OUTLOOK National Agricultural and Resources Conference

THE AUSTRALIAN FORESTRY AND FOREST PRODUCTS INDUSTRY–
Potential constraints and future

Speaker: Dr Syd Shea
Executive Director,
WA Conservation and Land

Session 6

1. Introduction

Australian forests, and the industry based on them, since European settlement, have made a major contribution to economic development of the nation. But the forest products industry is at a critical stage. Australia can continue to increase its dependence on the importation of forest products such as paper, pulp and eucalyptus oil derived from eucalyptus plantations grown overseas. Alternatively, Australia's forests and Australia's forest products industry could meet all the demands of the nation for forest products, provide a major source of export earnings, while at the same time making a major contribution to reversing environmental degradation.

Australian forestry and the Australian forest products industry have been subjected to a plethora of Government and non Government reviews over many years. For example - FORWOOD 1974, Bureau of Agricultural Economics 1977, Forest Products Industries Advisory Council 1980, Commonwealth Senate Standing Committee on Trade and Commerce 1981, Australian Forest Development Institute 1985, FAFPIC (Forestry and Forest Products Industry Council) 1985, 1987, House of Representatives Committee on Environment and Conservation 1987, Australian Conservation Foundation 1987, 1988, and Centre for International Economics 1988.

It is difficult, given the many reviews that have taken place, to avoid repeating the conclusions and areas of dispute, since over the period of these reviews little appears to have changed. In this paper while it has been necessary to recapitulate some of the significant points made previously about forestry and the forest products industry, I have attempted, however, to focus on the reasons why the potential of the industry is not being realised and suggest how the problems can be overcome.

2. Current Status

. Australia has 35.3 million ha of native forests, of which 25.6 million are publicly owned. The public forests include 5 million ha of parks where wood production is specifically excluded; 7.6 million ha of vacant or leased land and 5.8 million ha where wood harvesting is restricted due to non statutory constraints imposed by forest management authorities or due to inaccessibility.

. The residual 7.3 million ha is managed for wood production on a long-term, sustained yield basis. However, the uncertain status of substantial areas of forest in Queensland and Tasmania is symptomatic of the current parlous state of the national inventory. Uncertainties about the area available for wood production prevent any reliable estimate of the total sustainable production of the public forests.

. There are 930,000 ha of tree plantations in Australia, of which 280,000 ha are privately owned. About 95% of these plantations are softwoods. Plantation establishment commenced at the end of the last century. The current rate of establishment is approximately 23,000 ha and 15,000 ha carried out by the public and private sector respectively.

. 17 million cubic metres of logs were harvested in Australia in 1986/87. About 11 million cubic metres of the logs produced were hardwoods, 40% of which were used for sawn timber production. Softwood sawlog production was approximately 3.3 million cubic metres. It is estimated that by the year 2010 the total sawlog production will be 12.1 million cubic hectares of which 70% will be softwoods.

. Australia has over 4,400 wood based manufacturing establishments employing more than 90,000 persons and generating a value added exceeding $3,000 million.

. The forest products industry contributes over 1% of Gross Domestic Product. The industry provides export income exceeding $425 million (1986/87). In 1986/87 imports of forest products exceeded $1600 million, accounting for over 4.4% of total Australian imports and giving rise to a forest products deficit of over $1,200 million. Imports are mainly pulp and paper products.

. Despite the size of the native forest and plantation resource base, and the existing contribution of the forest products industry to the economy, there are significant problems in the industry, in particular the hardwood sector as evidenced by the inability of the industry to provide even Australia's net forest products needs. Specifically -

- The rate of plantation establishment of both softwoods and hardwoods is currently not sufficient to provide sufficient resource to meet Australian sawlog demand let alone provide a significant resource for export. This situation will be exacerbated if the rate of withdrawal of native forest from timber production use increases.

- While there are significant investments in new plant and equipment in the softwood sector and in some areas in the hardwood sector, in general the hardwood sawmilling sector suffers from lack of investment in new plant and equipment. Consequently, utilisation rates are lower than they should be and in many areas of the hardwood sawmilling sector value adding is non existent.

- There are various proposals for significant investments in major pulp and paper mills, but currently these are stalled.

- As a consequence of the lack of investment in forest product manufacturing, log prices for hardwood in some States may not reflect efficient production costs.

- While there are exceptions, the hardwood sector is characterised by low investment in research technology and training.

3. The Potential For Expansion Of Australian Forestry and its Forest Products Based Industry

A number of factors combine in Australia to provide the opportunity for a significant expansion of the forest resource base and the forest product industry -

. While much of Australia is arid and not conducive to tree growth, there are significant areas which have climatic and soil conditions which can produce wood fibre at rates equal to, or greater than, most other regions of the world.

. There is a significant area of existing native forest which has the capacity to produce a range of products on an indefinitely sustained basis. This resource has the potential to provide the base for investment in both the establishment of new forests and an expanding forest products industry.

. There is a significant existing and expanding market (provided Australia is cost competitive) for wood fibre and wood products internally and internationally. The most recent and authoritative analysis of the internal demand and supply scenario for forest products in Australia (ABARE 1989) indicates that there will be a significant deficit in the capacity of Australia to supply sufficient sawn timber to meet its requirements. A number of bodies have indicated that the significant importation of paper and pulp could be replaced by Australian mills (eg FAFPIC 1987).

There will be continuing and increasing world demand for high quality wood fibre. For example, Groome 1989, estimated that by 1997 there will be a deficit in the capacity to meet Japan's demand for hardwood fibre of 5.5 million tonnes per year. The demand for high quality wood fibre in other Pacific Rim Asian countries is increasing at a greater rate than Japan.

The availability of ornamental wood from traditional sources in the tropics and sub-tropics is declining because of the removal of forests primarily for agriculture. Consequently, there is also a significant potential market for ornamental high quality wood products (furniture, veneers, laminates, panel products) derived from Australian hardwood species.

. A number of reviews have concluded that Australia could be cost competitive both in terms of tree growing and processing of forest products. Given the large transport cost for imports of forest products into Australia, it is unlikely, provided that processing centres have even moderate efficiencies, that Australian producers could not compete in the internal market. With respect to export of wood fibre or pulp, Australia has a significant transport cost advantage relative to likely competitors because of its proximity to Pacific rim countries where the major demand for these products is located.

