

International market prospects and the changing structure of the Australian plantation industry

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Summary

Australia is located in a region experiencing substantial change in the production and consumption of forest products. Australia's own plantation sector is modern and dynamic. It has expanded rapidly (in both hardwood and softwood) in recent decades and has witnessed substantial investment by international forest corporations.

With the exception of woodchips, Australia does not export a large volume of forest products. Australia is a major supplier of hardwood and softwood woodchips to Japan. The volume of hardwood pulpwood which is due to come on-line towards the end of the decade means that Australia has the potential to double current exports of woodchips. Given that an increasing volume of hardwood pulpwood from other countries is also due to come on-line around the same time, there will be increased competition to sell hardwood pulpwood in the Asia-Pacific region.

China's need for fibre to meet rapidly growing demand for pulp and paper is commonly suggested as a possible new market for Australian woodchips. URS Forestry believes, however, that China's capacity to import woodchips will be limited by the need for domestic pulp mills to compete in open competitive markets with imported pulp. China's growing imports of pulp, and the potential surplus of hardwood pulpwood in Australia, provide an opportunity to develop a bleached hardwood kraft pulp (BHKP) mill in Australia. If Australia does establish a large new pulp processing capacity, its major competitor will be Brazil, which is already home to the most competitive pulp mills in the world.

Softwood sawlogs are the other major plantation product of which available volumes will increase substantially in Australia over the next ten years. Australia has traditionally used a large proportion of its plantation pine domestically and, as such, has had little reason to pursue export markets. However, the threat of competition, particularly from New Zealand, and the possible pursuit of export markets, also ensure that cost reduction is an imperative for Australian softwood sawmills. The potential markets for Australia's softwood include China (growing consumption of sawn timber and logs), Japan (change to importing processed softwood products) and USA (growing demand for imported softwood sawn timber).

The outlook for the Australian plantation industry is therefore strong, with opportunity to build on the large new investments that have been made in recent years.

Keywords: world markets; international trade; forest plantations; forest products industries; roundwood; pulpwood; wood pulp; sawnwood; Australia

Introduction

Australia is located in a region experiencing substantial change in the production and consumption of forest products. Major influences on market development will include changing demand in China, Japan and the USA, and large increases in southern hemisphere plantation wood harvests in Brazil, Chile and New Zealand.

Changes in international production and consumption are likely to have considerable implications for trade and investment opportunities in Australia's plantation sector. This is especially so as Australia has its own maturing hardwood and softwood plantation resources. The Australian forest sector therefore will increasingly need to take account of the international context in which it operates.

This paper identifies opportunities for Australia's plantation sector that might arise from changing international circumstances. It considers:

- major influences on the structure of the Australian plantation sector;
- market opportunities for Australian plantation products;
- competitive market forces relevant to the development of Australia's plantation sector; and
- development opportunities for the plantation sector.

The Australian plantation sector

Australia's plantation sector is a modern and dynamic sector that has expanded rapidly in recent decades. There have been new investments by international forest corporations in maturing softwood resources and associated processing operations. There has also been a very rapid expansion in hardwood plantations over the last decade (Gerrand *et al.* 2003). These developments illustrate the sector's ability to deliver widely based economic benefits to the Australian community.

Australia's pine plantation resources have expanded since the 1960s, and plantation softwood now out-competes hardwood from native forest in the primary sawn timber market. Plantation softwood accounts for around 70% of sawn timber consumption in Australia, and softwood sawn timber production has increased from around 500 000 m³ in 1980/81 to around 2.3 million m³ in 2000/01 (ABARE various). Pulpwood production and softwood pulp processing capacity also increased over this period.

