesses that depend on importing and exporting of goods, Xiashan District Council can work with the Port Authority to provide particular options for helping companies to move their freight through the port and utilising particular areas within the port precinct.

Xiashan District Council and the Port Authority have recently established a new company to develop a new 40-hectare site at the port for handling general cargo, including logs and containers. This extension will provide companies operating in Xiashan with access to modern port facilities to improve the efficiency of importing and exporting goods.

The Foreign Trade and Economic Cooperation Bureau will seek approval for any change in the company tax rate that will be applied to new foreign-investment businesses operating in Xiashan. Where the new companies are investing in activities supported under Central Government policies (such as new plantation developments or investment in timber processing facilities, including pulp mills, sawmills, furniture factories), they may be able to access a reduction in the company tax rates and a tax holiday for the first two years that the business is operating, as occurs in the ETDZ. With respect to the Municipal Government taxes, the taxes applied to business in Xiashan District will be the same as those applying to businesses operating in other parts of Zhanjiang (except for the ETDZ). However, the foreign investment and joint venture companies can negotiate a reduction in their local government tax liabilities. In addition, the price of land in Xiashan District will be negotiated with the Xiashan District Council, with the price paid for land to develop the new projects based on the expected company profits and therefore, the potential Municipal and Provincial Government tax revenue from the project. The greater the economic, investment and employment benefits to Xiashan, the stronger the position for new businesses to negotiate a reduction in the cost of their land.

Conclusions on the investment support options for Zhanjiang

The tax arrangements, investment support policies and various forms of preferential policies for attracting foreign investment to certain areas within China, and to certain parts of individual cities, require detailed examination prior to agreeing on the location for a new business. Only after a week of discussions with all of the relevant authorities and bureaux was it possible to draw any real distinction between the full range of investment attraction incentives that could be obtained when investing in either the ETDZ or Xiashan District. For a timber business that would rely on importing wood for further processing and/or distribution combined with the establishment of a processing facility to manufacture value-added exports, it was most likely that the greatest level of support and the best financial outcome would be provided by having the business located in Xiashan District.

Chapter 4 – Suggested approach to strengthening Australia’s forest industry relationship with China

The general aggregated outcomes from the meetings held with forest industry and government stakeholders in China are contained in this proposal for strengthening the forest industry relationships between Australia and China. This proposal is designed to raise the capacity for improving the volume of trade and investment between the forest industries of both countries. It outlines the activities to be undertaken and includes an approach for assessing the value of having an industry representative physically located in China for a period of at least three years. This proposal is broken down into a number of stages:

1. Australian companies to determine if this proposal will provide adequate returns on investment.
 - An Australian delegation to attend the next annual conference of the China National Forest Industry Products Association to:
 - o Present an outline of the Australian industry, resources, products and trade activities.
 - o Arrange targeted meetings between Australian and Chinese companies attending the conference to discuss trade and bilateral investment opportunities in the flooring, furniture, log supplies, woodchip supplies, construction materials, and preservation-treated product sectors.
 - Organise meetings in Guangzhou, Shanghai, Fuzhou or Xiamen, Zhanjiang to gauge the benefits of having an industry representative located in China and the most suitable location for that representative.
 - Industry agreement on the location and activities of the Australian industry representative.
2. Activities to support an industry representative based in China.

To improve Australia’s reputation as a forest product supplier and build confidence in Australian products:

- Prepare information (in Chinese) on Australia’s forest industry, forest resources, product specifications, and technical information on plantation management and the processing, drying, gluing and use of Australian forest products. Technical information would cover the furniture, flooring and construction sectors.
- Ensure technical information conforms with China’s building codes and other standards or regulatory requirements.
- Provide examples of where Australian timber products have been used in specific projects.
- Establish a program to inform Chinese wood buyers of the products and technology available from Australia (taking into consideration the successful components of the Canadian program and the US-China Build program).
- Use market intelligence to organise meetings between potential trade and investment delegations from Australia and China. In the past, many of the trips by Chinese delegations to Australia have been far less successful than may otherwise be the case, because the Chinese delegates have not known whom to visit in Australia.

The success and future development of this proposal will be gauged by the increase in trade and investment.

3. Recommended funding for this proposal from four sources.
 - Commonwealth and State funding should be sought to promote Australia’s forest industries as a demonstration of Government support for the industry and to allow the Australian industry to compete with the marketing and promotion campaigns delivered by other major wood supplying countries.

- Support the Australian Industry Group recommendation that, given the strong competitive pressures from China, that the Federal Government should assist the Australian industries by funding a promotional campaign to improve the marketability and market recognition of Australian products in China.
- Industry funding of the China-based representative and the preparation of promotional materials as a proportion of the funding contributions from Commonwealth and State Governments.
- Profits generated from organising the visit of Chinese delegations to Australia or Australian delegations to China. At the present time, Chinese forest industry trips to Australia are organised by companies based in China. One such company is Southern United, which is located in Shanghai. The Australian representative based in China could work with this (or a similar) company to organise the trips for delegations travelling to Australia, ensuring that they engage with the right people to develop their business and/or research relationships. A similar process could apply to Australian companies visiting China. The profits from these activities should fund a reasonable proportion of the activities to be undertaken by the Australian industry representative.

The overall aim of this proposal is to provide an avenue for the Australian industry to grow with the expansion of China's forest and timber industry. By providing information on Australia's resources and products, and improving the collaborative research activities, there is the capacity to increase bilateral forest products trade which should also lead into investment in timber growing and processing, for the mutual benefit of the Australian and Chinese forest products industries.

To address the Chinese industry concerns about the future role of Australia's wood suppliers and to provide the means for improving the capacity for identifying potential joint venture partners from Australia, the successful undertaking of this proposal would demonstrate the level of commitment that the Australian industry has towards the timber markets and timber industry in China.

Chapter 5 – Conclusions

By the official figures on per capita timber use, the Chinese consume approximately one-tenth the volume of wood products of Australians, when measured in terms of industrial roundwood consumption. Even from the unofficial consumption figures, there is most probably a five-fold difference in the per capita consumption of industrial roundwood between the two countries.

Whatever the true figure, the reality is that as China's economy grows, the consumption of wood and paper products will continue to rise. It is therefore reasonable to expect that Australia will have the potential to build a strong and enduring relationship with the timber industry in China through new opportunities for both trade and investment. This relationship will most likely develop through a series of steps.

If Australia is to take these opportunities, the first crucial step, as limitations arise with alternative timber resources, is to have the Chinese timber markets accept and demand the timber products and the timber species that are available from Australia. These include the engineered and sawnwood products manufactured from Australian softwoods and an increasing recognition of the qualities of Australian hardwood timber species (especially eucalypts). Given the dominant influence that the Chinese market will most probably have over all global timber markets in the future, it is essential that the timber products from Australia are not too dissimilar to those consumed in, and exported from, China. In fact, it would be quite beneficial to the Australian industry if the Chinese markets come to depend on the types of timber and timber products that are available from Australia.

By taking this approach and outlook, the Australian timber industry could position itself to benefit from the growth in China's forest and timber industry. The immediate requirement is ensuring that China's plantation growers, timber processors and the consumers of wood products can access information on how to use Australia's softwood and eucalypt timbers. In general, little is known about the Australian timber industry in China, yet in a small number of cases, concerns were raised about the qualities of the timber species used in Australia. If these perceptions gained any momentum, the Chinese market could shift to alternate species. On that basis, and given the relative difference in the size of the timber industries in each country, if China reduced its interest in eucalypt species or the emerging substitutes for sawn timber products, Australian manufacturers may find it extremely difficult to compete in the future global markets for wood products.

To facilitate forest products trade and market access for Australian suppliers in China, a targeted marketing and promotion effort is required to raise the marketability and market recognition of Australian products in China. As part of the broader promotional effort, targeted information needs to be provided to Chinese agencies and companies on the silvicultural management options for eucalypt plantations and the techniques for processing, drying and using eucalypt timber products. Through the supply of technical information, it is reasonable to expect that China will have the confidence to expand their use of timber species and products to include those that are similar, if not equivalent, to the species and wood products available from Australia.

In addition to providing technical information on growing and using Australian timber species, it will be important to ensure that there is a greater level of consistency in the product standards and specifications applying in Australia and China. Where the Chinese building code now accepts the use of wood framing, Australian suppliers must ensure that technical details, such as those available from the www.timber.org.au website, are supplied and promoted to the Chinese users of wood products. That is, to the furniture manufacturers, builders, architects and regulatory bodies.

An improved flow of industry information between the two countries, as the basis for facilitating an increased level of bilateral trade and investment, could be most effectively supported through the national industry associations in both countries. The Chinese industry has indicated its willingness to proceed along this pathway to establish and promulgate a long-term relationship with the Australian industry. However, to address the many questions that are raised about Australia's timber industry and wood products, a permanent Australian industry presence is required in China. A staged

approach is required as outlined in Chapter 4 to assess the value of having a permanent presence in China, the activities that should be pursued and the options for funding it.

To compete with the marketing and promotional efforts of other countries such as Canada and the US, Australian Government support at both a political and a funding level should be sought to assist the Australian industry in promoting the forest and timber industry in the international arena and the industry's trade and investment opportunities. Only with that support will it be possible to raise the profile of the Australian industry and compete with other major suppliers in the Chinese wood products markets.

The Australian Industry Group has recommended that the Australian Government should take a similar approach to support all Australian industries in response to the extremely strong competitive pressures from China. As China's wood growing and timber processing industry develops its understanding of the Australian timber industry, it is possible that the increased level of awareness could translate into future investment in Australia's plantation and wood processing sectors.

Based on the information gained from government agencies and the timber growing and processing companies in China, a proposed strategy and funding framework to promote trade and investment between Australia and China, is outlined in this project report for consideration by the Australian industry. Such a strategic approach would complement any future consideration of the potential investment opportunities arising in China's forestry and wood-processing sectors.

In all parts of China that were visited for this project, the opportunities for collaboration, at various levels, between Australian and Chinese organisations was immediately apparent. Where there is a growing awareness of the potential uses of eucalypt timber products in China's industries, there is a growing interest to develop bilateral trading and joint venture investment projects with Australian timber companies.

An additional area that could help to facilitate trade in wood products between Australia and China, is to undertake a comparison of the certification approaches under the Australian Forestry Standard and the draft China forest certification standard. By comparing both the forest management and the chain of custody components for the standards, it may be possible to reassure the international purchasers of wood products that the timber used to manufacture those products has been obtained from legally, and possibly legally and sustainably, managed forests and plantations.

The opportunities for cooperation and mutual benefit for the timber growing and processing companies in Australia and China are numerous. While the exchange of information will be one step in this process, Australian companies could consider accessing less congested and competitive markets (such as Guangzhou and Zhanjiang) as the basis for building a distribution network for Australian products and opening up the opportunities for expanding the level of trade and investment between the forest industries of both countries. Chapter 2 of this report provides a brief summary of some of the investment and trade opportunities that were immediately available in the areas visited.