. There has been significant community dissent surrounding the utilisation of native forest for timber production in Australia. However, relative to other potential tree growing areas in the world the Australian political environment is essentially stable. Long term stability is an essential prerequisite before investment will occur in tree plantations.

4. Major Constraints

The constraints which prevent the expansion of the forests and the industry - cost competitiveness, new plant and equipment, research, poor marketing, low value adding, dependence on single product lines - exist because of the lack of investment. The major factor preventing reinvestment and new investment in the forest products industry is a lack of secure resource of raw materials. No private or public company can be expected to invest in new plant and equipment, research and development, and marketing, if there is a potential that there will be no raw material to process one year after investment.

The inability to provide a secure resource of raw materials to the industry is in turn a consequence of the inability of the community via its politicians to agree on the appropriate balance between timber production and non timber production areas. Lack of security and consequent lack of processing investment also inhibits investment in plantation forestry for sawlog production (which has been proposed as an alternate way of achieving a secure resource for the industry) because while forest processing is inefficient and does not produce a variety of value added products, the price for logs will remain too low to attract investment in new plantations.

The proposal to establish significant areas of plantations to phase out use of native forest over 30 years is not a realistic alternative. Apart from unanswered questions about commercial viability and other factors, it would not be feasible to replace the existing sawlog supply from native forests over 30 years. A phasing out of the industry from native forests over the period would only compound the difficulties of obtaining investment in new plant and equipment. At the end of the period, even if a plantation resource were available to utilise, the industry might have to call on the assistance of Lazareth because trained personnel, plant and equipment, and markets, could be non

existent. It is possible that plantations could provide the basis for a significant expansion of the forest resource base in the longer term. But this needs to be done in conjunction with continued usage of the native forests for reasons connected with maintaining sawlog supplies, income generation, economies of scale, plant investment, personnel training and other factors.

5. Approaches to Removing the Constraints

By any standard, Australian forestry and its associated industry, has been well reviewed and investigated. These reviews and investigations, although differing at the margins have correctly identified the major problems, suggested approaches to resolving them and even proposed strategies. In 1985, in Western Australia, the forests and the timber industry were comprehensively reviewed and Forest Management Plans and a Timber Strategy were produced (Department of Conservation and Land Management 1987a,b,c). For obvious reasons I am reluctant to use Western Australia as an example of how the problems confronting forest growers and the forest products industry can be overcome. But the Western Australian plans and strategy differ from most of the documents cited above in that they have been acted upon.

The major elements of the Western Australian Strategy are -

. The production of publicly available detailed plans and a strategy. Much of the debate and dissent over the Australian forest and the industry has been counter-productive because there has been no framework to provide a basis for resolution of conflict and, in the case of industry, to enable long-term investment to occur. The production of the Forest Management Plans in Western Australia involved a comprehensive public participation extending over 12 months.

. A principal objective of the Forest Management Plans was to achieve a publicly acceptable allocation of use to different areas of forest and to ensure that, once determined, both the tenure and purpose of the forest areas was given the maximum security. While previous Forest Management Plans had involved the setting aside of areas which were excluded from logging, there was little public input into the process and none of the areas had been given statutory security.

. In addition to providing legislative security, the Plans and the Strategy proposed that wood resource flow to industry would be secured by legally binding long-term (5-15 years) contracts.

. The Strategy proposed that the pricing of logs should at least reflect the cost of efficient production and that pricing differentials between different grades of logs should be structured to ensure maximum utilisation.

. The Plans and the Strategy committed the grower (Department of Conservation and Land Management) to sustained yield, multiple

use of forest areas where timber production could occur and regeneration of every hectare of forest logged.

. The Timber Strategy proposed a variety of measures (research and development, pricing policy, marketing, resource allocation, etc) to maximise the production of value added products.

. Equity in the allocation of resource was to be achieved by providing a proportion of resource to existing industry users on long-term contracts regardless of the size of the user, and to allocate the remainder of the resource via tenders and auctions.

. It was proposed to expand the existing forest resource base by developing techniques to establish hardwood and softwood plantations on cleared agricultural land.

The results -

. Over 30% of the forest, including representatives of all significant forest ecosystems, have been excluded from timber production and are progressively being secured by legislation as national parks or conservation reserves. This represents a 300% increase in the conservation estate in the forest. Two hundred and seventeen legally binding long term timber supply and logging contracts have been signed. The remainder of the forest is managed to maximise all forest values - recreation, conservation, water and timber production.

. Since the completion of the Plans and the Strategy, investments totalling $200 million in forest product processing plant and equipment is occurring or is being proposed. This includes a medium density fibre-board plant, three new major softwood sawmills, the investment of $100 million in upgrading and extension of hardwood sawmills, including the provision of major new high technology seasoning facilities. Over the next decade, logging contracts will earn $400 million and total revenue earned by the Department of Conservation and Land Management from log sales to processing centres will exceed $850 million.

. Royalties for logs have been increased so that they reflect the cost of efficient production of both hardwood and softwood logs. In some cases, royalty increases have exceeded 300%. The pricing structure of different grades of logs have been changed to ensure that the differential between different grades reflects the net value of the product derived. For example, the differential between first and third grade karri logs has been increased from $3.00 to $20.00 per cubic metre.

. Utilisation rates of individual logs have increased, but more significantly logs previously considered unsuitable for sawmilling are now being processed. For example, it is anticipated that within 12 months marri (Eucalyptus calophylla) which previously was only used in limited quantities for sawn timber production will contribute an additional 40,000 cubic

metres of sawn timber to the Western Australian market. Value added production has also increased significantly. For example, recent investment in processing equipment by one major sawmiller will result in a 100% increase in production of dry sawn graded jarrah (Eucalyptus marginata) in the near future.

. More than $4 million of investment has been made into the development of new technologies to improve the utilisation rates and the production of value added products. For example, a new process "Valwood" has been developed which permits the production of high quality furniture grade timber from young eucalypt logs (Bailey, 1989).

. There has been a major expansion of new plantations onto cleared agricultural land. A "sharefarming scheme" was developed which involves joint ventures between the grower and farmers. Under this scheme, farmers are paid an annuity and a percentage of the return from the final crop in return for the use of his land. In addition to providing a return for the use of the land, the farmer derives considerable on-farm benefits, such as reductions in soil erosion and shelter for crops and stock, by the integration of tree planting into the farm. Significant grazing potential also is available to the farmer during the early stages of development of the plantations. In addition to the economic benefits of the project to the community (it is estimated that a 100,000 ha of hardwood plantations could earn about $200 million annually of export income) the regional environmental benefits are also significant. Broad scale tree planting will cause major reductions in water tables, thus reducing salination and eutrophication (Shea et al 1988).