During the last decade the Australian plantation sector has attracted new investments with a value of around \$4 billion including:

- direct investment in resources of over \$1.6 billion, via
 - Hancock Victorian Plantations' (HVP) acquisition of the Victorian Plantations Corporation (\$550 million) and recent acquisition of the Australian Paper plantation estate (\$152 million);
 - GMO Renewable Resources' (GMO) investment in Tasmanian softwood plantations (\$49 million); and
 - a rapid expansion in hardwood pulpwood plantations in Australia which has taken the resource from about 28 000 ha in 1990 to around 500 000 ha in 2002 (\$900 million).
- processing investments of over \$2.3 billion, via
 - Carter Holt Harvey's (CHH) acquisition of Forwood in South Australia (\$130 million), CSR's Oberon assets (\$330 million) and the Brown and Dureau sawmills in Gippsland (undisclosed value);
 - Weyerhaeuser's acquisition of CSR's assets in the Green Triangle, Queensland and New South Wales (\$310 million);
 - Visy's new pulp mill at Tumut (\$400 million);
 - New medium-density fibreboard (MDF) mills at Wangaratta, Tasmania and Oberon (\$350 million);
 - Amatek's acquisition of Laminex (undisclosed value) and Wesfi (\$190 million);
 - Monsbent's new particleboard plant at Benalla in Victoria (\$100 million);
 - Jeld-Wen's acquisition of Integrated Forest Products in the ACT and CSR's door manufacturing plant at Oberon (undisclosed value);
 - Marubeni's acquisition of Bunnings woodchip export operations and plantations (\$58 million);
 - Gunns' acquisition of North Forest Products (woodchip export and plantations: \$330 million);
 - Hyne's acquisition of the Boral mill at Tumbarumba in NSW (undisclosed value), construction of a new sawmill at Tuan in Queensland (\$38 million) and planned construction of a new softwood sawmill at Tumbarumba (\$65 million).

These investments paint a picture of a rapidly developing and changing sector influenced by international markets. The changes should help establish the Australian plantation sector as a competitive industry ready to respond to opportunities presented by international markets.

Hardwood pulpwood: opportunities for using increasing volumes

With the exception of woodchips, Australia does not export large volumes of forest products. Australia is a major supplier of both hardwood and softwood woodchips to Japan (Fig. 1). Japan dominates the world woodchip trade and accounts for more than

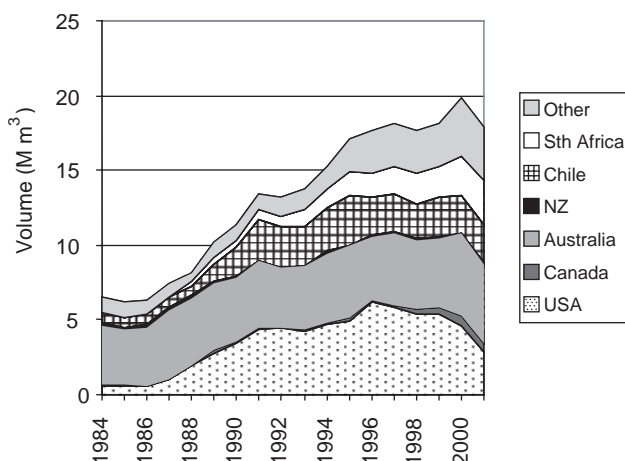


Figure 1. Japanese imports of hardwood woodchips by origin 1984–2001 (Source: Japan Paper Association 2002)

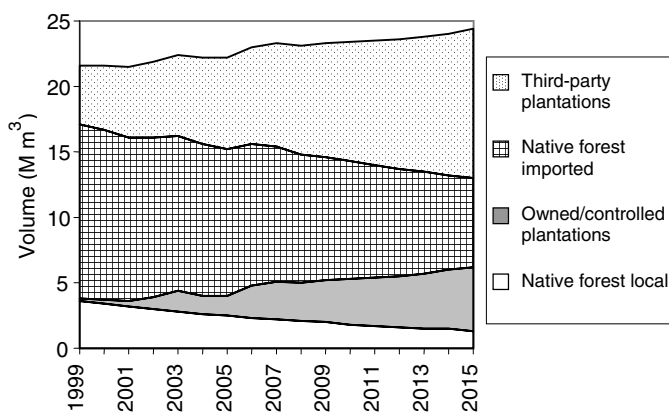


Figure 2. Forecast Japanese hardwood pulpwood demand by source (Source: URS Forestry 2001)

85% of the Asian regional trade in pulpwood (FAOSTAT 2002). Australia currently provides around 33% of the hardwood woodchips imported by Japan.