Where Australian companies may be willing to consider the trade and investment opportunities available in China, the information contained in the Zhanjiang case study provides an outline of the investment process for potential foreign investment or the establishment of product distribution networks in China. However, for any companies interested in pursuing those opportunities, it is essential that they closely examine the possible tax arrangements, investment support policies and other forms of preferential investment policies (including access to low interest loans or production subsidies) before deciding on the physical location for their businesses.

To strengthen the relationships between the forest industries of Australia and China, the activities fall into four main categories:

1. Addressing the information requirements (as outlined in Chapter 2);

2. Assess the areas in China where there could be an immediate expansion of trade and investment, which may require an Australian delegation attending the next meeting of the China National Forest Industry Products Association to discuss these opportunities with their Chinese industry counterparts;
3. Improving long-term market access to China by bridging the cultural differences between the Australian and Chinese industries and building on the research programs linkages surrounding species selection, plantation management, timber processing, and certification; and
4. Establishing a permanent market presence in China, with an industry representative located in China to provide information and address queries regarding the Australian industry and products. Australian industry representatives could consider the value of locating that representative in one of the emerging markets of Guangzhou, Xiamen, Fuzhou or Zhanjiang.

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Summary of meetings and site visits

CIFIT Trade and Investment Fair (Xiamen City, Fujian Province)

There is strong interest from companies in Fujian Province to purchasing radiata logs from Australia with a small-end diameter (SED) of less than 30cm for rotary peeling, with the sheeting used to make the core of plywood. Radiata log imports to China generally occur through either one of two approaches. In a limited number of cases, the processing companies are large enough that they can process all of the timber that they import and they have an import/export licence. This group of companies organise their own log purchases, imports and possibly some additional wood that is ordered for other mills.

A more common approach is utilised by the many small mills which process up to 10,000 cu.m. of imported logs per annum. The Chinese trading companies, or importing agents, order the logs and have them delivered to the ports in China, such as the Port of Zhangzhou, at Xiamen. The smaller mills then purchase their logs at the docks through spot sales and usually in very small parcels, for example between 2 and 20 cubic metres at a time. The importing agents or trading companies may handle in excess of 200,000 cu.m. of logs per annum in this way.

The development of trading relationships between Chinese and Australian companies are in the early stages of development, as indicated by the nature of the 'discussions' with the log and timber importing companies at the trade fair in Xiamen. During these discussions, the Chinese companies indicated the importance of radiata logs to the domestic industry and the potential benefits that could arise from a clearer and mutual understanding of common issues between the trading partners. Misunderstandings generally arose over:

- The timing of shipments and delays in shipments reaching China (which impacts on the availability of resources to supply the large number of spot sales on the docks);
- Differences in the way that the log volumes are calculated by the log buyers and suppliers (leading to regular differences in wood volume estimates between Australian exporters and Chinese importers of around 5%); and
- Differing log specifications for the buyers and sellers in terms of the diameter classes and size of the knots.

A major issue for the Chinese log traders was the significant increase in the price of Australian logs imported into China. The landed price of Australian log imports rose considerably in 2004 and remains high, due to the appreciation of the Australian dollar, the rising price of diesel fuel and the difficulties in organising freight transport of any kind to China.

With the Chinese Yuan pegged to the US dollar, any appreciation of the Australian currency against the US currency means that the price for Australian log exports will rise. This is affecting all of Australia's resource exporters at the present time, with the Australian dollar worth USD0.76 (May 2006 exchange rate). For Australian timber to be competitive in this market, the Australian dollar would need to depreciate to around USD0.67, the Yuan would need to be revalued (appreciate relative to the Australian dollar), or there would need to be some combination of these two events.

There appeared to be some major 'cultural' differences between the Chinese log importers and Australian log exporters. For example, Chinese companies are interested in building their business relationships one step at a time. When they purchase logs from a supplier for the first time, the Chinese companies are interested in purchasing one shipload of logs. For Australian companies, this is quite difficult to organise, especially when there are such large demands for timber resources in

China and there are so few ships readily available around the world for transporting logs to China, with most ships needing to be ordered several months in advance of the transport of logs.

The demand for cargo ships is so great that the shipping companies themselves will only contract out their ships if there is a guaranteed sequence of transport activities, as opposed to the one-off shipments. Given the logistical effort required to organise logs from a variety of sources (and possibly regions) in Australia, the log suppliers do not have the time to organise what might be one-off shipments to China. A better understanding of these matters by China's log importers should help to overcome the perceptions that Australia is not a reliable supplier of timber resources.

The Chinese timber importers indicated the importance they placed on having more direct contact with a wider range of timber suppliers from Australia in order to build stable, long-term business relationships.

None of the Chinese companies were aware of the range of timber species available from Australia and were interested in finding out more about the lower grade pinaster (from Western Australia), cypress (from New South Wales), slash or Carribbean pine (from Queensland) and the eucalypt resources. In addition to obtaining this information, the Chinese companies were extremely interested in Australia's research programs to underpin the use of plantation resources for peeling, sawing, gluing and drying.

It was suggested by the Chinese companies that it would be highly advantageous to have a representative of the Australian log and timber suppliers located in either Xiamen City, close to Zhangzhou Port, or in the Provincial capital, Fuzhou City. Such a representative would be based in the market and be able to directly address the questions raised by importers regarding wood availability, log specifications, and additional species availability, together with information on the qualities, characteristics, durability and uses for those timber products.

To establish a good reputation and strong links in China's timber markets, the Chinese wood importing and processing companies indicated that the best option would be for Australian companies to invest in timber processing in China and import the logs to service that mill. At least one example was outlined of a potential joint venture project with a local company where logs could be imported, processed and the plywood products exported to Japan. By establishing themselves within the timber markets, Australian companies could build the distribution networks for a broader range of products, of which some may be manufactured in Australia. The Chinese companies also thought that this approach could open up a distribution network for their products in Australia.

Fujian Great World Enterprise Group Co Ltd – Xiamen (also Fuzhou)

This company is large enough to directly import a range of timber species to manufacture ACQ-treated materials across the general lumber sizes for China's domestic and international wood markets. Until recently, they have been directly importing a significant of Australian (and New Zealand) radiata logs through the port of Zhangzhou, where the changing demand for logs has been determined by the landed price. Prices for Australian logs landed at Zhangzhou port increased from an average of US\$53 in 2000, to US\$110 in early 2004, and have since fallen back to US\$79 per cu.m.. The impact is the volume of radiata logs used by the timber mills around Zhangzhou has been reduced from 7,000 to 1,000 cu.m. per day.

They have found radiata is a good resource for manufacturing their ACQ-treated posts and while they would be interested in importing much larger volumes of wood, the main problem is the price of the radiata logs relative to the price of softwood logs being imported into China from the Russian Far East. At the present time, they are interested in importing logs through Zhangzhou Port for processing and treating to produce timber for manufacturing prefabricated, timber-framed and timber-clad houses for exporting to Japan and the US.

This company was also interested in importing semi-processed timber products from Australia. However, there are significant variations in the dimensions of lumber produced in China and in Australia. For example, the Chinese importers want to purchase floorboards that are 10cm wide and 1.8cm thick. Australian timber suppliers could only provide timber that is 9.5cm wide and 2.2cm thick from their current product ranges.

Some questions of interest to this company were whether the current fumigation process for imported logs would affect the colour of the timber and if there were any known pests that would attack Australian timber products after they had been installed in China or any of their export markets.

They are interested in exporting their fully-fabricated timber houses to Australia.

Zhangzhou Baifair Wood Industrial Group - Xiamen

The company imports 100,000 cu.m. of logs per month to manufacture a range of plywood products, including ply made solely of radiata, ply with a radiata core and C-grade spruce for the face and back, and waterproof grade plywood. Hardwood logs, such as meranti, are sourced from Indonesia and Malaysia to produce the backing and face material for furniture grade ply.

Local Chinese fur can be used for the core as well as radiata, although radiata makes the better waterproof grade of plywood. This company uses pulp grade radiata logs to produce the coring material, as opposed to KI and KA grades from NZ, due to the difference in price. The best size logs for rotary peeling are 18-22cm SED, although they can use logs in the range of 14-30cm SED.

The cost of freight has become a major problem for this company. In 2002, the cost of transporting logs from Australia to Zhangzhou Port was USD15/cu.m., which increased to USD30/cu.m. in 2004 and is preventing them from using a larger volume of radiata from Australia. This company indicated that if they had information regarding the different uses of radiata, in terms of its gluing properties (with respect to its capacity to adhere to other species of timber) that they may be encouraged to use more of the Australian timber resources.

Zhangzhou Port - Xiamen

Zhangzhou Port can handle over 2 million cu.m. of logs per annum and represents one of the 10 biggest log markets (by volume) in China, supplying timber to over 2,000 factories in the area close to the port. At any one time there will be approximately 100,000 cu.m. of logs sitting on the docks. Quite importantly, this port does not suffer the same congestion problems as some of the larger ports in China, such as those around Shanghai and Guangzhou.

The port users reiterated the belief that there would be a significant advantage in the Australian wood suppliers having an office located close to Zhangzhou Port and that the Australian companies should investigate the opportunities for joint venture investments in timber processing. There is an invitation from the Chinese companies for Australian industry representatives with links to the timber, log and wood chip suppliers in Australia, to be located in this area – they are building a major timber-processing complex close to this port with suitable office space.

Having Australian industry representatives located close to Zhangzhou Port would be strongly supported by the Fujian Forest Industry Association as this could lead to the establishment of long-term relationships between the suppliers and the wood buyers in a relatively large Chinese market. The Fujian Forest Industry Association could help to identify suitable Chinese business partners for those Australian companies that may be interested in potential investment opportunities in Fujian Province. The Chinese industry association could also be utilised to obtain government support for any new joint venture-project proposal.

Xiamen Yongquan Group Co. Ltd - Xiamen

This company is vertically and horizontally integrated across all aspects of the forest and timber industry. It has a nursery to produce seedlings and to clone trees from cuttings, it is growing its own plantations, extracts perfumes and oils from a range of tree species, and it processes timber prior to supply its own furniture, door, flooring and veneer factories. They grow a range of species for these purposes, including Chinese fir, masson pine and hardwoods (especially eucalypts). To support the future growth of the company, they are undertaking extensive plantation species and clonal trials. The company employs over 10,000 people across all of its operations.

This company is establishing a major furniture factory and office complex that will house all sectors of the industry and the industry association within the one location. It will be built close to the major freeway and have a direct link to the Zhangzhou Port. The owner of this company, Mr Lai, believes it would be an ideal location to house an Australian industry representative and log or timber suppliers from Australia. He is also in a strong position to obtain government support and facilitating investment in joint venture projects or attracting foreign direct investment to the Zhangzhou area, given his positions as:

- A deputy to the 10th National People's Congress
- Vice-chairman of the General Chamber of Commerce of Fujian Province
- Chairman of the Fujian Forest Industry Association
- General Director of Xiamen High-Tech Enterprises Association.