To date, eighty sharefarming agreements have been signed with farmers involving the establishment of 9,000 ha of plantations on farms. It is estimated that a further 8,000 ha of plantations will be established on cleared agricultural land in 1990.

A commercial company (Tree Fund Ltd) is being formed to provide an investment vehicle for the tree plantation project.

6. Conclusions

Forests and the forest based industry make a significant contribution to the Australian economy, but despite the fact that Australia has a number of factors which provide it with a comparative advantage for wood production and processing, the nation cannot produce sufficient wood to meet its own needs.

The factors which prevent Australia from becoming a major net exporter of wood fibre and forest products are numerous, but individually they are not insurmountable. The problems appear complex and insoluble only because they are inter-related. Consequently, a prerequisite for removing one obstacle is the prior resolution of another which itself depends on the removal of the first obstacle. The Western Australian experience suggests

that the key in the "log jam" is the provision of security of areas set aside for conservation and security of the wood resource. Once security is provided, investment will follow. Ironically, the subsequent benefits which will flow - greater returns for forest managers, and more favourable environment for investment in plantations and improved forest management, better utilisation, more value added product, etc - will provide the opportunity for forest management agencies to achieve most of the requirements of the environmental movement without loss of economic development in the industry.

If security is the "key", Governments, both State and Federal, because they control most of Australia's forests and plantations, are the agents which must "break the circuit". Thus the community, via its politicians, has the opportunity to initiate a major expansion of a wealth producing industry which will also confer significant positive environmental benefits.

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OUTLOOK 90 National Agricultural and Resources Conference

THE OUTLOOK FOR PULP AND PAPER

Speaker: Mr Bill Paisley
Chief Executive,
Associated Pulp and Paper Mills

Session 6

1. Markets

Statistics for calendar 1988 are shown in the following two tables. Table 1 shows consumption by region and and Table 2 is production by grade.

Table 1

Consumption of Paper & Board by Region 1988

	Population millions	Consumption Million tonnes	Consumption kg/capita
Western Europe	355.5	53.9	152
Eastern Europe	423.3	17.1	40
North America	271.5	82.6	304
Asia	3006.2	53.5	18
Latin America	425.0	10.6	25
Australasia	24.4	3.1	126
Australia		2.5	156
New Zealand		0.5	157
Africa	604.4	3.3	6
Total World:	5110.4	224.1	44

Source: Pulp & Paper International - July 1989

Table 2

Production of Paper & Board By Grade 1988
million tonnes

	Newsprint	P & W	Packaging P & B	Other Paper	Other Board	Total P & B
W Europe	7.5	20.9	16.0	5.2	7.8	57.4
E Europe	2.1	2.9	7.0	3.2	2.7	17.9
N America	15.4	22.5	29.1	7.1	11.9	86.1
Asia	4.6	10.8	12.2	12.9	9.0	49.5
Lat America	1.1	2.5	4.1	1.5	1.4	10.5
Australasia	0.7	0.3	0.3	0.7	0.6	2.6
Africa	0.4	0.5	1.0	0.2	0.3	2.4
Total World:	31.7	60.4	69.8	30.9	33.6	226.3

Source: Pulp & Paper International - July 1989

One significant statistic in Table 1 is the consumption per capita. North America has a consumption of 304 kg/capita. Europe, Australia and New Zealand are about 150 kg/capita. It should be noted that Eastern Europe has a figure of only 40 kg/capita.

The recent turmoil in Eastern Europe was fuelled by the dissatisfaction felt by the community of the low economic growth of their region. We must expect, therefore, that the consumption per capita of paper and board will rise and, in the short term, supplies will come from the major paper producing countries in the western world. In time, the Eastern Europe will increase its own production capacity and it will satisfy most of its domestic requirements and will trade with the rest of the world.

The following two tables show growth rates. Table 3 shows historical growth rates by region and Table 4 shows historical and forecast growth rates by grades.

Table 3

Increase in Paper Consumption by Region in 1980-88

	Growth % p.a.
North America	3.1
Total Europe	2.5
EEC	3.1
Rest of W. Europe	1.1
Eastern Europe	1.6
Asia	
Japan	3.5
China	11.5
NIC countries	11.2
Rest of Asia	4.4
Oceania	2.5
Latin America	2.3
Africa	3.2
Total:	3.6

Source: Ekono PPI 6th International Pulp Symposium - May 1989

Table 4

Consumption Growth Rates By Grade

		Historical 1979-88 % pa	Forecast 1988-95 % pa
1.	Printing & Writing - world		
	Coated	6.4	5.1
	Uncoated mechanical	3.4	2.2
	Uncoated woodfree	4.5	3.7
	Total:	5.0	3.9
2.	Newsprint - world	3.0	2.7
3.	Other Paper - USA		
	Container Board	3.0	2.9
	Folding Board	n/a	2.5
	Household & Sanitary	n/a	1.8

Source: FAO World Outlook Study for Pulp & Paper Supply & Demand - May 1989

These tables demonstrate that historically, growth rates have been quite strong and are likely to continue into the mid 1990's.

Historical and forecast growth rates by grade for Australia are shown in Table 5.

Table 5

Australian Growth Rates By Grade

	Actual 81/82 - 86/87 % pa	Forecast 86/87 - yr 2000 % pa
Printing & Writing Paper	1.5	2.8
Newsprint	2.0	1.9
Paper Board	(0.4)	1.2
Other Paper	2.3	3.1
Total:	1.5	2.2

Source: Australian Bureau of Agricultural & Resource Economics, September 1989

The historical growth rates for Australia in Table 5 are well below the growth rates shown for the world in Table 4. If, however, the previous two years, i.e. 79/80 and 80/81 are included in the Australian statistics, then the historical growth of Printing & Writing increases to 4.4%.

The forecasts for Australia are more in line with those projected for the world. It can be concluded that the Australian market is growing at a rate which will encourage expansion of local production capacity.