Australia has traditionally supplied export hardwood chips from native forests. However, this could change over the next five years as large volumes of pulpwood from hardwood plantations established over the last decade become available for export. The latest figures from the National Plantation Inventory suggest that around 9 million m³ y⁻¹ of hardwood pulpwood will be available towards the end of the decade (Ferguson *et al.* 2003). The volume is forecast to further increase with new planting.

This expansion will increase Australia's potential to supply hardwood woodchips by more than twice the volume of current exports. Alternatively, the woodchips could provide scope for increased local processing. As Japan begins to harvest its own plantations overseas, it is expected that competition for the Japanese market will also increase. This is reflected in forecasts of increasing use of plantation wood by the Japanese pulp and paper industry (Fig. 2).

Given that increasing volumes of hardwood pulpwood from other countries are also due to come on-line around the same time as

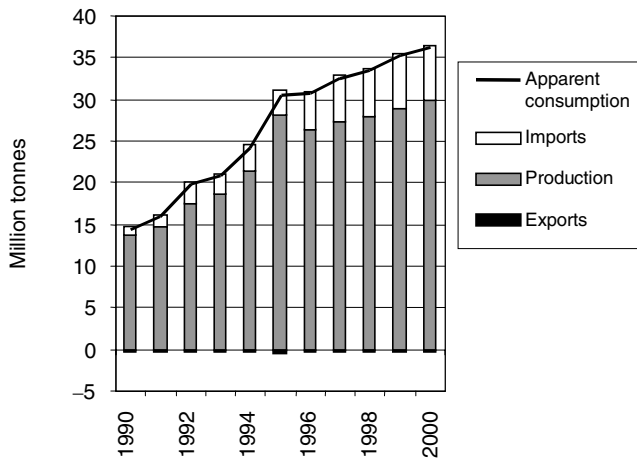


Figure 3. Apparent consumption of paper and paperboard in China 1990–2000 (Source: FAOSTAT 2002)

Table 1. Hardwood woodchip trade: supply and demand balance 2005–2010 (Source: URS Forestry 2000, estimates only)

Forecast consumption		Potential production	
Country	Volume (M m ³)	Country	Volume (M m ³)
Japan	23	Australia	17
China	2	South Africa	3
Indonesia	1	Chile	7
Other	1	USA	2
		Other	4
Total	27	Total	33

Australia’s resource, there will be increased competition to sell hardwood pulpwood in the Asia-Pacific region. As a result it is expected that woodchip export prices will be weak. Table 1 provides an indicative estimate of potential production and consumption of hardwood pulpwood in the Asia-Pacific region.

China’s need for fibre to meet its rapidly increasing demand for pulp and paper is commonly expected to offer a possible new market for Australian woodchips. There can be no doubt that the impending growth and development of China will have great implications for world trade, and the forest products trade is no exception. GDP growth of 7% annually, a massive and highly trainable workforce, explosive growth in per capita consumption, protection of native forests and admission into the World Trade Organization (Adams and Kunshan 2002) are all reasons for potential exporters to be excited about China.

Pulp and paper consumption in China has been growing rapidly (Fig. 3). In 2000, China was the world’s second-largest importer of pulp after the USA, accounting for around 11% of world pulp trade.