From these discussions, it was clear that the Chinese timber companies did not know who they should speak to in Australia (apart from Pentarch, who is a highly-valued and respected supplier, or maybe Forestry Tasmania) with respect to obtaining information about Australia's forestry resources. The Fujian timber companies wanted to know about the species being grown in Australia, the volumes of wood that are being produced and the types of resource grown, all on a region-by-region basis. There was interest in finding out the dimensions of Australian timber products, so that they could be compared to those sold in China, and information was sought on the potential insect resistance of Australian timber species.

For this company, there was some interest in obtaining information on cypress timber and supplies of cypress oil. They also wanted to know who the major furniture and timber importers in Australia were, as the basis for starting to open up new Australian markets.

Even though the Xiamen Yongquan Group is a highly integrated company, neither they nor the other timber manufacturers in Fujian Province were aware of the changes that had been made to the Chinese building codes or of the potential uses of wooden building products in new timber-framed constructions. There is an opportunity to demonstrate how Australian building products and products manufactured from Australian logs can be used to meet the requirements of the new building code, which came into effect on 1 January 2004, as the basis for encouraging the supply and use of these products in China.

This company, like others operating around Zhangzhou, were not interested in South American timber supplies, as the costs of freighting the logs and wood products to China was prohibitively expensive.

UPM Kymmene - Zhanjiang

UPM gained approval to develop a pulp mill in the area close to Zhanjiang, a large port city in the south of Guangdong Province, and they were working with local landholders and government agencies to develop the plantation resource that would be required to supply this mill. The proposed mill would need 3 million cu.m. of wood per annum to produce at least 750,000 tonnes of pulp.

To secure enough wood for the mill, UPM was engaging local landholders to grow the wood for them and to do this, they had to obtain a licence for 'internal' wood trading. The aim was to establish 200,000 hectares of plantations within 80 to 100km of Zhanjiang Port, where plantations would need to compete with the sugar industry for access to land. Additional woodchip supplies would be obtained from the local wood market, where there are 30 small woodchip mills operating in and around Zhanjiang.

The main species being planted were the clonal materials derived from *Eucalyptus grandis* and *Eucalyptus europhylla*, with some interest in acacia species. This area is affected by typhoons each year, so advice from the China Eucalypt Research Centre was essential for determining the clonal origins of the seedlings to be planted. UPM was interested in utilising blocks of farm land down to areas as small as 0.3 hectares in size. They assist landholders by providing financial support, fertilizer, helping to prepare the land prior to planting and provision of the seedlings, in exchange for the landholders agreeing to sell the wood to the pulp mill.

Many problems arose with the plantation program. In general, there are no clear land ownership rights. Villages own the land and have the right to plant it with crops. However, all land has a designated use under one of five categories. To change the designated landuse, local government approvals must be obtained. In some cases, it may also be possible to obtain a concession from the Provincial Government to use a certain area of land for plantation forestry over a specified time period. These concessions are difficult to obtain and a number of caveats are applied to the approved landuse.

Although sugar cane production was less profitable than forestry, farmers were reluctant to change their landuse largely because of the period of time they had to wait to receive their forestry income. Concerns had been raised over the potential impact of plantations on land productivity and in the last 10 years, there has been a significant loss of farm land to industrial developments in this region. As the area of crops is reduced, more food has to be imported into the area meaning that the local governments are less willing to support a change in landuse from agriculture to forestry.

The question of declining land productivity is more challenging and may not be anything to do with the growing of plantations. In the area of Zhanjiang, when a plantation is harvested, everything is removed. The small branches and leaves are used to provide for fuel for heating and cooking, and the stumps are dug up and sold to the charcoal plants. Even on highly productive soils, the cultural approach of using everything that is available from the plantations is likely to be mining those sites of nutrients, leading to declining productivity in the second and subsequent rotations.

In China, foreign companies cannot own the land and where a farmer agrees to plant trees, UPM was paying around \$1,200 to \$1,500 per hectare to establish and maintain the plantations. Where UPM leased the land from farmers, they were paying annual land rentals of approximately \$200 to \$300 per hectare. At the end of the rotation and under China's ownership laws, the farmers own the trees. The forestry company has no secure rights over the trees or the age at which the trees would be harvested.

Where farmers establish the plantations themselves, they are only interested in growing the trees on 3 to 4 year rotations, then harvesting the timber and transporting two-metre long logs with SED down to 3cm, to the local chip mills. This is considered to be a long investment time horizon. Unfortunately, the juvenile wood produces very low pulp yields. To improve the pulp yields to a level that is commercially viable, the trees should be grown in this area on rotations of 6 to 10 years. However, this would make it difficult for the farmers to harvest and handle the logs.

With many small blocks of trees planted, transporting of logs to the mills is quite costly and complex, from a logistical perspective. Most of the roads from the plantations to the highways are in relatively poor condition and are generally unsealed. To transport the timber, it will need to be taken out of the plantations in small trucks. The overall structure of the plantation sector means that it is difficult to

deliver production efficiencies through longer rotations, mechanisation of harvesting and transporting logs using large truck configurations.

An alternative land acquisition model is for Chinese businesses to acquire large areas of farm land, obtain an approval to establish plantations, and then work with the forestry companies such as UPM to grow the plantation resource.

If the UPM pulp mill were built, it is unlikely that enough resource could be secured locally to supply all of its wood fibre requirements and they would be interested in obtaining more information about Australia's resource and exporting companies to see if there were any Australian suppliers that could potentially provide the woodchips to meet their shortfall.

Existing woodchip supplies from small-scale forestry operations on farmland

In the area around Zhanjiang, the farms are relatively large by Chinese standards and have generally been used for sugar cane production. As a result, most of this area is cleared of trees and the land has been heavily fertilised. With low returns from sugar, more farmers are starting to grow trees using an agro-forestry format. The trees are planted at 3,000 stems per hectare and are harvested by hand as small-diameter logs after 3-4 years. (Industrial operations have trees planted at 1,000 to 1,200 stems per hectare).

The current silvicultural approach is to plant, harvest, coppice once, kill the stumps and replant. When replanting, the deep soils are only ripped down to approximately 30cm. There is no need for deep ripping as the seedlings have been derived from tissue culture, not seeds. As a result, the trees put out lateral roots without producing a tap root. No herbicides are used to control the weeds, as in this 1,500mm annual rainfall area, the trees reach 'canopy closure' quite early in the rotation and even though the crowns of the trees are not dense, the amount of sunlight that reaches the ground is only enough to maintain a covering of grass.

Farmers are paid approximately AUD70 per green tonne of wood delivered to the chip mills around Zhanjiang, with the logs supplied in two-metre lengths. These mills are small family-owned businesses, with 30 mills processing, in total, approximately 1.5 million cubic metres of wood per annum. The woodchips are transported from the mills to the ports using semi-trailers and 30-foot bins along good-quality roads. At the port, the chips are shovelled out of the sides of the bins before being stockpiled for export to Japan and Korea.

With diesel costing around AUD3 per litre, transport costs are minimised in this region by restricting the average transport distance between the plantations and the mills to 30km, with the distance from the chip mills to the port being another 30-40km along relatively flat roads.

Similar to what has been happening in Australia over the past 5-10 years, concerns are being raised in China about the expansion of plantations onto farmland. Some farming groups, ecologists and bureaucrats refer to plantations as Green Deserts, as it is claimed that no birds or other animals live in the plantations. The China Eucalypt Research Centre is undertaking a project to compare the biodiversity in the plantations and on the adjacent farmland. These studies will investigate the potential for using a nitrogen-fixing understorey with the potential to grow up to two-metres in height.

Sun Win Furniture Factory - Zhanjiang

Sun Win manufactures a large range of furniture products and decorative items, such as timber doors, with the major portion of the companies output being exported. As there is only a very limited amount of timber from this area that is suitable for making furniture, up to 90% of Sun Win's timber requirements are imported from other areas of China, and from other countries including Canada and Australia.

This company is growing quite rapidly and has been combining relatively low-cost labour with low quality sawntimber to manufacture high-quality furniture products. To expand their business operations, they are seeking foreign investment through a joint venture arrangement and preferably with an Australian company, as they wish to use eucalypt hardwoods to supply the timber for their future product range. Foreign investment would help to expand the business quickly (and provide them with access to a range of Chinese government support programs). If that business partner was from Australia, they would hopefully access technical information on how to process and use sawn eucalypt timbers, with the potential for the joint venture partner to supply timber from Australia.

As a future development stage for the business, Sun Win intends to grow their own plantation eucalypt resources for sawing and processing into furniture. The local (municipal) and provincial government are very supportive of a possible project that could include investment in forestry, value-adding and exporting.

Zhanjiang port is the closest Chinese port to Australia. It is rapidly expanding while being relatively free of the congestion experienced in other ports around China, and it could provide an important entry point for establishing an effective distribution network in China for Australian forest products.

China Eucalypt Research Centre (CERC)

The China Eucalypt Research Centre (CERC) was founded in 1987. It is part of the Chinese Academy of Forestry and has been involved in a long-term collaborative research partnership with CSIRO. CERC is made up of seven divisions (covering genetics and tree breeding, silviculture, wood processing and utilisation, tissue culture, seeds and seedling production, and forest health) and is involved in a number of major national and international forestry projects. A new area of research for CERC is the cultivation of fast-growing, large-diameter eucalypts.

One of the outstanding areas of achievement for CERC is the depth of information they have built up through their many trials with eucalypt hybrids. The main eucalypt hybrids they have developed for their trials and for supplying the local plantation growers, are *euophylla x grandis*, *euophylla x tetracornis* and *euophylla x camaldulensis*. Most of the 500-plus family trials and the numerous clonal trials that have been completed with these hybrids, have focused on wood volume production in southern China with the potential for using the timber to supply the pulp and paper industry (little is known about the variations in pulp yields from the different clones). Quite importantly, CERC has identified those clones that can withstand typhoons when grown in plantations. There is a possibility that these clones could also be used to form wind breaks, providing some level of protection for the agricultural crops that are grown on the Leizhou Peninsula (south of Zhanjiang).

In this typhoon-susceptible area, the clones that demonstrate the best capacity for survival are the hybrids grown from tissue culture, as they have no tap roots, small crowns and the tree diameter at breast height is not too large. It appears that these characteristics give the trees sufficient movement in the typhoon winds to prevent them from breaking.

The CERC clonal trials are being undertaken on their 200-hectare nursery site outside of Zhanjiang, where the trees are only grown for 3 years to provide an indication of the growth potential and form. At three years of age, it is too difficult to determine if there will be any variation in the pulp yields from the various clones. Out of the CERC seed orchards, they grow eucalypt 'hedges' to produce the clonal stocks. Enough material is removed from the hedges to produce 40 million seedlings per annum. The hedges themselves are only around 10cm high and the shoots are cut off the hedges every two weeks. To be of any use for preparing the clonal material for future planting, the individual shoots must be less than 10cm long.

