

# Opportunities in Timber and Timber Products

## Overview

The forest products industry is concentrated in the south west land division of the State. Industry activity ranges from the production of tree seedlings, plantation development, growing, tending and managing the forest estate, harvesting, through to sawn timber conversion and secondary processing to provide a wide variety of wood-based products.

The Forest Products Commission (FPC) was established as a government trading enterprise in November 2000 to be responsible for the harvesting and sale of State owned native and plantation timber.

The annual turnover of the combined hardwood and softwood sectors is estimated to exceed \$A850 million and the industry employs more than 20,000 people. In 2000/2001 the industry converted more than 1.0 million cubic metres of hardwood into various wood products, such as sawlogs, chiplogs, industrial wood, firewood, charcoal logs and other products (see table below).

### Log Production in WA – 2000/2001

Hardwood	M <sup>3</sup>	Tonnes
Sawlog Native	518,736	666,069
Sawlog Plantation	314	374
Other Native	492,398	588,701
Other Plantation	672	677
<b>Total</b>	<b>1,012,120</b>	<b>1,255,821</b>
Softwood	M <sup>3</sup>	Tonnes
Pine saw & veneer logs	266,538	266,538
Industrial wood	167,713	167,770
Pine rounds	14,963	14,963
<b>Total</b>	<b>449,214</b>	<b>449,271</b>
<b>Grand Totals</b>	<b>1,461,334</b>	<b>1,705,092</b>

Source: Forest Products Commission

Currently, the State's softwood resources are committed to the local production of sawlogs, veneer logs, industrial woods and other products such as particleboard, MDF and pine rounds.

Since the 1920s the Government has been establishing plantations, which reached 80,000 ha by the mid 1980s. Plantation development was extended to tree cropping joint ventures on farmland. The average annual area planted per property has increased from 3 hectares in 1988, to 120 hectares in 1996.

In 1996, the Department of Conservation and Land Management (CALM) introduced the Maritime Pine (*Pinus pinaster*) project to address the salinity problem and to capitalise on the increased demand for softwood fibre for export. In 2000, 4,659 hectares of maritime pine were established. The annual rate of planting should increase to establish a total of 25,000 hectares by 2020. The continuation of this process offers investment opportunities for the future.

Most of the native forest resources are publicly owned and managed by CALM (90%). By contrast substantial areas of hardwood plantations have been established on private property (tree farming), and these developments are becoming increasingly important.

With more than 20,000 hectares planted in 2000, the area planted to blue gums (*Eucalyptus globulus*) exceeds 150,000 hectares. At this rate of planting an estate of 200,000 hectares of blue gums will be easily achieved.



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There are a number of **processing and manufacturing** activities within the State's Forestry Industry. These include the following:

- There is a range of saw milling facilities from large mills to portable mills for commercial craft and hobby purposes. These mills are involved in a range of processing activities from high value kiln dried and appearance grade products (including furniture and mouldings) for both domestic and export markets, to green structural timber.
- Sawn timber is processed to the dry-dressed stage and then to veneers, decking, flooring, and speciality products, parquet flooring, laminated beams, laminated benchwood, square dressed timber and wall panelling. Veneers are sliced from green timber.
- Jarrah is the timber primarily used in furniture manufacture in Western Australia, but use of marri and karri will increase.
- Wood residue is the byproduct of sawlog harvesting and silvicultural operations (thinning). Marri and karri residue is presently used for export woodchips, for the manufacture of high quality writing paper.
- Jarrah residue is alternatively being used to produce high quality charcoal, which in turn is used as a reducing agent in the production of silicon. Jarrah residues are also used by the domestic firewood industry.
- Jarrah is highly regarded, and has considerable potential, for use as activated carbon.
- Wood panel products, pulp and paper are composed of wood or other ligno-cellulosic material, reduced to fibres, or particles, which are reconstituted, or engineered into medium density fibreboard (MDF), and particleboard. Plywood is manufactured from peeled and sliced veneers. Panel products manufactured in the **South West** include:
  - Flooring material from particleboard.
  - Architraves, skirtings and furniture from MDF.
  - Furniture, construction and marine timbers from plywood.