Restrictions on native forest harvesting in China will ensure that its domestic fibre supplies remain limited and unavailable as a possible pulp resource. While there have been large-scale plantings which are due to come on-line in the next 10–15 y, many of these are based on dispersed village and roadside plantings and their suitability for industrial use is uncertain. So how does China

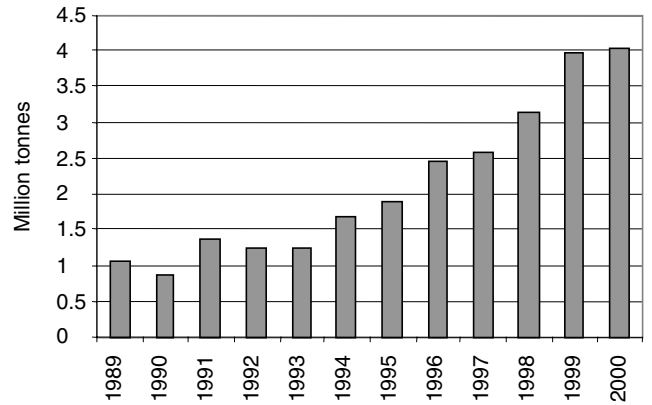


Figure 4. China’s pulp imports 1989–2000 (Source: FAOSTAT 2002)

envisage supplying its fibre requirements? Does it present large-scale export opportunities for Australia’s hardwood plantation woodchips?

URS Forestry believes that China’s capacity to import woodchips will be limited by the need for domestic pulp mills to compete in open competitive markets with imported pulp. To meet its forecast demand for pulp and paper, China will have to invest heavily in new pulp and paper machines. For printing and writing papers, it appears that China is investing in paper machines and relying on imported pulp. While it has begun to import some hardwood chips, imports are unlikely to be economically sustainable on a large scale if paper markets are open and competitive. The cost of imported woodchips would mean that pulp and paper producers would be unlikely to match competing world prices. Japan can afford to pay such high prices for wood delivered to its pulp mills only because of its unique and highly protected (by non-tariff barriers) paper markets. This suggests that China will continue to import increasing quantities of pulp (Fig. 4). China’s imports of pulp are forecast to reach more than 10 million t y⁻¹ by 2010 (Zhenlei 2002). The question is where will this pulp come from?

Potential hardwood pulp mill development in Australia

China’s growing imports of pulp, and the potential surplus of hardwood pulpwood in Australia, provide an opportunity to develop a bleached hardwood kraft pulp (BHKP) mill in Australia. A world-scale BHKP mill would require around 3 million m³ y⁻¹ of hardwood pulpwood. Both south-western Western Australia and the Green Triangle region have the potential to provide these volumes from currently uncommitted wood over the next 5–10 y.

The development of a BHKP mill in Australia will depend on its international competitiveness. The scope for developing pulp mills in Australia has in the past been curtailed by the industry’s inability to meet world competitive benchmarks, particularly if woodchips are priced at export parity. However, excess supplies of hardwood woodchips, falling real export prices, and a much more favourable exchange rate mean that a world-scale competitive BHKP mill in Australia is now more attractive.

It is estimated that the cost of production of a new pulp mill in Western Australia would fall at the top end of the lowest quartile