Small pieces are cut from each shoot and placed onto a tissue culture medium (which is similar in appearance to agar). After growing under sterile laboratory conditions for 30 days, the clones are removed from the agar, the roots cut off and the remaining material is placed onto a second lot of

tissue culture medium for another 50 days. At that time, the clones are 2-3cm in height and they are transferred to the potting mix in the CERC greenhouse, where they are exposed to a controlled water and temperature environment. These clones are extremely uniform in nature.

In addition to the eucalypt clones, CERC has produced clonal material from acacias (including *A.mangium*), casuarina species and the Queensland pine hybrids of *carribea x elliotii*. The casuarinas have been established in plantations on Hainan Island, where they show good growth characteristics and the harvested wood is supplied to a particular market in Korea.

In recent years, CERC has participated in a major national project to identify cold-tolerant eucalypt species and hybrids for plantation establishment in Guangxi, Yunnan, Hunan and Fujian Provinces. In these areas, the trees have to withstand snow in winter, temperatures of over 40°C in summer, and grow at an MAI of 15 cu.m. per annum. These trials include *dunnii*, *grandis*, *globulus*, *camaldulensis*, *saligna* and *smithii* species and hybrids.

From the discussions with CERC, there is the potential for Australian forestry companies to utilise the information available from the trials completed in China as the basis for selecting genetic material that can be used for domestic trials in tropical areas that may be suited to plantation forestry, such as the northern parts of Queensland, the Northern Territory and Western Australia. CERC has a lot of information on the characteristics of these hybrids and their ability to withstand major weather events, such as cyclones.

China also has a Eucalypt Society with a wealth of knowledge on growing and managing eucalypt plantations. The Australian forest and timber industry would be a most welcome participant in this group.

Family-owned wood veneer factory - Zhanjiang

The small factories producing veneer products are extremely labour intensive. Farmers supply these mills with logs that are two metres long and a SED of 30cm or less. The logs are cut down into one-metre lengths prior to rotary peeling on small, open-bladed machines (worth approximately AUD8,000 each). After peeling, the sheets are laid out in the fields to air dry. This particular factory produced 8-ply sheeting where the smaller pieces from the rotary peeling process are patched together to produce the core while the intact, larger pieces are used as the face and backing layers.

Guangdong Forestry Products Industry Association and Forestry Department of Guangdong

Guangdong is a fairly large province covering much of the southern coastal region of China. It produces approximately half of China's reconstituted board products as well as manufacturing a significant proportion of China's solid wood furniture. Most of the furniture produced in this area is exported.

The timber market for the Pearl Delta (located around the rapidly-growing city of Guangzhou) is one of the largest in China. Almost no wood is grown in the local area, so the industry is currently 'importing' approximately 6 million cubic metres of roundwood (mostly saw and veneer logs), 3 to 4 million cu.m. of sawntimber, and approximately 1 million cu.m. of plywood and flakeboard each year. These 'imports' are supplied from other parts of Guangdong (which only produces 3 million cu.m. of roundwood per annum), other parts of China, or from overseas.

The Pearl Delta is an important area for manufacturing high-quality veneers and plywood, generally from imported tropical hardwood logs. Of China's total output of reconstituted wood products, Guangdong manufactures 1.5 million cu.m. of MDF, 680,000 cu.m. of plywood, 280,000 cu.m. of flakeboard, and 990,000 cu.m. of engineered wood products. The growth in these sectors of the industry has attracted new investment into Guangdong and planned investments will raise the total output for the province to over 4.5 million cu.m. per annum.

With a large wood processing sector located close to Guangzhou and limited resources growing nearby, the industry is heavily dependent on the road, port and river system that is used to transport logs and wood products. These transport routes are highly congested, given the use from other rapidly growing industries in the area, with Guangzhou being the next fastest growth centre in China, outside of Shanghai.

If Australian companies were considering investments in, or exporting to Guangdong Province, they might consider using Zhanjiang Port as the basis for establishing their distribution network. Logs and timber products could be transported to Guangzhou by sea or road. Zhanjiang port has recently been recognised as one of the ten most important ports in China and as such, the Government will assist the upgrading of the port and the road and rail network leading out of the port.

A new pulp mill is proposed for Guangdong Province (at Zhanjiang) and a second pulp mill, the Golden Eagle mill operating at Jiangmen (close to Guangzhou), will be expanded. These mills will require a significant amount of wood either from plantations that are yet to be established in the province or from imported sources. The large mill on Hainan Island is also short of wood resources and there are major problems with gaining access to sufficient land to grow the resources that these mills will require.

Two important timber markets close to Guangzhou are Nanshun and Shekoun, with an increasing number of factories producing wood flooring at Nanshun. While there is a fairly large range of solid wood flooring available in China, it is interesting to note that only a small proportion of the timber contains any features, although there is a large amount of variation in the colour and species that are available. To provide some level of product differentiation, the members of the Guangdong industry association indicated their interest in gaining access to either sawn timber or finished flooring products that could be readily distinguished from those being sold in China. Most of the solid wood flooring is manufactured from tropical hardwood logs.

Approximately 70% of China's furniture production is supplied from Guangdong Province, with a significant proportion of the finished products exported to the US. In the areas around Guangzhou, the main furniture-making and distributing centres (or markets) are located in Dongguan and Shenzhen. A new furniture-making centre is rapidly expanding to the south of Guangzhou, in Zhongshan.

Furniture products are promoted through major shows in Guangzhou during March and August each year. The US uses these trade shows to promote their own furniture products in China, in addition to running three, 2-day forums a year in Guangzhou, Beijing and Shanghai. Most of the major US furniture manufacturers have an office in each of these three cities, indicating their level of commitment to the Chinese market.

The Guangdong Forestry Products Industry Association expressed their strong interest in meeting representatives from Australia's timber supply and processing companies. They are interested in finding out about the species that can be supplied from Australia, the log and timber products that are available and the processing options for Australian hardwood timber. These interests extend to a possible long-term commitment to the market in Guangdong, obtaining technical information on how to use Australian timber products (particularly high-value veneers and flooring), and potential joint venture projects with Australian companies who would have the capacity to supply and distribute timber products from China back into the Australian markets.

To facilitate this process, the Guangdong industry association asked that a delegation of Australian companies attend the next annual conference of the China National Forest Products Industry Association (held in March each year). Australian industry representatives would be given an opportunity to provide information on the range and scale of products available from Australia. During the conference, the Guangdong industry association would help to arrange meetings between those Australian and Chinese companies that are interested in pursuing opportunities to expand the current level of bilateral trade and investment.

Yuzu Timber Company and Timber Market - Guangzhou

The Yuzu Timber Company was founded in 1952 and is now a highly-integrated organisation which imports logs and wood products, distributes wood products and manufactures a range of outputs, including furniture, flooring, sawntimber, reconstituted wood products and veneers. Company turnover is approximately AUD40bn per annum, with furniture exports to the US exceeding AUD1.3bn each year.

This company was very interested in purchasing furniture-grade veneers, but was unaware of the wood products available from Australia or the characteristics (colour range and features) of those products. Similarly, they have no knowledge of the companies who can supply these materials and they would be interested in obtaining the contact details of potential Australian suppliers.

With regard to wood flooring, the Yuzu Timber Company would be interested in expanding their high-quality flooring range to include some products that are different to most of those currently available in China. They also wish to expand their current operations as the major supplier into what is currently the largest wood market in southern China, and to investigate potential trade and joint venture activities with Australian companies. The Yuzu Timber Company requested that information be provided (in Chinese) on:

- The volumes of wood products traded with China;
- Areas of forest and plantation in Australia;
- Volumes of harvested wood and wood products available in Australia; and
- Information on Australia's timber species, specifications of the timber products, and potential uses for those timber products.

The Yuzu Timber Company has an importing and exporting licence, allowing them to import and export much of the wood and wood products that are traded through the Yuzu International Timber Market. Logs and wood products are imported through the port of Huangpu. However, the site at Yuzu will undergo a major redevelopment so that they can load and unload large ships. At the present time, the materials are barged from the port to the timber market, which contains over 100 companies (all located at the one site) producing mostly solid wood flooring and solid wood products for furniture manufacturing.

This timber market covers an area of 60 hectares and is located adjacent to the major roads, cargo wharfs and the national railway network. Quarantine inspection services for imported wood products can also be provided through the timber market. A one-hectare wood flooring display centre is planned for the Yuzu International Timber Market. This display centre will be a shopping mall for the home decorators in the growing market of Guangzhou. The Yuzu Timber Company has indicated that if there is sufficient interest from Australian suppliers, they could maintain their own display area within the wood flooring centre.

Fujian Provincial Forestry Timber Corporation - Fuzhou

The Fujian Provincial Forestry Timber Corporation is a local government (or municipal) organisation which operates as a wood trading company across Fujian Province. It was the first Fujian company to import timber from Australia (in the form of radiata logs) in 2001. While the level of log imports increased quite rapidly during 2002-2003, the appreciation of the Australian dollar and the rising cost of freight made the Australian resources too expensive for the Chinese market, where the imported logs were peeled to provide the core material for plywood manufacturing.

Companies in Fujian Province indicated their preference for Australian radiata logs and hoped that there would be some change to the currency exchange rates and the freight charges in the future,

which would lead to a fall in the cost of delivered timber. It was stated that the delivered log prices would only need to fall by approximately USD5 per cu.m. for Australian log imports to be resumed.

A key concern is the quarantine treatment of imported logs. Chinese companies would be interested in purchasing de-barked, small diameter logs. However, this would add a further AUD3 per cu.m. to the price, which the Chinese importers are not willing to pay. Then there is the issue of whether the logs should be fumigated while being shipped from Australia to China, or undergo onboard fumigation once the boats have reached China and prior to the logs being unloaded.

Fujian importers indicated that the Chinese quarantine officials just wanted an assurance that the Australian quarantine officials accepted the process of fumigation used by the Australian exporters. Unfortunately, the Australian quarantine protocol for log exports has still not been accepted by the Chinese officials, even though all of the log imports into Fujian province were found to be clear of pests and diseases.

There are cultural and economic differences with log and wood products trading that need to be addressed. Chinese importers would like to obtain 'trial shipments' of 10-15,000 cu.m. of logs from Australian suppliers as the basis of establishing a long-term trading relationship. The specifications on log imports were an average length of 3.9m, with small knots, a SED of between 14 and 20cm, and logs delivered at a cost of USD70 per cu.m.

However, this approach of starting with small shipments is very expensive. To lower the costs of delivering wood into China, Australian suppliers need long-term supply commitments from the log buyers. This would provide Australian exporters with the confidence to order transport ships to carry multiple shipments of logs, and with the long-term shipping contracts the costs of transport can be reduced to a more competitive level.