The demand for wood pulp can usually be calculated from the forecast demand for paper. There is, however, a particular situation at this time in that the world community is demanding increased conservation of resources and this translates into increased usage of recycled paper and a corresponding reduction in wood pulp. There are many technical questions to be resolved, particularly in the fine paper area and once the options are known, the market will decide what type of paper it wants. Finnish consultant, Ekono has shown historical usage of recycled paper in production by region and has made a projection for year 2000. The details are shown in Table 6.

Table 6

Recycled Fibre Utilisation Rate (%)

	1972	1980	1987	2000
USA	19	23	26	32
EC	35	43	47	50
Japan	38	43	51	52
China	16	20	25	30

Source: Ekono PPT 6th International Pulp Symposium - 8th May 1989

In 1986/87 the utilisation rate for Australia was 42%, a good performance by world standards.

2. Opportunities for the Australian Pulp & Paper Industry Supplying the Domestic Market

Looking to calendar 1990, the author feels that the Government will have dampened the economy sufficiently by about February/March and this will allow a reduction in interest rates of about 2 percentage points in March/April. The rate of exchange can be expected to fall to about US73 cents at that time.

The industry will find little market growth in calendar 1990 and competition will be strong. There will be greater effort by the industry to segregate, collect and recycle waste paper. The packaging sector of the industry is a major consumer of waste paper but the opportunities to use more are limited. The newsprint sector currently does not use waste paper but is carrying out a major feasibility study. Parts of the tissue sector uses recycled paper but overseas experience indicates that there may be opportunities for this sector to include more recycled papers in its furnish. The fine paper sector has a number of technical and marketing problems to solve before its position becomes clear but the usage of recycled paper in that sector will increase also.

The Government has handed down a reference to the IAC to produce a report on recycled waste paper in Australia by 30th April 1990.

The Australian Pulp & Paper industry will be in a position to meet the increased demand for paper in the domestic market into the next decade. The tissue sector has recently commissioned two machines and the newsprint sector is waiting for the opportunity to install a new machine. The packaging and fine paper sectors will probably meet demand by a combination of debottlenecking and machine rebuild.

3. Opportunities For the Australian Pulp & Paper Industry Supplying Overseas Markets

The greatest economic benefit to Australia would be achieved if the Australian Pulp & Paper industry were to invest in world scale plant to supply some of the growth in world demand for pulp and paper. Australia has sufficient wood resource to support this type of development and the industry has the technical and management skills.

The Australian Manufacturing Council, in October 1989, published an interim report, "What Part Will Manufacturing Play In Australia's Future". The authors, Pappas Carter Evans & Koop/Telesis, state that the Forest Products industry, including timber, panels, pulp and paper, ran a trade deficit of $1.25 billion in 1987. The report notes that FAFPIC and industry sources believe that the deficit could become a surplus of $2-3 billion over the next 5-10 years if the investment in world scale plant described in the FAFPIC growth plan 1987, is achieved.

The industry believed the first major project would be a world scale chemical pulp mill in Tasmania. The Federal and State Governments have had to grapple with the prospects of world scale chemical pulpmills. They have now produced environmental guidelines for new chemical pulpmills and industry has stated that the guidelines are achievable. The governments are now developing joint procedures so that project proponents will know exactly what is required to obtain authority to go ahead.

The Federal Government has referred questions relating to unbleached and non-chlorine bleached paper products to the IAC and a report is required by 30th April 1990. The Tasmanian Government has retained a consultant to review markets for non-chlorine bleached pulps to be made from mature eucalypts.

By June 1990, the industry will have a clearer understanding of the Federal & State Governments requirements in this area.

There are two other impediments to large scale developments in the industry. These are:-

- concern for the long term security of the wood resource
- community attitudes

Security of Wood Resource

It is generally accepted that the middle ground majority of the community support the use of industrial forests for sawn timber, wood pulp and paper. There are many conservation groups who also agree with this position; there are, however, other groups who hope to convince the community that industry should be locked out of the national forests. Industry has the task of finding ways of presenting a balanced view to the community.

Of more immediate concern is the use of the Australian Heritage Commission Act. Areas of public or private land can be nominated as National Estate by individuals, groups, governments or the Australian Heritage Commission itself. The areas can be nominated if they meet the requirements of 'those places, being components of the natural environment of Australia that have aesthetic, historic, scientific or social significance or other special value for future generations, as well as for the present community'.

Once the areas where export of wood or foreign investment is involved, are recorded in the Interim Register and, in time, are fully listed, logging can only be allowed if the Commonwealth Minister for Primary Industries and Energy authorises it.

The danger is that after an investment in a new major project is made, someone or some organisation may decide to nominate part of the forest supplying wood for the project as National Estate and if successful, the loss of the wood resource could substantially change the economics of the project.

The industry has brought this matter to the attention of the Federal Government and hopes the Government will accept the need to give some protection to proponents of major projects.

Community attitudes

The middle ground majority in the community wants economic growth:-

- provided there is no harm to the environment
- and provided conservation of resources is maximised.

Industry supports these combined objectives and believes that the technologies are available to achieve them.

The community is being bombarded by a range of conflicting statements, sometimes given by experts of the highest standing. Interest groups range from those who advocate zero economic growth to those who, for aesthetic values, believe that mature forests should not be used by industry, to those who agree that certain native forests should be used by industry but raise a range of environmental issues. Industry, if it is to fulfil its role as a wealth creator for the community, must find ways of presenting a more balanced view.

It is of some considerable concern that the community clearly will not readily believe big business, project proponents, politicians or the media. In fields which

are technically very complex, they are desperately seeking an honest broker, a person or a technical body who will have the expertise to match project proponents and who will be objective in their appraisal.

4. Conclusion

The demand for paper in the world and in Australia, continues to grow. The potential increase in consumption per capita in Eastern Europe will add to published projected growths. Recycled paper will constitute an increasing proportion of the fibre furnish for the industry.

The Australian Pulp and Paper Industry, in calendar 1990, will face a competitive market with little growth.

The Australian industry will be able to keep pace with the longer term growth in the demand for paper in the domestic market.

The real opportunity for the Pulp & Paper industry to contribute to the Australian economy, however, is via the use of the large forest resources available in Australia to produce pulp and paper to supply some of the growth in demand in the world.

The Australian Manufacturing Council recently reported that the forest-based industries have the potential to move from a trade deficit of $1.25 billion to a surplus of $2-3 billion in 5-10 years.