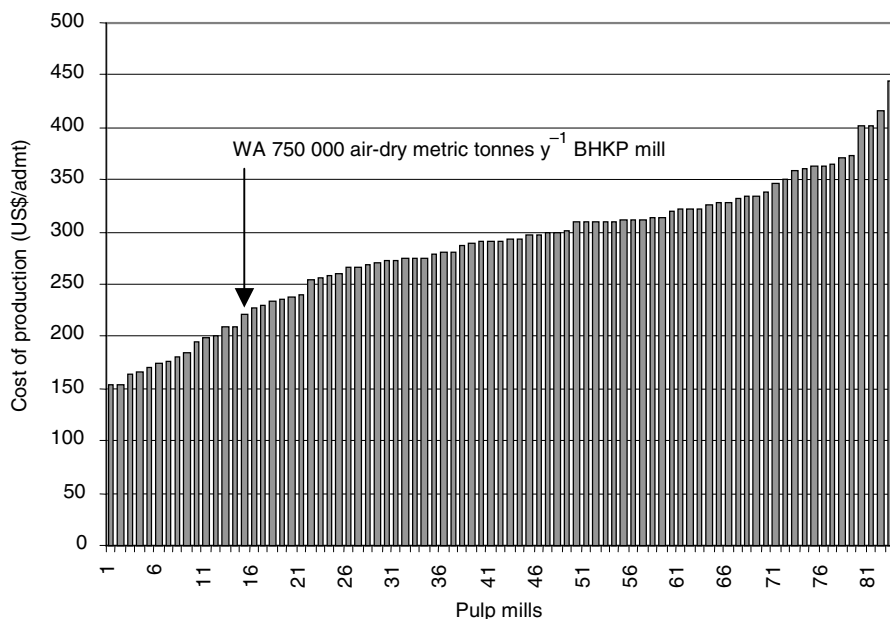


Figure 5. Costs of production from 83 bleached hardwood kraft pulp (BHKP) mills (Source: NLK & URS Forestry 2002, estimates only)

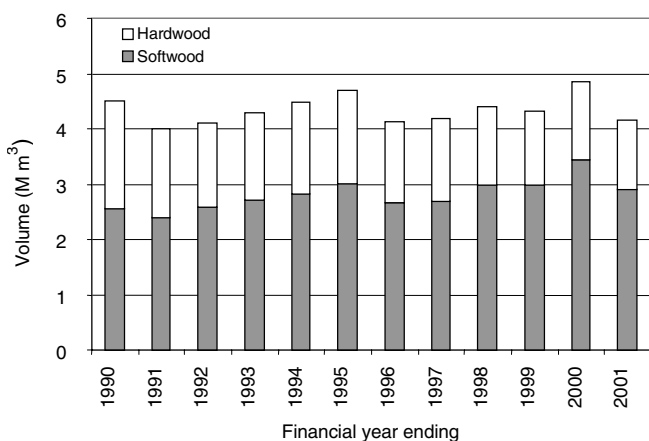


Figure 6. Apparent consumption of sawn timber in Australia (Source: ABARE various)

of costs of a sample of 83 pulp mills around the world (Fig. 5). This estimate assumes a delivered price for pulpwood of \$52 t⁻¹, about equivalent to current export parity pricing for plantation export woodchip in Western Australia, and local costs for power, labour, water, etc. Australia's competitive position could be further enhanced by lower prices for pulpwood, but the scope for achieving these would be limited by returns required to attract ongoing investment in plantations.

If Australia does establish a large new pulp processing capacity, its major competitor will be Brazil, which is already home to the most cost-competitive pulp mills in the world. (The only possible exception to this is Indonesia, but the ability of a number of Indonesian mills to maintain low production costs in the face of increasing resource costs is uncertain.) Brazil already has about 3 million ha of eucalypt plantations and these are expanding by around 135 000 ha y⁻¹. It is currently the world's fifth largest industrial wood producer (FAOSTAT 2002). Its low labour costs

and log prices also make it one of the lowest-cost manufacturers of forest products in the world. Most of the production in Brazil is consumed domestically (Akers 2002). Almost half Brazil's wood production is used to produce sawn timber, and a large quantity of the remainder is used for pulp and paper. About 3 million t of wood pulp were exported in 2000 (FAOSTAT 2002).

Softwood sawlogs: targeted strategies for development

Softwood sawlogs are the other major plantation product which will become substantially more available in Australia. Australia has the fourth largest plantation pine resource in the southern hemisphere — about 950 000 ha. Australia's harvest of plantation pine sawlogs has increased from 3.5 million m³ in 1990/91 to over 7 million m³ in 2000/01 (ABARE various). The total harvest is forecast to increase further to about 9 million m³ from now (Ferguson *et al.* 2003).