In Fujian Province, the forestry and wood processing sectors are growing quite rapidly, although most of the enterprises are state-owned companies and a lot of money has been invested by the Government to make them more competitive. That is, to increase the scale of the operations and improve the wood processing technologies employed.

To accelerate the development of the industry in Fujian Province, the Fujian Forest Industry Association and the Government's economic and trade bureaux are attempting to secure foreign investment in the timber processing sector. The main areas of interest include the manufacturing of high-quality MDF, high density fibreboard and other reconstituted products, such as OSB, which could all be used to support the expansion of the provincial furniture industry.

A foreign investment partner is currently being sought to build an OSB plant at Mawei Port (near Fuzhou City) with a projected output of 250,000 cu.m. per annum. The investment partner would need to contribute approximately AUD60m to the project, matching the AUD60m to be provided by business partners from Fujian Province. Local plantation timber and imported wood resources would be used by this mill, based on a product input mix of 50% hardwoods and 50% softwoods. The final product would be traded through the Furen wood-based panel suppliers from Fuzhou, a company whose reputation allows it to receive a price premium of 3%-5% in China's domestic market.

There is interest in importing Australian woodchips via Mawei Port to supply the newspaper mill at Nanping. Wood can be delivered to the port and loaded onto trains for transporting up to Nanping. The cost of delivered softwood woodchips needs to be approximately USD70-73 per cu.m., with an additional freight cost of USD3 per cu.m. to transport the chips to the Nanping paper mill.

Fujian Wood and Forest Products Trade Centre - Fuzhou

This company is part of a group that has established a website (www.chinaforestry.com.cn) to support the electronic trading of the full range of wood products throughout China. Their views on the market

in Fujian Province is that companies prefer radiata as it has similar properties to Chinese fir and that the types of wood products purchased by consumers depends on the amount of natural lighting in the houses. In dark houses, lighter colour timber products are sought, while darker-coloured products are sought for bright houses.

At the present time, there is little interest in Australia's potential hardwood timber supplies, as the manufacturers know very little about Australian timbers (apart from radiata) and therefore, they are unsure of how to use them, whether they are stable, and what glues or finishes can be used on them. A considerable amount of technical information will be required to support the sale of these timbers in China.

This company has investigated opportunities for investing off-shore in plantations and in timber processing facilities. None of these investments appear to be profitable enough in countries including Brazil. The main impediment is that the land is too expensive to purchase. They would like to obtain more information about potential investments in Australian wood growing and timber processing.

In China, there are cyclical changes in wood prices throughout the year. This company explained that wood product prices are approximately 25% to 30% higher in April than in June. The increase in prices is related to the interest in finishing houses and apartments by June each year.

Fujian Forestry International Cooperation and Economic Development Bureau - Fuzhou

At the present time, the processing sector in Fujian Province is made up primarily of a large number of small factories. Their interest is in both increasing the size of the processing factories and moving further downstream into furniture manufacturing. A specific government policy is in place to attract furniture manufacturers to this Province, both from other parts of China and from other countries. Within Fujian Province, each Municipal Government has its own policy for encouraging investment into the furniture sector.

The Provincial Government has established policies aimed at attracting investment in large-scale wood processing plants for plants at Zhanzhou, Xiamen and Quanzhou (a port city between Fuzhou and Xiamen). To facilitate investment, there are particular tax policies in place and the Government has delivered significant improvements in major infrastructure, such as the main highway system and the railway link to Zhejiang (the next province to the north of Fujian). They would be interested in talking to Australian furniture manufacturers and wood processing companies about potential joint venture projects in Fujian Province.

In Fujian Province, there is a requirement to establish a number of different types of plantations. Along the coast, there is interest in addressing environmental degradation and rehabilitating landscapes by establishing windbreaks with casaurina species. Where they have been used in the past and harvested, the second rotations are performing poorly. This decline in productivity may be occurring as the local people remove all of the nutrients from the site. The cultural approach is that all of the needles, small branches and bark are removed and used as fuel for heating and cooking.

Symptoms of decline in the second rotations are that the trees are not as tall, the stems are not straight and the stems are quite brittle, breaking quite often in the strong winds experienced along the coast. It appears that advice is required on silviculture, site management and nutrient balance, otherwise the casaurina and other species from Australia will continue to get a bad reputation as a poor growing species that mines the plantation sites of nutrients. Similar outcomes are arising in other areas of China that rely on eucalypt species.

Another area of interest to members of the Fujian forest industry is the identification of cold-tolerant eucalypt species and the potential use of acacias for the southern part of Fujian Province. They need to identify and trial hardwood species that can grow in the extremes of heat and cold that are experienced in this Province. If there are species that have the potential to grow within the climatic

range experienced in this part of China, the Fujian forest industry would be interested in jointly pursuing programs of genetic improvement and silvicultural management to produce wood of sufficient quality for manufacturing furniture.

Zhejiang Forestry Department - Hangzhou

Zhejiang Province covers an area of approximately 10 million hectares with natural forests covering 65% of the Province, of which almost 85% are protected in one form or another. They have a strong interest in learning about Australia's approach to combining forest protection (or ecological construction) with timber production objectives, given that the standing timber volumes in the natural forests are currently quite low and the quality of the stands are relatively poor.

Zhejiang forests contain a rich diversity of plants and animals, but with many of these listed as endangered or threatened (eg. chinese alligator and chinese tiger), suitable management planning is required to protect these forests. A mix of forest parks, national parks and forests reserves are currently used to restrict public access and use of the forests. At the same time, the forests are under pressure from harvesting of a range of products.

This province contains around 800,000 hectares of bamboo forests, which supply over 2,500 factories with construction materials, resources for furniture, flooring, pulp, plywood, activated carbon, weaving fibre, and shoots for eating. Output from the bamboo sector is over AUD2bn per annum, generating 300,000 cu.m. of plywood, 200,000 sq.m. of flooring, 1.4 million tonnes of bamboo shoots and 10,000 tonnes of activated carbon.

Non-timber products sourced from Zhejiang's 1.2 million hectares of 'economic' forests include fruit production, hickory nuts, oil, flowers and seeds. The timber harvested from these forests supply over 20,000 factories in the province, with most being family businesses.

Roundwood consumption in the province exceeds 10 million cu.m. per annum with the majority of the resources imported to supply areas of specialist production within Zhejiang. In the north of the province, the industry produces mostly plywood and flooring. The Nanxun timber market is China's largest wood flooring producer. The companies manufacture one quarter of China's total wood flooring output and import virtually all of their timber needs. Total plywood production in the province represents almost one third of China's total output for this sector.

In the south and east of the province, they produce wood articles for exporting, mostly to Europe, such as architraves and wood panels for timber features. The southern part of the province has reasonably large MDF manufacturers (over 400,000 cu.m. per annum in total) and a growing furniture sector.

Although there is some interest in expanding the plantation resources within Zhejiang Province, the land is very expensive. To promote plantation expansion for timber production, herbs, medicines and food, the Provincial Government has determined the areas of land that can be used for each purpose and is providing reduced taxes and access to electricity, water and loans to encourage investment in timber growing and processing.

Plywood mill – Nanxun Timber Market

There are 800 factories in the area around Nanxun producing flooring, plywood, wooden doors and furniture. This company produces construction and furniture ply, with a turnover of USD30m and exports of USD12m per annum. They import logs from Russia, Africa, Southeast Asia, Papua-New Guinea as part of the overall industry imports of more than 3 million cu.m. of log imports per annum.

This plywood mill is interested in selling their plywood to Australia, but have no current links into the Australian market. They import 8,000 cu.m. of plywood logs per month to make rotary peeled veneer and are interested in three sources of wood:

- Rare or precious wood for furniture and decoration purposes;
- Common or low grade wood to produce the plywood core (such as poplar); and
- Middle grades of logs that can be used for the face and backing on construction ply.

They know nothing about Australian timber products, but would be interested in obtaining supplies of wood that are similar to the pink colouring of Okume (from Africa), given the strong consumer preference for wood products that are neither too dark or too light and that the delivered cost of Okume logs is now over USD200 per cu.m. Small features in the wood (but not large knots) are currently in fashion.

Nanxun/Furen Timber Flooring Market

The Nanxun market is a major supplier of wood flooring to Shanghai (approximately 2 hours drive to the north). While it sells exactly the same range of wood flooring products as the timber markets in Fuzhou and Guangzhou, the main difference is price. In the Nanxun market, solid wood flooring sells for AUD26-40 per sq.m. compared to a price range of AUD40-76 in the other two markets. The lower prices in Nanxun are due to the competitive pressures associated with supplying the largest market in China. This may indicate to Australian companies that they could be more competitive in the smaller markets where the prices are considerably higher, although all of the wood flooring (and veneer) markets are seeking specialty products that are different in appearance to many of the wood products that are currently available in China.

For the wood flooring market, any new products from Australia will require specialist branding, be backed by good technical resources and address the difference in product specifications between those used in China and in Australia. In China, the floorboards made from African logs will have a width of 9.5cm, while those boards manufactured from Southeast Asian logs will have a width of 9.2cm as the standard size with the potential for some boards to be 12.3cm wide. The standard thickness of the floor boards is 18mm, although the thickness can range from 15 to 18mm.

Logs for the Nanxun Timber Market are landed at Shanghai, sawn into 1m lengths and transported to Nanxun by road. The green timber is stacked and kiln dried for 10 to 15 days (depending on the moisture content of the stacked timber), to reduce its moisture content to the desired level of 13 to 15%. The timber is planed, moulded, the finish applied and then packed for distribution. If the timber flooring is to be sold to Beijing, the moisture content is reduced to 12%.

Australian Counsel/Austrade/Invest Australia - Shanghai

Although Beijing is an important market, as the capital city, the two major centres of growth in China are Shanghai and Guangzhou. Australian companies, in their experience, would benefit greatly from building their export interests around these key markets.

Australian government officials based in China were interested in obtaining information on the opportunities for investing in the Australian forest and timber industry. They have regular queries about the investment opportunities that are available and should therefore be supported with up-to-date information, given that China has the second largest cash reserves in the world and that Chinese companies are encouraged to invest overseas.

Queries on investment opportunities in Australia are generally based around specific interests, such as the resource availability and investment potential for a high-density fibreboard mill in Australia. It is difficult for Invest Australia to assist the forest and timber industry, as they are required to concentrate

on certain industries and they have only limited knowledge of what is happening within the Australian forest growing and wood processing sectors. Similarly, Austrade has only a limited knowledge of the Australian industry and the products being exported.

Both organisations are interested in establishing a more direct line of communication with the Australian industry, especially if a representative is based in China. At the moment, the only avenue of contact to the industry is through either Federal or State government departments. If provided with suitable information on the Australian industry, Austrade and Invest Australia could be better utilised to identify strategic trading and investment partners for Australian companies. For example, there are regular queries to address on plantation developments in Australia and potential supplies of plantation products from Australia.