In order to achieve this turnaround:

- the Federal and State Governments must lay down environmental standards and have procedures for giving clearance for major new projects including pulpmills
- wood resources must be secure once projects are authorised
- industry must give the community the assurances it wants on protection of the environment and conservation of resources.

OUTLOOK 90 National Agricultural and Resources Conference

PROSPECTS FOR SAWN TIMBER PRODUCTS

Speaker: Dr Bill Hurditch
Executive Director,
NSW Forest Products Association

Session 6

Summary

Production of sawn timber is set to increase markedly (25 per cent) over the next decade in line with planned increases in output from conifer plantations. Native cypress production will also increase, but native eucalypt timber production will decline to a stable level some 17 per cent below current harvests due to resource restrictions and sustained yield policies.

Despite the projected downturn in domestic housing in calendar 1990, producers are optimistic about the prospects for sales of Australian-produced sawn timber because of two factors: a continuing downward movement in the Australian dollar leading to import replacement by domestic softwoods, and a rapid trend toward diversification in the native timber industry, weakening the nexus between this sector's performance and the domestic housing cycle.

Federal Government policy on interest rates is seen as the single most significant factor which may influence the overall market's performance.

A major constraint for the native eucalypt sector in the foreseeable future is uncertainty regarding resource availability due to the threat of adverse government decisions on sawlog supplies. Such a concern comes at a time when the native timber sector is restructuring to take advantage of an increasing world demand for hardwood products and new domestic market opportunities for value-added milled hardwood products.

1 Size and Structure of the Timber Sector

Within the Australian forestry and forest products industry group, sawn and milled timber accounts for around $1.5 billion worth of turnover (comprising some 16 per cent of total turnover) and around 12,000 direct employees (11 per cent of the total employment). Added to this are the 14,000 forestry and logging jobs engaged in tending, protecting and harvesting the resource for the forest-based industries - most of which involve management and extraction of sawlogs as part of operations.

Table 1 shows the current levels of production of plantation and native sawn timber at around 3.2 million cubic metres for 1988-89, with imports supplying some 35 per cent of total sawn timber consumption. In 1979 the production was 2.9 million cubic metres, with imports accounting for 25 per cent of consumption.

Table 1: PRODUCTION AND IMPORTS OF SAWN TIMBER IN AUSTRALIA - 1988-89

Timber Type	Domestic Production (m^3)	Imports (m^3)	Imports/ Total Supply % 1988-89	(1979)
Plantation Softwood	1 401 077	1 410 251**	50%	(46%)
Native Broadleaf	1 635 625	309 302	16%	(13%)
Cypress	116 251	0	0%	(0%)
Total	3 152 953	1 719 553	35%	(25%)

** Total softwoods
Source: ABARE (1989) Timber Supply Review 39(2), p.8.

The native hardwood and cypress timber industries have traditionally been characterised by small production units, whose size and location have been determined by the distribution of the naturally-occurring resource. The plantation conifer (softwood) timber industry has been developed more along the lines of planned resource centres giving rise to industrial infrastructures geared to process a growing and maturing man-made resource. Figures 1 and 2 demonstrate this distinction between the sectors in terms of number of mills by mill throughput.

Fig 1: NSW Softwood Mills 1989

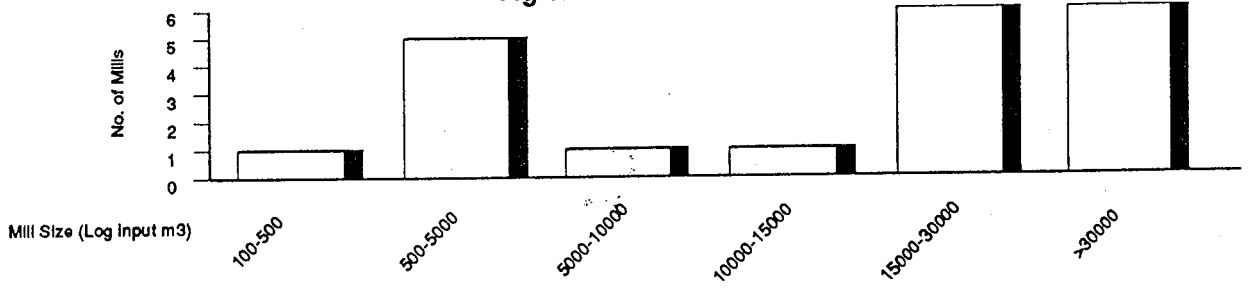
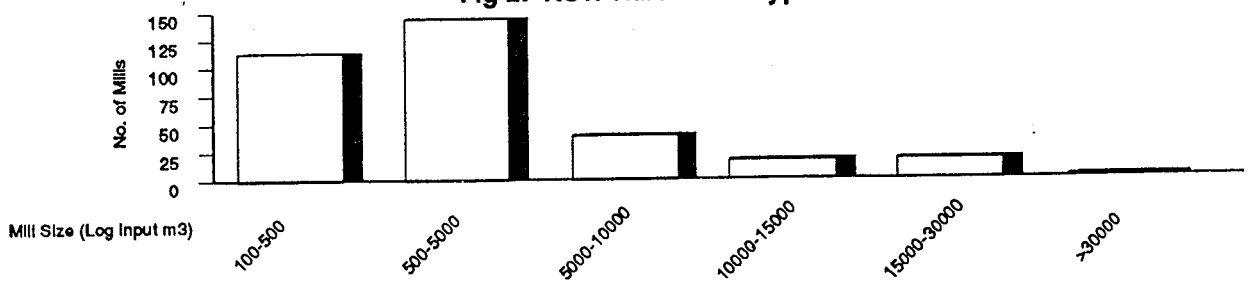


Fig 2: NSW Hardwood/Cypress Mills 1989



In recent years this distinction between the structures of the plantation and native forest-based industries has been blurred because of three main factors.

The first is the entry of large corporate players into the native timber industry. This has provided the potential for more investment for down-stream processing and the establishment of regional timber processing centres for value-adding.