Australia consumes around 4.2 million m³ y⁻¹ of sawn timber, although consumption fluctuates with economic cycles (Fig. 6). Of the timber consumed, about 0.7–0.8 million m³ y⁻¹ is imported. The volume of sawn timber imports has generally declined over the last decade as domestically produced softwood has out-competed both softwood and hardwood imports. Softwood accounts for around 3 million m³ y⁻¹ of sawntimber consumption in Australia. Of that, around 0.6 million m³ y⁻¹ is imported, largely from New Zealand (65%) and Canada (21%).

Australia has traditionally used much of its plantation pine domestically, and as such has had little reason to pursue export markets. Only very small volumes of sawn timber have been exported. The size of the domestic market together with Australia's geographic location have meant that Australian sawn timber producers have enjoyed a degree of price protection. Consequently, the average price of sawn timber in Australia is high compared to other regions (Fig. 7). While processing costs have also been high, high sales prices have meant that in general Australian softwood sawmills have been very profitable by world standards.

The entry of international processors into the Australian domestic market has no doubt been influenced by the size of the domestic market and the relative profitability of Australian softwood sawmills. At the same time, the presence of new processors has increased competition. This has led to strategies by all the major processors to reduce production costs to be more in line with international benchmarks. The threat of competition, particularly from New Zealand, and the possible pursuit of export markets ensure that cost reduction is an imperative for Australian softwood sawmills.

While the threat of competition from New Zealand is always present, that country's recent export strategy has been to pursue markets other than Australia. The relatively small size of its domestic market and the very large volume of wood that will be

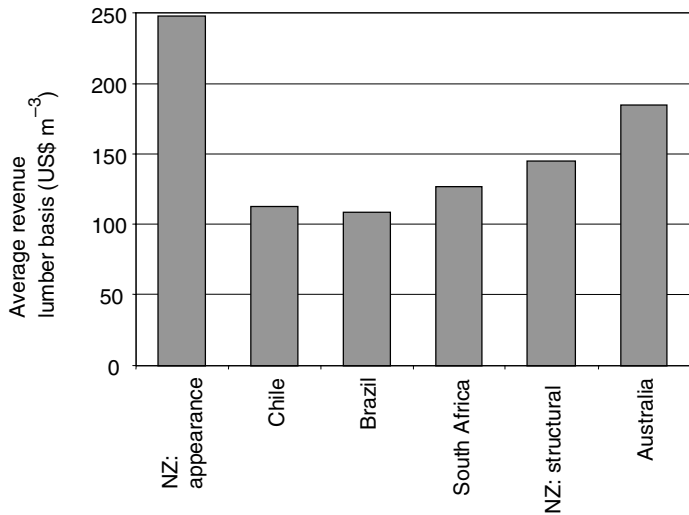


Figure 7. Southern hemisphere sawmills — average lumber prices (Source: R.E. Taylor and Associates estimates 2001, unpublished data)

maturing over the next decade or so (Ministry of Agriculture and Forestry 2000) mean that New Zealand requires a much more expansive export strategy than the Australian industry. New Zealand’s radiata resource differs from Australia’s. In particular, it has large volumes of pruned wood and the density of the wood is commonly lower than that of Australian radiata pine. Because of these factors New Zealand has focused on log exports to Japan and China, and exports of value-added appearance products to USA and Japan. New Zealand’s timber exports to Australia are now mostly large-section appearance-grade products, while the Australian pine industry is focused on producing structural timber. Nevertheless, the increase in harvest volume in New Zealand from around 18 million m³ y⁻¹ at present to around 30 million m³ y⁻¹ by 2006 provides continuous scope for supplying Australian domestic markets. This threat of competition should ensure that Australian producers strive to develop internationally competitive cost structures.