The Australian government officials were seeking information on sustainable forest management policies and practices in Australia, so that they could be in a position to address concerns about Australia's forestry practices if they are raised by Chinese companies or officials. Some issues regarding sustainable forest management in Australia have already been raised by the eNGOs based in China.

Anxin Enterprise - Shanghai

Anxin is an integrated timber company that focuses primarily on wood flooring, but is expanding into outdoor timber products, such as timber decking and pergola materials. At the present time, they have plantations in Brazil, sawmills in Brazil and China, and a product distribution network that covers most of the provinces in China.

Anxin had specific questions about the forest and timber industry in Australia:

- What was the availability of cypress flooring and posts from Australia (queries had arisen from the Japanese market)?
- Is there any level of demonstrated equivalence between the FSC (Forest Stewardship Council) system of certification and the certification approach adopted in Australia?
- Is pine flooring available from Australia and are any companies making coloured pine flooring products in Australia?
- What preservative-treated timber products are available from Australia for use in gardens? Have they been treated with environmentally-friendly preservatives? How durable are these products when used in the ground or exposed to varying climates?
- What information is available regarding the wood products available from Australia, particularly the hardwood resources? (Age of resources, reason they are being grown, characteristics of the wood.)

Anxin was interested in FSC certification and labelling of Australian forestry products, as this company has been asked to supply B&Q Hardware stores globally with timber flooring products. However, the price of logs from Brazil continues to rise as the volume of timber harvested declines and the demand for hardwood flooring, particularly in China, continues to grow. They are therefore looking for alternative resources, which could include hardwoods or impregnated softwood flooring.

This company knows little about Australian suppliers or the Australian wood flooring market, but would be interested in meeting company representatives from Australia to discuss the potential for establishing distribution networks to support bilateral sales in flooring and outdoor timber products.

Southern United – Shanghai

Southern United, through its Brazilian flooring product distribution network, has the capacity to assist the Australian companies to gain market acceptance for their products. The suggested approach for

Australian timber suppliers, based on Southern United's long-term experience in the Chinese market, is that Australian companies or associations should promote a single, high-quality wood flooring, furniture component, and veneer product range for China. The specific characteristics of Australian wood products would allow the Australian industry to target the top end of the markets in Shanghai or Guangzhou.

By establishing a position and reputation for excellence in China's timber markets, Australian companies could then build their distribution capacity into the commodity products (such as general construction timber products, panels and boards, woodchips and log exports). As the Chinese industry becomes more aware of the Australian industry, there is the potential for opening up investment opportunities for Chinese companies in Australia and Australian companies in China.

To achieve these outcomes, Australia would need to have a permanent presence in a key market, with Shanghai and Guangzhou as suggested key locations. That presence would need to be supported by technical information on the specifications and uses for Australian timber products. The German timber industry followed a similar approach for their suppliers operating in the Chinese market. The German companies operate as a single group, particularly with respect to price, which has prevented the Chinese companies from using one German company to undercut another. This approach has provided the Germans with market strength and considerable power when seeking policy changes or tax relief from China's provincial and local governments.

It may be possible to fund this position through a combined industry-government approach from Australia and with funding provided by Chinese delegations visiting Australia. One area of activity for Southern United is organising trips of Chinese forestry delegates to Australia. A partnership approach with Southern United could have the delegations to Australia being better targeted, so that they speak directly with companies and organisations of interest on forest management, trade and investment. The Chinese companies and government groups pay for these services and the 'profits' from these activities could be used to pay a reasonable proportion of the costs for preparing the information resources and maintaining a permanent presence within the Chinese market.

Through the partnership with Southern United, it would be possible to write to the Chinese industry associations, timber companies and the forestry bureaux, advising them of the range of services that are offered, especially the provision of contact with relevant companies and organisations in Australia. For Chinese companies, part of the service offered would include the provision of information on Australia's expertise in timber growing and processing, the types of projects completed with Australian timber products and the Australian industry's exporting capacity.

Such an approach would be helpful for Australian companies attempting to expand their exports to China. It would be possible to align those companies who are potentially interested in bilateral trade and investment across the many sectors of the forest products industry. The permanent position would also be used to provide contacts and information on the market back to the Australian wood product suppliers. Some of the funds could be used to provide interpreters for Australian delegations attending major shows and conferences in China.

As indicated above, the initial approach would concentrate on promoting high-quality Australian products, establishing links and contacts between the Chinese and Australian industry, providing information about the Australian industry, and providing market information back to Australian companies. These activities would promote trade in Australia's commodity products, help to establish links across the raw materials and value-added product sectors, and promote investment opportunities in Australia.

Jiangsu Provincial Foreign Trade Company – Timber Division (Nanjing)

This company is a Government enterprise that is responsible for importing 600,000 cu.m. of logs per annum from Africa, Papua-New Guinea, North America, New Zealand and Russia, as well as waste

paper, pulp and sawn timber. From their market position, they are aware that the growing economy of China is leading to the escalating domestic demand for wooden furniture and decorative timber products.

Radiata logs are purchased by manufacturers in Jiangsu as the price allows it to compete with alternative suppliers, particularly those from Russia, where imports of species such as larch are cheaper (around USD55 per cu.m. delivered to Jiangsu) while others such as red pine are more expensive. Russian white pine is similar in price to radiata.

The Jiangsu Provincial Foreign Trade Company has imported small shipments of high-value, sawn Australian timber products (flooring and furniture grades) which have sold at quite reasonable prices (over USD500 per cu.m.) in China. However, the Australian timber products have no price advantage over suppliers from other countries and these products must therefore be differentiated by the other features of the wood (grain, strength, durability).

Rising freight costs are impacting on all timber imports into China. With the combined increases in the costs of diesel and shipping, plus variations in the exchange rates, the costs of radiata logs from Australia rose by USD38 per cu.m., USD15 per cu.m. for Russian logs, and USD70 per cu.m. for west African logs. To overcome the problems associated with rising freight costs, Canada and the US now send their wood shipments to China in containers. Previously the containers were carrying finished wood products to North America and returning empty. By filling them with timber for the return trip, the US and Canadian exporters have reduced their transport costs by USD20 per cu.m.

The slow down in demand for logs that can be used for rotary peeling and plywood production is the result of a change in Government policy to reduce land availability for new housing construction and to promote consumer spending. As a result, domestic demand for timber products should remain strong, although the policy decisions will most likely lead to a change in the types of wooden products consumed domestically, and therefore the logs demanded by industry.

Sumec International - Nanjing

They are aware of some interest in the Chinese market for using Australian timber products, including the purchase of *Eucalyptus regnans* (Victorian Ash or Tassie Oak) to make furniture and regrowth hardwood logs for rotary peeling to produce the flooring material used in shipping containers. The logs used for rotary peeling were landed in China for USD100 per cu.m.

Sumec is of the opinion that 30 million cu.m. of tropical hardwood logs were imported into China from West Africa, South America and Southeast Asian countries in 2002/03. However, that volume has been declining ever since due to the restrictions on access to native forests in those countries. This could raise the future demand for hardwood resources and products from Australia.

Sumec imports over 500,000 cu.m. of logs annually. When they purchase radiata logs from Australia, they act as the agent for approximately 80% of each shipment (purchase on behalf of other companies using their trading licence). The remaining 20% is sold off the docks in lots of 20 to 30 cu.m. at a time. They only sell a small proportion of their logs through this trading avenue, due to the risks of changing market conditions (in terms of demand and price) between when the wood is ordered and when it is delivered in China.

White ants are a threat to timber products in China. This company was interested in the availability of CCA, ACQ or other preservative-treated timber products from Australia that could be used for outdoor projects. They also indicated their interest in obtaining more information on multi-storey, timber-framed constructions and how timber could be used to reduce the amount of noise transferred through the concrete apartment blocks. Sumec would also be interested in talking to Australian companies with the capacity to supply hardwood woodchips to China.

The company outlined their concerns over the supply of eucalypt logs without adequate information on how to handle the Australian resources. This leads to a perception that eucalypts cannot be used for manufacturing high-quality hardwood timber products. Chinese companies had attempted to rotary peel the eucalypt logs from Australia. However, the material cracked and split quite easily. As a result, it is perceived by some manufacturers that eucalypts can only be used to make plywood for shipping containers. This demonstrates the importance of providing good technical information on Australian timbers when they are supplied to overseas buyers in order to improve the uses, market acceptance and market penetration for Australian hardwood products, and thereby avoiding the development of any negative perceptions regarding the potential uses for Australian wood.

Pentarch Forest Products – Nanjing office

The Central Government policy to slow down the release of land for new residential construction led to an excess supply of low quality peeler logs in China. This has caused serious problems for those companies acting as log traders operating off the docks, compared to the impacts on agents (who are buying wood directly for others). Log traders lost a considerable amount of money as the prices fell, even while the logs were in transit between Australia and China.

For the hardwood log imported into China, they confirmed that the volumes supplied from tropical countries peaked in 2002/03. The falling supplies and rising demand for hardwood timber, even in a period of very high freight charges, could raise the demand for Australian hardwood timber products.

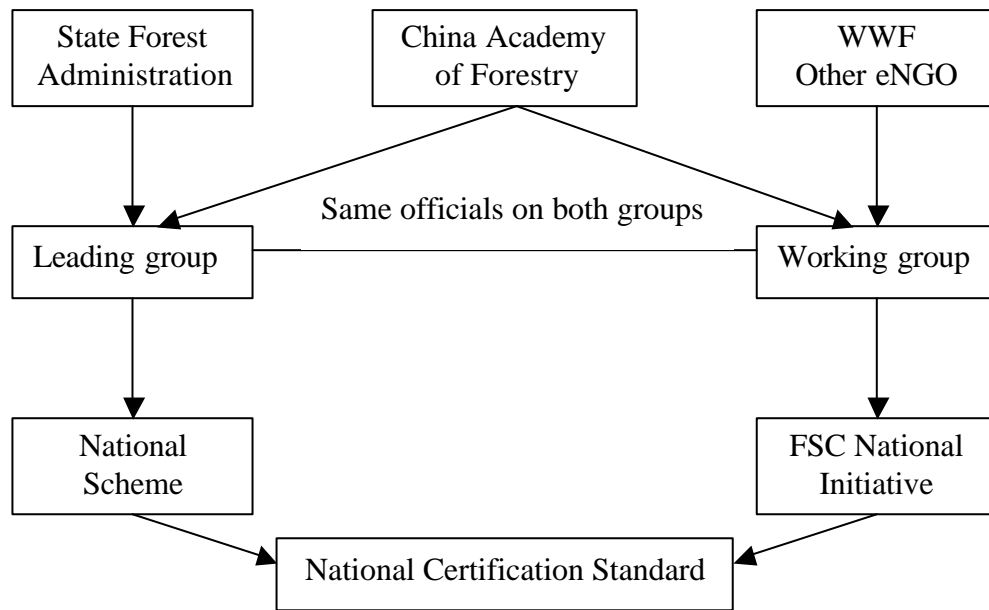
Australian suppliers are awaiting the approval of a fumigation protocol for log shipments to China. A number of options are possible. Fumigation could commence once the logs are out of Australian waters so that the ship's captain could inform the Australian Quarantine and Inspection Service of when the fumigation process has been completed, and a permit can be issued by the Australian authorities that is acceptable to their Chinese counterparts. Alternatively, fumigation could be completed when the ships are within Chinese waters, while they are waiting for the ship to berth.