Secondly, there has been a dramatic increase in availability of native regrowth timber from stands resulting from regeneration of heavily-logged forests during the 1950's and 1960's. Such resources

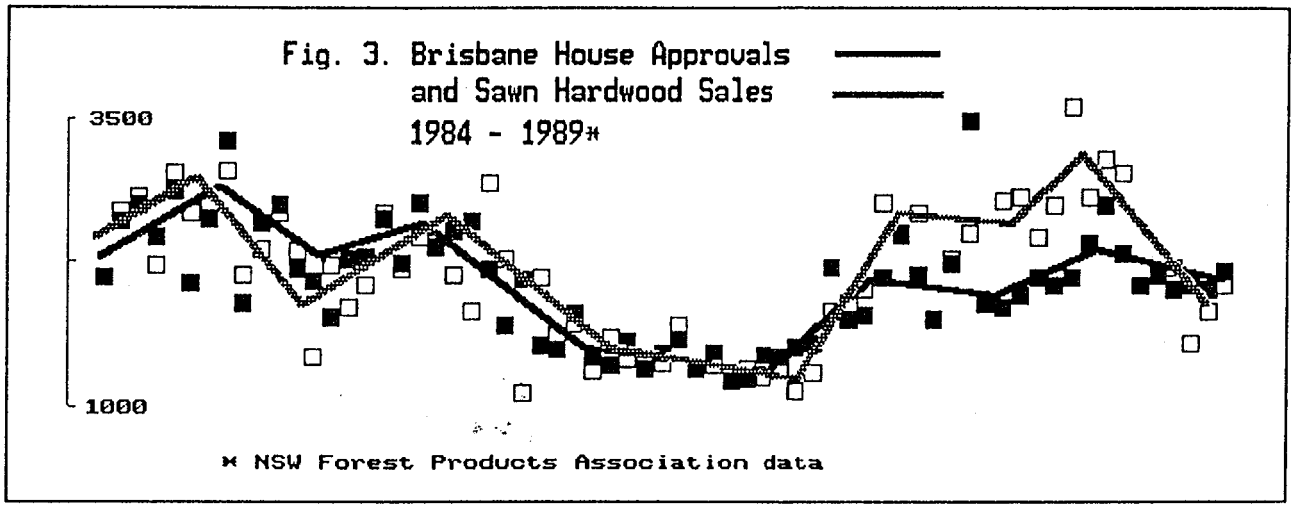
have provided opportunities for greater flexibility in timber management, economies of extraction and more predictable supply, in volumes sufficiently great to warrant the establishment of larger primary processing centres.

A third factor is the increase of "integrated" harvesting and processing operations in native forest areas, leading to the production of a broad range of forest products, including large volumes of pulpwood. The substantial increases in hardwood pulpwood harvests - and projected availability - have led large corporations to consider large capital investments in woodchip export, pulp or even paper manufacturing establishments.

2 Activity Determinants

Domestic housing

There is a clear nexus between sawn timber market activity and movements in the domestic housing market. Volumes of sawn timber sales follow the levels of both house approvals and commencements quite closely, as shown in Figure 3 for Brisbane. While these data relate to hardwood supplied from Northern New South Wales, the same general patterns hold true for other sawn products.



Although the link between domestic housing and timber sales has ensured good sales to local mills for their traditional hardwood and cypress "scantling" products, it has led to a degree of complacency in the marketing context. Accordingly, innovation in native sawn timber production and marketing has been slow, allowing for the ingress of competitive non-wood products such as concrete floors, aluminium joinery and steel framing.

There have been two main responses to such market threats. The plantation-based radiata industry, relying mostly on commodity house construction because of the nature of the wood, has embarked on an ambitious advertising campaign to combat alternative products, particularly steel.

The hardwood and cypress industries, while still recognising the continuing importance of domestic housing, have sought to direct part of their production away from the conventional framing applications into more property-specific applications such as high-strength seasoned members (lintels, beams etc.), flooring and panelling, and feature fencing to utilize the natural durability of many native timbers.

Thus, the domestic housing market will continue (and increase) in importance for the plantation conifer sector, and diminish in significance for the native timber sector during the next decade.

Australia-wide it is predicted (Brenac, 1989) that domestic housing approvals will continue to steadily decline from the all-time high level of 140,000 in May, 1989 to a low of around 112,000 by the beginning of calendar 1991. In broad terms, the prospects for "commodity" sawn timber sales could be expected to follow this downward trend over the next twelve-month period.

Other construction

Timber's share of the "other construction" market in Australia suffers as a result of historical prejudices and misapplication of timber performance data. Unfortunately, little objective national data exist on the volume of timber used in non-dwelling construction. Diehm (1986) has calculated that for Queensland, around 93,000 cubic metres of sawn timber was used by the multi-unit and non-residential building sectors in 1984/85. This represented less than 18 per cent of the total sawn timber consumption in that State.

Attitudinal research in Queensland (TRADAC 1988) has found that architects and specifiers generally feel "uncomfortable" about specifying timber in other than detached dwelling construction, and that "...engineers see it as a novelty and are not confident in using it in major structural components".

Some of the blame for such attitudes must rest with the timber industry itself, since it has not generally been aggressive in servicing the full market spectrum with the same professional approach as its competitors. This observation is borne out by end-user questionnaire research (Market Facts Pty Ltd. 1987). The rise of specific quality assurance programmes such as those operated by the Australian Hardwood Quality Council and the Radiata Pine Association, together with increased distribution of technical literature is bearing fruit in this sector.

Keith (1987) has identified three areas of non-dwelling construction which should lend themselves to much greater use of timber: motels, apartments and heavy construction. In all three cases he has identified alleged unnecessary fire restrictions of the Building Code of Australia (BCA) as contributing to the lower use of timber.

Researchers at the Forestry Commission of NSW have supported such a claim, noting that "...the differences in the perceived fire hazard in the U.S. and Australia puts Australian forest products at a disadvantage over forest products in the U.S." (Anon, 1987).

Work currently being coordinated by the National Association of Forest Industries is directed at reconciling the perceptions and realities with regard to fire performance and timber construction. It is expected that this will result in a significant boost in timber usage in commercial, industrial and other non-residential sectors, as well as more use of timber in multiple-occupancy townhouse and unit developments.

Brenac (1989) notes that national non-dwelling construction has continued to boom despite repeated predictions of decline. Nevertheless he predicts a slow-down in the growth rate for this sector throughout 1989/90, with commercial approvals dropping by around $1 billion (20 per cent) between June 1990 and June 1991.

3 World Trade Patterns

Australia has always been a significant importer of sawn timber, largely as a result of our natural deficit in softwood timbers.