The combination of a relatively small increase in availability of softwood sawlogs, together with a larger domestic market, means that the potential surplus for export will be much smaller from Australia than from New Zealand. This suggests that Australia’s approach to exporting softwood needs to be targeted on specific markets. Where then do the potential markets for Australian producers lie?

The major factors driving demand for softwood products in the Asia-Pacific region are:

- China’s growing consumption of logs and sawn timber;
- Japan’s change to importing processed softwood products; and
- the USA’s growing demand for imported softwood sawn timber.

China’s demand for logs has been increasing very rapidly in recent years: in 2001 more than 16 million m³ of logs were imported (Fig. 8). Softwood accounted for around 45% of this volume. China has also become a major importer of tropical hardwood logs as Japanese imports have declined.

China’s increased imports are a result of rapid expansion of its wood processing for both domestic consumption and export of

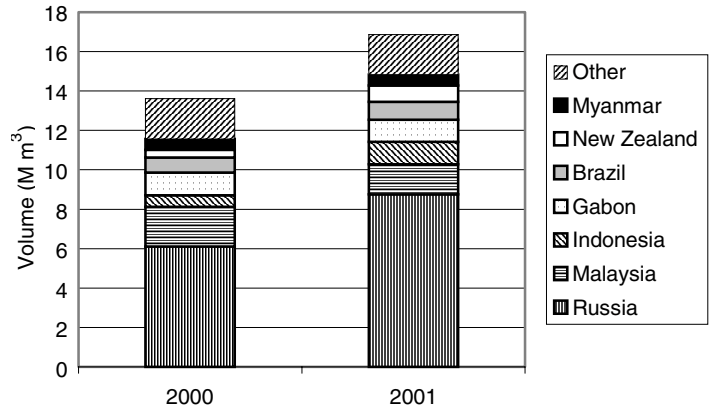


Figure 8. China’s log imports (Source: Lu 2002)

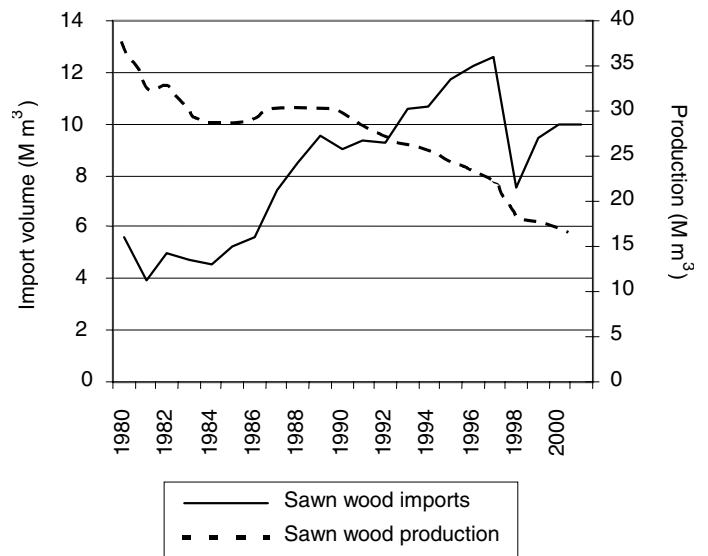


Figure 9. Japanese production and imports of sawn timber (Source: FAOSTAT 2002)

finished products. For example, exports of furniture, particularly to USA, have grown very quickly in recent years. It is thus expected that China’s demand will continue to be for logs, as evidenced by its increasing demand for New Zealand logs and acquisitions of resources in New Zealand by Chinese companies.

Opportunities for Australia in China are most likely to be found in sawn timber exports for re-manufacturing, such as the trade in hoop pine which has developed in recent years. Australia is unlikely to have large quantities of logs for export to China.

Japan’s domestic production of sawn timber has declined dramatically in recent years. Imports of sawn timber also decreased as the economic crisis in Japan took hold, but these imports are now increasing (Fig. 9).