- Two major hardwood-chipping facilities are operating in the **South West** region, at Manjimup (processing marri and karri logs) and Greenbushes (processing log residue and thinnings). A new chip mill, processing plantation timber in the **Great Southern** became operational in 2001 and will export through Albany Port.
- Two recycling paper mills operate in Western Australia. One produces packaging-grade paper products; the other produces tissue, writing and printing grade products.

Hardwood exports from Western Australia have accounted for only 6 per cent of total production with the remainder, plus imports, consumed by the domestic market (1998/99). This trend is changing rapidly as sawmills and manufacturers focus on a high level of kiln-dried products to target Eastern States and overseas markets. Woodchip exports have traditionally comprised around two thirds of the value of exports (see table below).

### Exports Of Wood Based Products and Pulp Wood 2000-2001

Commodity	Value (\$A'000)
Round Wood	464
Sawn Wood	14,124
Miscellaneous cts	17,305
Pulpwood (woodchips)	81,560

*Source: Forest Products Commission*

The FPC manages Sandalwood production in the state and a variety of timber resources in the **Goldfields-Esperance** region, while CALM manages oil mallee cultivation in the **Wheatbelt** region. All of these offer investment opportunities.

### Investment Prospects for Plantation and Forest Products

By 2005, at current rates of planting, at least 3 million cubic metres annually of plantation hardwood roundwood is expected to be harvested. Some is committed for export as woodchips. Most could be available for processing into reconstituted wood products, such as MDF, particleboard, and into pulp and paper.

There are also opportunities for projects based on solid wood ranging from veneers to furniture. All prospects have significant export potential.

### Short Term Outlook

- Products utilising hardwood forest residue:
  - Production of hardboard for the low cost end of the market.
  - Fibre mineral composites, which is an infant industry and would require pre-feasibility studies.
  - Charcoal produced from jarrah residues is already established as a valuable resource and is expected to have a promising future.
  - Activated carbon production from jarrah residue has potential.
- Products utilising State hardwood forest residue as a low cost supplement to other resources:
  - Medium density fibreboard production.
  - Hardboard production.
  - Particleboard production.

### Medium to Long Term

There is longer term potential for a variety of high value end uses for plantation blue gums. These include:

- Furniture manufacture
- Veneer production
- Sawn timber
- Medium density fibreboard.
- Oriented strand board.
- Hardboard
- Plywood
- Bleached chemo-thermo mechanical pulp suitable for fine paper manufacture.
- Bleached kraft pulp suitable for fine paper manufacture.

The investment opportunities for softwoods are largely in the establishment of pine plantations cultivated under FPC's Maritime Pine Program. By the year 2020, 800,000 hectares of tree crops will be established on farmland. These trees will sequester 6 million tonnes of carbon per year, and will generate 13 million cubic metres of wood fibres annually. An estimated 4 million hectares of land has been identified as appropriate for maritime pine crops within 150 km of processing facilities and ports.

The Government has already endorsed the establishment of 150,000 hectares of maritime pine in partnership with private landowners over the next 10 years. Trees will be grown on farms (20 per cent maximum of the farm area) or blocks. Established maritime pine is already being harvested for packaging and structural products, medium density fibreboard and particleboard. There is also an identified demand in the Pacific Rim for softwood fibre, creating a new export opportunity. The sandalwood industry managed by FPC also offers investment potential. Value adding opportunities for sandalwood, including furniture manufacture, fine woodwork, veneering and production of religious artefacts, are all being investigated. There is also the potential for the development of an essential oils industry based, not only on sandalwood, but on other native species as well.

CALM is promoting the planting of oil mallee eucalypts as a tree crop (for commercial and landcare) in the **Wheatbelt**. The excellent solvent properties of the oil might be developed commercially for industrial use.

FPC is managing hardwood species such as redwood, Goldfield's blackbutt, salmon gum, red morrel, gimlet and black morrel, in the **Goldfields**, for applications such as flooring, parquetry, musical instruments manufacture, furniture, joinery and craftwood.

In addition, the **Mid West** and the **Wheatbelt** regions are being jointly investigated for the introduction of plantation farming to their coastal areas to diversify farm incomes and explore the benefits that could accrue from carbon sequestering.

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