The steady rise in production capacity of the domestic plantation pine industry will, in time, remove the need for commodity sawn timber imports, although beyond 2020 a supply deficit may re-emerge (Hossain et al. 1989).

Traditional hardwood imports, almost exclusively sourced from South-East Asia, are set to decline as a result of both political initiatives and silvicultural imperatives. Whether such hardwoods will be replaced by locally-grown timbers, alternative materials, or imports from Latin American suppliers remains totally speculative at this stage.

What is more certain, however, is the unlikliehood, in the absence of specific trade barriers, of the level of softwood imports declining. This is because marketing and distribution networks have been well

established here by importers, and there is a long-standing builder preference for imported softwoods like douglas fir in some key markets, notably Sydney.

Given that there is an increasing availability of softwood timbers emanating from Pacific Rim countries like New Zealand, Chile, Canada and the U.S., as well as a growing domestic supply, world trade patterns stand to influence the Australian industry markedly during the next few decades. This is particularly the case for the plantation softwood sector.

At least three factors will determine how well our industry will fare. These are the relative value of the Australia dollar, the world softwood demand scenario, and the acceptability of Australian softwood on world markets.

Exchange rates

Current predictions are fairly unanimous that the value of the A$ will continue to fall over the next number of years. BIS-Shrapnel puts the figure in December 1990 at around $US 0.71, while ABARE (1989) projects the rate to be at between $US 0.76 and $US 0.77.

A level of $US 0.70 represents a substantial trade disadvantage for North American and other Pacific Rim softwood exporters over Australian producers selling on our domestic market. Provided the level of domestic demand remains high, such an exchange-rate scenario will ensure profitable domestic markets for locally grown plantations softwoods in the short to medium term. As local supply increases, however, this sector will have to look to export opportunities to dispose of that part of its production which is surplus to domestic requirements. The point at which the export imperative is reached will depend upon the interaction between domestic demand and the exchange rate.

Global wood supply and demand

Forecasts of world timber supply and demand are fraught with difficulty and dissension. Sutton (1986) doubts that the widely predicted sharp increase in global industrial sawnwood supply will be achieved, due to environmental and economic factors. He predicts a decline in Canadian lumber production of around 35 per cent by 2020 unless stumpages and/or production efficiency improves. Sutton propounds a similar prediction for the U.S. West Coast.

On the demand side, Leslie (1987) postulates that the Far East timber deficit (including China) could mop up all of the Pacific Rim's predicted softwood surplus. Most commentators now acknowledge that the huge Soviet softwood resource will only come on stream very slowly, and that, because of extremely slow growth rates, will not provide the once-predicted on-going high yields.

The World Resources Institute (1989) tends to support a "global wood scarcity" scenario, based on data for loss of tropical wood resources and environmental impacts, such as acid rain, on temperate forests.

Australian softwood: an acceptable world timber?

Australian softwoods do not enjoy a good reputation overseas as a construction material. This is largely because, prior to its establishment in Australia and New Zealand, radiata pine was little known as a building and construction timber. It is also categorised as a "fast-growing wood", a label which immediately invokes in-built prejudices.

In the bid for Australian plantation softwood producers to successfully export their sawn products, the overriding consideration appears to be cost competitiveness. Roughana (1988) notes that in many instances countries in direct competition with Australian radiata pine suppliers for a third party's business are able to quote delivered prices lower than the Australian company's price delivered to the Australian wharf.

He identifies the following countries as showing the best potential for softwood export from Australia - if and when there is a demonstrated need or compulsion to export our softwoods:

* Japan (some draw-backs because of species preference)
* China (growing world attention on trade with China)
* India (NZ is targeting this market)
* Singapore, Taiwan & Malaysia
* U.S.A. (particularly niche marketing)

Recent events in Eastern Europe, together with the rapid approach of a United Europe in 1992, will change the shape of world forest products trade. Although Australia is a very minor player globally, it has an important role in the Pacific and South-East Asia.

The main question facing exporters appears to be: will Australia's softwood timber be able to meet the price, quality and reliability criteria demanded by the major purchasing nations?

At this stage it seems the Australian industry is not generally capable of meeting all three criteria. But there is time to overcome these problems before the export option becomes a necessity.

4 Sector Activity and Prospects

The following sections give brief accounts of the current situation and prospects for each of the three Australian sawn timber sectors: hardwood, plantation conifers and cypress.

Hardwood sector

The Australian Forestry Council (1989) predicts that Australian hardwood sawlog production will decline by approximately 17 per cent to a relatively stable figure of 3.5 million cubic metres of log by 2030.

The State-by-State distribution of production decline is expected to be as follows:

Western Australia	-39%
New South Wales	-23%
Queensland	-23%
Tasmania	-15%
Victoria	+10% (increase)

The decline rate will be fairly constant until around 2010 at which time there will be a temporary upturn in output brought about by maturing second-growth eucalypt stands. The exception, Victoria, will see a 10% increase due partly to an increased contribution from maturing eucalypt plantations and fire regrowth.

Current plans for the expansion of pulpwood utilization may significantly improve this situation since it will provide the opportunity for increased sawlog yields from native forests, as a result of economies of scale and integration of harvesting.

This down-turn in production volume is coming at a time when the industry is realising the higher potential value of its products. Hence, whilst the great majority of hardwood production was once sold as "commodity" framing or general construction timbers, there is a rapid change occurring which is seeing an increasing volume of production being channelled into higher-value products.

Several large companies have totally re-structured their operations to take advantage of an increased domestic (and global) demand for hardwood panelling, flooring, high-strength engineered beams and decorative joinery timbers.

While the additional production costs associated with the manufacture of such products can be high compared with traditional sawmilling costs, the opportunities for re-couping such costs in the marketplace are increasing, particularly as more and more companies are promoting these products.

It is widely acknowledged that value-added hardwood products will eventually represent the mainstay of this sector of the Australian industry. Opportunities for export of such products are still very much in the germinal stage of investigation.

The results of recent surveys of selected hardwood-producing companies Australia-wide (NSW Forest Products Association, unpublished data) indicate a vastly diverging attitude to market prospects for the next 12 to 24 months.

Demand for sawn and dressed hardwood products at the end of November 1989 was at or above budget levels nationally, with Queensland respondents indicating demand at near 200% of budget.