Chinese Academy of Forestry - Beijing

China commenced the development of a draft standard of forest certification in response to pressures from the market place. In particular, furniture manufacturers wanted access to some form of certification which demonstrated that the timber resources they used were obtained from sustainably-managed forests. Almost 70 companies operating in China have attained FSC Chain of Custody certification, but only 2 forest management units have so far achieved FSC forest certification – one is 900 hectares in size and the other covers 5,000 hectares.

China's internal discussions on certification commenced in 1995. The State Forestry Administration and WWF co-organised a workshop on certification in 1999. The outcome from that workshop was a commitment to develop a national forest certification standard for China. WWF put in place a working group on certification in 2000, and in July 2001, the Chinese Government established a leading group on certification. The approach taken to develop the standard is provided below:

National certification standard developed through three agencies



As such, there is no FSC national scheme or initiative that is currently recognised by the Chinese Government as the official China Forest Certification Standard. The Chinese Government intends to have its own standard to ensure that there are no conflicts between meeting the requirements of certification and their sovereign control over forest management decisions. They are also interested in determining if this draft standard is equivalent to the national standards employed by other countries.

At present, the draft Chinese forest certification standard has been submitted to the State Forestry Administration for their approval. While the Chinese Government will not object to any company using the FSC initiative to certify the timber resources harvested in China, they are not intending to promote FSC as China's national standard of forest certification.

China's forest certification standard is based on nine forest management principles and is therefore similar to the Montreal Process Criteria and Indicators. It includes part of the ISO 14001 requirements and elements of the FSC standard. The Chinese officials were interested to know how the Australian Forestry Standard had gained recognition through the PEFC (Program for Endorsement of Forest Certification standards), how well PEFC is recognised in Japan, and how product labelling can be used to demonstrate that timber products have been derived from sustainably managed forests.

Three forestry bureaux in the north of China have sought regional FSC certification so that can supply to one of the furniture manufacturers that is exporting finished products to Europe.

China's State Forestry Administration - Beijing

The State Forestry Administration (SFA) is China's national forestry agency, managing six major programs for the Government, of which five are focussed on ecological reconstruction and environmental protection. The sixth program covers plantation development, which must be carried out in accordance with a national standard of afforestation that is designed to protect water quality, biodiversity and remnant vegetation.

To support the future growth of the forest and timber industry, the plantation program has a component for supporting investment in fast-growing, high-yielding plantations. Eucalypts are the main plantation species used for this purpose, so far, by farm foresters and large industrial companies.

Coinciding with the plantation program, the SFA has established an office of carbon sequestration. From this office, they will investigate the volume of carbon sequestered by plantations and the best methods for carbon accounting. They are very interested in the carbon accounting expertise, methodologies and practices developed in Australia.

A carbon sequestration pilot project is planned for Yunnan province and they are seeking a plantation investment company to establish and manage the trees as a commercial plantation. They have spoken to the Carbon Bank group (within the World Bank) and the German Development Bank about obtaining financial support to undertake this project.

The SFA is very interested in obtaining information on species that can grow in the drier areas, such as the oil mallee or sugar gum. It might be possible to use these species for helping to control the spread of desertification to the west and north-west of Beijing. In addition to information on species for dry areas, the SFA asked if Australia had a manual on sustainable plantation management. When it was explained that the Australian Forestry Standard is used by some companies for this purpose, they were very interested in supporting the proposed project to compare the Australian and draft Chinese standards.

Bel Trade Co. – Hong Kong

This company is based in Hong Kong and has wood processing factories in Fuzhou and Guangzhou, making kiln-dried sawn timber, finger-jointed lumber, solid wood flooring and wood panels. They are interested in moving into furniture manufacturing for the US and Japanese markets.

Their Guangzhou factory is producing general flooring and sports floors, which are exported to Japan and other countries. A range of species are used in their flooring range, including Japanese cedar, hemlock, European beech, Chinese species and some hardwood species from Southeast Asia. Their customers are looking for high-grade flooring materials, which could include some Australian timbers (such as Blue gum timber for sports halls).

The Bel Trade Co. would like to obtain information on the Australian species, the products that are available, the long-term supply potential, and the specifications for the products plus any technical information that is available on how to use or to process Australian timbers. If Australian companies can only supply a limited volume of timber, they could work through this sort of company to supply wood products for specialty projects. For example, the Bel Trade Co. has a customer wanting to purchase premium solid wood flooring products for a housing project in South Korea. Australian timber species may be a suitable option for this client.

Summary of meetings to investigate investment and trade opportunities in the forest and timber industry – Zhanjiang Case Study

With the assistance of CERC and the support of the Australian and Chinese Governments (through ACACA), a series of meetings were organised with Government officials and timber processing companies to discuss the potential trade and investment opportunities that may be available to Australian companies in Zhanjiang. Only through these meetings was it possible to gain an understanding of the roles of the National, Provincial and Municipal (Local) Governments in supporting trade or foreign investment, either directly or through joint ventures, in China.

Each of the Government representatives emphasised the importance placed on these meetings, as the basis for starting to attract investment from Australian companies into Zhanjiang, even though the initial focus could centre around trading in forest products as the basis for building long-term and broader relationships between the companies from both countries.

Zhanjiang Municipal Government

This particular meeting involved key Municipal Government decision makers and representatives from the government agencies who attract and then facilitate the delivery of new investment activities within their precinct. The delegates included senior administrators, and tax, economic, port, local government and provincial government officials.

The meeting provided an outline of the preferential tax and investment policies that may apply to projects in China, depending on the physical location of the company headquarters for each project, where the company headquarters is the address on the business certificate issued by the Government authorities.

There is the potential for some financial support from the Provincial Government even if the project proceeds on Municipal land, as the project will be bringing new jobs, investment in value-adding and the potential for additional tax revenue to the local and provincial governments.

The furniture manufacturers have pioneered the wood processing industry in Zhanjiang, based around the production of high quality furniture from very low quality timber imports. A broad outline was presented of how the Chinese industry would welcome Australian imports of logs and sawn timber into this region, together with investments in sawmilling and furniture manufacturing. From a government perspective, this would help to promote the development of their Pan River Delta concept around Zhanjiang, where future investment and economic development is associated with the utilisation of the port, which will act as the distribution centre and transportation hub between southwest China and the global economy. The warehousing facilities at the port can be readily used to import, store and distribute timber products.

Within China, there are 15 Free Trade Zones of which four are located in Guangdong Province. Zhanjiang is seeking approval from the Central (National) Government to gain this status. They need to demonstrate that this status is required to attract new investment to the region. Such an approval may be granted if it can be demonstrated that foreign investors are attracted to this region, particularly in industries such as timber growing and processing, which are encouraged through other national policies.

Free Trade Zones are administered by separate bodies that are recognised by the Central Government. These administrative bodies have the capacity to approve new investments within the designated zone and the companies located in those areas can access all of the preferential tax policies permitted by the State (including all available reductions in tariffs, value-added taxes and other fees). For example,

imported equipment for timber processing would be exempt from customs duty and where wood is imported and processed into value-added products (such as furniture) for exports, no value-added tax would be applied to the timber imports. These Free Trade Zones are located around the major ports and are designed to encourage new import/export projects to be developed within the port precinct.

Another set of preferential tax and investment policies apply to activities proceeding in the Economic and Technological Development Zones. Of the 54 such zones in China, one is located in a particular section of Zhanjiang City. The preferential policy support providing to companies with their head office located in the Economic and Technological Development Zone include:

- Preferential tax treatment on imports of capital equipment;
- If the foreign investment enterprise is one of the forms of investment encouraged by the central government (such as timber processing) there is no import tariffs or value-added tax applied to imports; and
- Preferential tax rates of no tax in the first two years and for the following three years, a tax rate of 15% is applied to company profits (ie. company tax).

In areas outside the Economic and Technological Development Zone and within the jurisdiction of the Zhanjiang Municipal Government, a 33% tax rate may be applied to profits on foreign investment projects unless the investment is recognised by the local government under the description of technology, port or infrastructure related projects. Under those circumstances, the preferential tax rate of 15% could apply.

Company taxes on foreign investments with an operational lifetime exceeding 10 years and undertaken outside the designated Economic and Technological Development Zones, can utilise the general company tax exemptions provided by the Central Government. That is, no tax in the first and second years of the project and for the next three years, profits are taxed at the reduced company tax rate of 15%.

Preferential tax policies can be extended to those enterprises that are supported by foreign capital and are classified under the following two categories:

1. Where products are exported from China and earn net foreign income, they are classified as a 'product export enterprise'; and
2. If a foreign investor uses advanced technologies, new product innovations or their output replaces imports, they are classified as an 'advanced technology enterprise'.

Beyond this five-year timeframe for the reduction in company tax rates (zero for the first two years, 15% for the following three years), if the foreign investment enterprise is involved in agriculture or forestry, they export 70% of their output, they are located in the Economic and Technological Development Zone, or they are recognised as an 'advanced technology enterprise', they can seek approval to retain the preferential (15%) company tax rate.

Where foreign companies come under the preferential tax rules by a number of means, for example the company invests in one of the priority policy industries identified by the Central Government and their business is located in the Economic and Technological Development Zone, their company tax rate will be reduced even further. However, the company tax rate will only be reduced to a minimum of 10% (beyond the two-year tax holiday created for new foreign investments).

For foreign companies that re-invest their profits into the capital register of that enterprise or use those profits to establish another enterprise, they will receive a rebate of 40% of their company taxes. If profits are re-invested to establish or expand an export-oriented enterprise, then all company taxes may be returned to that enterprise. The enterprises must seek an exemption to gain this status.

Outside of the company taxes, the local government levies another set of taxes on each industry and can offer preferential treatment to foreign-owned companies operating particular types of enterprises or operating within particular parts of the city. For example, there are local government tax exemptions for foreign enterprises established in the Economic and Technological Development Zone, if the investment period for a foreign-owned company located outside this zone is greater than ten years and they can access at least one form of preferential tax treatment from the National or Provincial Governments, or the activity is supported by the policies of the Central Government.

The Foreign Economic and Trade Bureau indicated that foreign companies could obtain loans from the policy banks (such as the Capital Bank) to develop the port infrastructure if it is required to assist with the development of an approved project, where the project has a relatively large capital component in its total project costs. The sorts of infrastructure that could be supported through these loans are road and rail links or new cranes to handle logs. Approvals for these loans are provided by the Provincial Government.