While low economic growth is expected to limit overall expansion of markets for forest products in Japan, export opportunities for other countries are expected to arise from the ongoing trend away from domestic processing in Japan in favour of increasing imports of processed forest products. New Zealand processors are targeting Japanese markets for appearance-grade products as well as veneer for plywood production. Markets for engineered wood products, particularly laminated veneer lumber (LVL), are also

growing rapidly in Japan. Given that Australia's resources are more suited to structural uses than to clear appearance-grade products, there is an opportunity for Australia to provide core material for veneer and/or plywood and LVL production in Japan. The Japanese plywood industry has moved from reliance on tropical hardwoods to Russian larch and, due to concerns regarding the sustainability of larch supplies, is now moving towards greater acceptance of radiata pine plywood.

The sheer size of forest product markets in the USA, together with exchange rates favourable to Australian exporters, mean that this market is worthy of consideration by potential exporters. The USA imported 45 million m³ of sawn timber in 2000, mostly from Canada (FAOSTAT 2002). While imports from southern hemisphere plantation sources are relatively small, they have been growing steadily in recent years and are forecast to continue increasing. About 80% of the sawn timber imported from the southern hemisphere by the USA is industrial lumber for the appearance-grade (clear) end use market. The fastest growing suppliers are New Zealand, Chile and Brazil. Given that Australia's resource is more suited to structural uses, and that there is intense competition for appearance products in this market, it does not appear to hold great potential for Australian sawn timber.

The USA might, however, provide opportunities for plywood exports from Australia. USA imports of plywood have been increasing in recent years, and the move to regrowth forests by domestic producers has created demand for core veneers with high strength characteristics. The superior strength of Australian softwood suggests that there could be opportunities in this market. Veneer and/or plywood could be exported from Australia to the USA and possibly to Asian markets. Veneer from Australia could also be used for LVL in the USA, where production has been expanding rapidly.

Conclusion

The Australian plantation sector has been undergoing extensive change. This is likely to continue as new participants in the industry strive for international competitiveness to maintain margins and to stave off competitors. Australia has had the advantage of a domestic market capable of absorbing more softwood sawlogs, particularly through ongoing replacement of wood from native forests, and imports. The increasing volume of available softwood will lead to greater competitiveness in domestic markets, as well as more vigorous pursuit of export markets, although Australian producers do not face the same imperatives as producers in countries like New Zealand, Brazil and Chile.

In this environment the major investment opportunities for Australian softwood producers are:

- ongoing investment to improve the competitiveness of softwood sawmills, a requirement driven by increased competition among domestic producers, the threat of imports, particularly from New Zealand, and the need to pursue export markets;
- veneer or plywood production facilities based on export to Japan and/or the USA; and
- further development of engineered wood products such as LVL (including I-beams for the domestic market to replace structural hardwood timber).

Investment opportunities for hardwood are likely to be focused on the increasing quantities of hardwood pulpwood that will be available in coming years. Increasing volumes from Australia and other countries will lead to greater competition in the woodchip export market, which is dominated by Japan. Falling real woodchip prices and rapidly growing pulp and paper demand in China present the opportunity to develop a hardwood pulp mill based on plantation resources in Australia. It is most likely that this would be in Western Australia or the Green Triangle.

Recent experience suggests that there is considerable interest in investing in forest resources in Australia. Opportunities for large-scale investments in softwood plantations may depend on privatisation of publicly-owned resources. For hardwood, it appears that the highly successful pulpwood prospectus model has lost some of its appeal, but there may be opportunities to attract investors through other models.

In summary, the outlook for the Australian plantation sector is strong. There is opportunity to build on the substantial new investments of recent years. In addition, increasing competitiveness of domestic producers (driven by open competitive markets) and development of targeted export markets offer scope for ongoing investment in the industry. Maintaining this investment will lead to expanding economic returns from the plantation sector.

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