Most predicted a market downturn for sawn hardwood to commence between February and April 1990, with demand to remain below budget for between 6 and 12 months. The exception was Western Australia, where it was apparent that the downturn had commenced in September 1989 (from very high prior sales levels). Western Australian sources also reported record levels of hardwood imports - running at 68,000 cubic metres, compared with a 5-year average of 20,000 cubic metres per annum.

Although a relatively minor market, Tasmania reported very poor prospects for structural hardwood at the commencement of calendar 1990, with the expectation of at least a 12 month slump in sales to follow. Alternatively, suppliers of hardwood joinery stock, the market for which usually lags some 6 months behind construction timber activity, reported continuing strong demand and ongoing good prospects into 1990.

All respondents pointed to continuing high interest rates as the single-most prominent factor influencing any downturn for sawn hardwood.

Nevertheless, prospects of such a downturn must be viewed against the background of an extremely high demand period during 1988/89. Many producers see the downward trend as somewhat of a "respite" to enable replenishment of log and seasoning stocks.

Milled hardwood (flooring, panelling, kiln-dried beams etc.) present a different picture, with all States (except Tasmania) indicating a continuing strong demand for such products. This reflects the increasing popularity (and promotional effort) of all milled hardwood lines on the Australian market. Accordingly, companies which have positioned themselves to service the milled hardwood market should be well insulated against any downturn for traditional sawn timber sales.

Plantation conifer sector

Projections for plantation conifer sawlog production are for a 200 per cent increase on 1986/87 levels by the year 2030 (Australian Forestry Council 1989). On any analysis, such an increase represents a major marketing challenge for local producers, despite the fact that we currently import around 50 per cent of our softwood requirements.

Nevertheless the domestic industry, both through individual progressive companies and the Radiata Pine Association, has positioned itself well to take advantage of new domestic market segments and to combat threats from alternative (non-timber) materials. Accordingly, the projected annual 9.7 million cubic metres of conifer sawlog produced by 2030 will find most of its markets on-shore.

As mentioned earlier, it appears unlikely that a significant volume of sawn softwood will be exported, however the rapid changes in international trade patterns, including the emergence of new Asian and European trading blocs, may result in new export opportunities for Australian softwood timber.

While some major softwood companies are budgeting for increased sales in calendar 1990 compared with the previous year, it is difficult to imagine how a general housing downturn will not affect sawn softwood sales over the next 12 months.

However one factor which may mitigate against a general downturn in the softwood sector is a continuation of the downward trend in the relative value of the Australian dollar. Such a trend would encourage import replacement. In such a circumstance it would be the softwood importers rather than the domestic producers who will bear the brunt of a housing downturn.

Cypress sector

Production of Australian cypress timber is confined to two States: New South Wales and Queensland. The projections for the next 40 years (Australian Forestry Council 1989) indicate an overall increase in sawlog supply of around 25 per cent to a level of some 320,000 cubic metres of sawlog.

Such an increase has been enabled by intensive silvicultural management techniques in the 1950's and 1960's which have converted the natural cypress forests from crowded regrowth stands to higher-yielding, better quality forests.

As with native hardwoods, cypress timbers seem set to benefit from promotion of specific qualities such as natural white-ant resistance, minimal shrinkage and decorative features. Significant recent investments in new production centres in both states and the widespread acknowledgement of the role of seasoning will form the basis for a profitable future for the cypress sector.

A continuing problem impacting on resource cost and allocation policy for cypress is the high forest management and log extraction cost (per unit volume). This is due to the highly disparate nature of the resource, and Forest Services continue to report negative financial results for this sector despite recent steep increases in royalty.

Since most cypress is sold in regional centres, the immediate prospects for marketing of sawn cypress hinge on domestic housing activity in those centres. However in the medium to long range, market opportunities will increasingly shift to key markets such as Sydney and Brisbane, and possibly Melbourne.

Brenac (1989) predicts December 1990 housing activity for the "Rest of Queensland" and "Rest of New South Wales" will be about 25 per cent down on the June 1989 peak in both states - a situation which is mirrored in the State-wide projections. Accordingly, sales of cypress framing and flooring can be expected to decline throughout calendar 1990.

It is possible that the channelling of unseasoned cypress from normal production to seasoned processing product lines will create an artificial buffer against the effects of a market down-turn for this sector.

5 Constraints and Opportunities

Marketing

Despite advances in quality control, advanced engineering specifications and the like, sawn timber remains one of the "basic" building materials. As such it is at the "mature" end of its product cycle and is thus faced with a major challenge to compete with newer, more technically sophisticated materials such as pre-stressed concrete, extruded steel, plastics and a host of new "re-constituted" wood and other fibre-based products.

Data of Ruthven (1986) show that sawn timber now occupies a much smaller proportion (32.5 per cent) of total turnover in the wood and wood products manufacturing sector than fifty years ago (57.9 per cent). He notes that while real growth opportunities exist at both ends of the value scale (ie.

woodchips/pulp and decorative uses), traditional sawn timber may be left "in limbo" unless a well-coordinated, imaginative national timber marketing programme is undertaken.

Such a programme is now underway under the auspices of the National Association of Forest Industries' Marketing Committee which embraces all the major Australian companies and Associations involved in timber marketing and promotion.

Resource availability

The clear difference between the native eucalypt and the plantation conifer timber sectors lies in the nature of the supply/demand relationship.

Increasing supplies of plantation conifer timbers are assured, and this sector's performance will be largely market-constrained.

On the other hand adverse government decisions on resource availability for the native eucalypt sector continue to thwart investment opportunities at a time when the market for value-added hardwood products is expanding. As such, this sector is increasingly resource-constrained.

The recent establishment of the (federal) Resource Assessment Commission reflects timely attempts by governments to obtain more objective information as a basis for native forest policy formulation, rather than allowing an emotional and polarised public debate to decide if, where and when wood is grown and harvested.

However, as has been recently pointed out (NSW Forest Products Association 1990), the constitutional prerogatives for day-to-day forest management rest with the State Governments. As such a federal RAC can only hope to find areas of common ground between parties, and work to arrive at an objective basis for decision-making to be implemented by the States.

The Australian forest industry's resource base will, for the foreseeable future, remain largely in the control of governments.

Prospects for the industry will therefore depend ultimately on government decisions, since without stable, long-term access to forest resources, there can be no lasting profitability and expansion in the Australian forest products industry.

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