To import logs, a licence or permit is required. For an enterprise located in China, a log import permit could be obtained within 7 to 10 working days. It will take slightly longer if the company has to register as a business in China, obtain a business certificate and then apply for an import permit. The Zhanjiang Municipal Government can assist with the organisation of business certificates and import permits, and providing other forms of assistance that include:

- The development of roads to and from a new processing facility;
- Training assistance for new mill workers, especially where the new enterprise brings in people to train local employees;
- Assistance with R&D on growing and processing of locally-grown timber;
- Targeted support for Chinese companies that are joint venture partners in new projects; and
- Approvals to access low interest loans from the policy banks.

Xiashan District (Industrial Zone) of Zhanjiang

Xiashan is the key infrastructure point for this region, the business centre for western Guangdong, and the CBD of Zhanjiang City. The Central and Provincial Governments support the research centres and universities in Xiashan. Within this district, roading, water, sewerage and similar services, are provided by the Zhanjiang Municipal Government. The Foreign Trade and Economic Cooperation Bureau of Guangdong is a provincial body with responsibility for facilitating investment into Xiashan District, the industrial centre of Zhanjiang.

Xiashan District is the location for the Sun Win Furniture Factory and the GDH MDF plant (both described below) and will soon have a new panel/chip board mill operating in the area. To support economic growth in Xiashan, the Foreign Trade and Economic Cooperation Bureau has a close working relationship with the port authority through the 'mutually beneficial coordination system' for managing the movement of products into and out of the port precinct. This Bureau, together with the Xiashan Investment Bureau, provide a 'one-stop shop' for attracting new investment to the district.

The major difference between Xiashan District and the Economic and Technological Development Zone in Zhanjiang is that Xiashan has its own set of preferential investment attraction policies that are developed, implemented and funded by the Provincial and Local Governments. Preferential investment policies relating to the Economic and Technological Development Zone (as described below) have been determined by the Central Government and are administered through the Government Departments in Beijing.

If a new project is being considered for Xiashan and depends on moving freight through the Zhanjiang Port, the Xiashan District Council and the Port Authority will be able to provide options for meeting the investor's requirements, in terms of access to the port or utilising some area within the

port precinct. In Zhanjiang, the Xiashan District Council controls all of the land at the port and if the Port Authority wants to change any land use within their jurisdiction, it must be approved by the District Council. To expand the port facilities and provide the necessary importing and exporting infrastructure for companies operating out of Xiashan, a new company has been established between the Zhanjiang Port Authority and the Xiashan District Council, to develop a 40-hectare site at the port.

The value of land required for any project at the port or within Xiashan District will be determined by the Xiashan District Council. If there are economic and investment benefits to Xiashan from any particular project, then the Council will negotiate with the company on the price of that land. To underpin this negotiation process, the Council will undertake a feasibility study to estimate the level of profits and the amount of Provincial and Local Government taxes that will be generated from the project.

If a business is registered within Xiashan District then the local government taxes flow through to the Municipal Government. Alternatively, if the same business is registered in the Zhanjiang Economic and Technological Development Zone, then the local government charges (as determined by the administrators of that zone) will be paid to the administrators of that zone. In both areas, the governing body collects taxes from the companies and has the capacity to provide investors with a targeted set of investment attraction incentives.

Understanding the separation of the economic zones is very important when assessing the investment opportunities within any particular location, as the costs of land, the company and local government tax rates, access to the port, and the policy support options for new businesses, will depend on where the business is registered. The difference between the economic zones is defined by Chinese law which prevents a company from being registered in the Economic and Technological Development Zone and acquiring land in Xiashan District to build a new processing or manufacturing facility.

Zhanjiang Port Authority

This is a well-developed port with the Authority being a State-owned enterprise that provides its own quarantine and customs services. It was established in 1956 and now handles more than 40 million tonnes of cargo per annum with AUD6.5bn in fixed capital and employing over 10,000 workers. At the present time, there is over 38 km² around the port precinct that is available for future development. Zhanjiang port is strategically located, linking the east and west of China, and is only 6 hours drive from the Pearl River Delta (around Guangzhou)

If the port is designated as a wood processing zone, the Port Authority could obtain a permit from the National Quarantine Bureau in China to fumigate the logs once they have been landed on the docks. The options for fumigating the logs include using a specific site close to the port for treating the logs (a very cost effective solution) or utilising an existing facility at their container terminal for the steam treatment of logs. The steam treatment area is used to treat the wooden flooring materials in the bottom of all shipping containers. An additional activity under consideration is the de-barking of logs once they are landed and using the bark to produce electricity for the port users.

If the site for quarantine treatment of the logs is outside the Port precinct, the Port Authority will work with the Municipal Government to acquire land for this purpose and the Municipal Government and the Customs officials will determine the quarantine approach to be adopted by log importers.

Zhanjiang Economic and Technological Development Zone (ETDZ)

This zone was established in 1984 with the approval of the State Council. It covers an area of 920 hectares with a population of over 50,000 people, is located between the two major parts of Zhanjiang City, and is classified as the central economic zone of Zhanjiang. There are only two such zones in Guangdong, with the other being in Guangzhou, and both are given direct policy and financial support through the Provincial Government.

There are over 400 foreign companies located in the Zhanjiang Economic and Technological Development Zone and more than 80 of these have an annual turnover exceeding AUD20m per annum. Total economic value for the companies operating in this zone is approximately 17% of the regional economic output for Zhanjiang as well as providing one-third of the foreign income earned by the city. Some of the companies located in this zone are from the paper, food processing, aquaculture, pharmacy, household appliances and textile industries. Some of these companies have gained recognition as advanced technology enterprises.

A specialist investment promotion bureau exists to encourage investment into this zone. They are interested in attracting priority industries, such as industries with a high degree of value-adding and those using modern, high-tech production and processing technologies, which can include modern sawmills (using twin edgers, multi-saws and a log optimisation system). Within this zone, the preferential policies include:

- 2-year full exemption and a 3-year reduction in the company tax rate for foreign investors;
- The reduced company tax rate for projects based on high-tech approaches;
- Any research centre developed in the zone can access the reduced company tax rate;
- If 30% of the company profits are invested into R&D, half of the company taxes for that year are returned; and
- If the investment is in a Central Government priority industry, the companies don't have to pay import duty on capital equipment.

However, since China's accession to the WTO, there have been concerns raised about the level of assistance and the range of benefits that are available to companies operating in the Economic and Technological Development Zones.

A regulation from the Guangdong People's Congress in 1993 authorised the investment promotion bureau for this economic zone to have full authorisation rights over the project approvals process within their jurisdictional area. As a result, project proponents would only need to obtain approvals for their projects through 8 bureaux, compared to having to work with 30 to 40 bureaux in those parts of Zhanjiang City that are under the control of the Municipal Government.

During the last 20 years, all of the land available for development in the Economic and Technological Development Zone has been utilised. In the future, companies can locate their headquarters within the zone, but all of the processing facilities will need to be located outside the existing zone limits. It is anticipated that the expanded zone will be in another area of the city called Donghai Island, which already contains materials distribution centres, high-tech research centres, value-adding processing and petrochemical industries. Note: For this Zone, a high-tech facility is one that produces higher economic returns per unit of land than the alternate technologies. To attain this status, a company must demonstrate that it utilises a low-cost approach for that particular industry.

If a foreign company decides that it wants to build its facilities and have its headquarters located within the Economic and Technological Development Zone, it will take two days for the bureaux to complete the paperwork and register the company. It is therefore essential that any project proponent investigates all of the options available in the different economic zones before committing to any particular area to establish their head office.

Leizhou Forestry Bureau

The Leizhou Forestry Bureau manages 40,000 hectares of eucalypt plantations that are used to supply a local MDF plant. They manage the plantations on five-year rotations and harvest approximately 380,000 cu.m. of timber per annum of which some is used to produce 30-40,000 cu.m. of MDF. The remainder is sold as woodchips for exporting and the Bureau produces 5,000 cu.m. of peeler quality logs per annum. Returns from the total operation are over AUD40m per annum. This whole

enterprise is State-owned and supports a school, a hospital and 5,000 people. All profits go back into the community.

In total, there is approximately 170,000 hectares of eucalypt plantations growing on the Leizhou Peninsula. The Leizhou Forestry Bureau is the largest woodchip exporter, supplying half of the total volume of woodchips exported from the Zhanjiang area. Hybrids being grown to produce the pulpwood are LH1 (Leizhou Hybrid 1 – *E.europhylla* x *E.tetracornis*) and the *E.grandis* hybrid, DH. To grow timber on the Leizhou Peninsula for producing solid wood products, *E.pellita* hybrids will be planted.

Sun Win Furniture Factory

Sun Win is primarily a furniture manufacturer selling their output into the export markets. Approximately 60% of their furniture is sold in the US and the remainder into Europe. Exports in 2005 were approximately USD30m and this is expected to reach USD100m by 2007, supported by the companies rapid growth and accelerated investment in plant mechanisation.

This company has acquired a 15-hectare site for building a sawmill, to process 200,000 cu.m. per annum of imported pine and local eucalypt species (to supply their furniture factory), and a door factory. The eucalypts are to be harvested from their own plantations in Guangxi (3-400 km away from Zhanjiang). They are also interested in growing acacias and producing veneers.

Their strategic interest is in working with an Australian joint venture partner who has the capacity to supply timber products to Sun Win and has suitable expertise in the processing, drying and handling of eucalypt species, especially plantation-grown hardwoods.

Superwood

Superwood annually produces 5,000 containers of indoor furniture for exporting to the US, South America, Europe, Asia and Australia, based on Chinese oak, ash, birch and pine timbers. Company output is growing by approximately 30% per annum. They wish to process other species in the future to extend their furniture range, focussing on solid wood furniture. The other species they are considering using are teak, hemlock and eucalypts.

In 2005, they had some difficulty expanding their business, due to problems with gaining financial support from the banks. They are interested in building a sawmill to produce their own timber and to access timber resources that can be used to produce outdoor furniture.

GDH MDF Plant

GDH uses a combination of 50% pine and 50% eucalypt material to produce E1 MDF for flooring manufacturers. This ratio may vary slightly across the various grades of MDF they produce. The company has also started to produce a small volume of E0 MDF (low formaldehyde content in the adhesive) to manufacture products that may be sold into Europe.

In the manufacturing process, they use 1.2 to 1.4 BDT of woodchips to produce 1 cu.m. of MDF. Their flooring products have a density range of 820 to 920 kg per cu.m., with pine used to give the boards strength and because it is too difficult to control the board thickness, density and moisture content, if they use just eucalypt woodchips.

GDH is interested in building a sawmill and using the sawntimber for supplying the furniture industry with the sawmill waste being used by their MDF plant. Their options are importing logs from Australia or purchasing Australian plantations and investing in a sawmill to process that timber, either in China or Australia.