Australian Forests and Plantations

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A WFI MARKET BRIEF SERIES

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World Forest Institute
OF THE WORLD FORESTRY CENTER

4033 SW Canyon Road
Portland, Oregon 97221
Tel: (503) 228-0803 Fax: (503) 228-3624
Email: wfiwfc@ix.netcom.com

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Australia, a country with a large forest resource to population ratio, is positioning itself to become a net exporter of wood products in certain markets. At the core of the country's growth plans is an expansion of its softwood and eucalypt plantations, which support the timber, pulp and wood chip industries. The government has initiated new plantation incentives to foster private investment, and years of silvicultural research and an advanced forest management system are intended to yield a three-fold increase in the plantation base, to almost 3 million hectares by 2020.

Coupled with the government's vision to develop Australian forestry, is an unprecedented expansion in the level of active involvement by diverse stakeholders in forest management decisions. This has led to greater community involvement in forestry, reduced harvesting in public lands, and renewed interest in private forest lands. It also poses a new challenge to the government, which must determine how to meet diverse needs in a more consensus-based management era.

Forest industries in Australia are well established and produce approximately 70 percent of the domestic timber needs. The timber industry has experienced a great deal of change in recent years in line with a shifting emphasis towards environmental and ecological objectives by communities and governments.

Governmental control over forest resources is strong in Australia, with 72% of forest area owned by the state, the crown, or other governmental jurisdictions. This control has facilitated a management shift to incorporate further conservation objectives and environmental protection. As an incentive to timber industry, governments have provided financial assistance to restructure and increase value-adding capabilities.

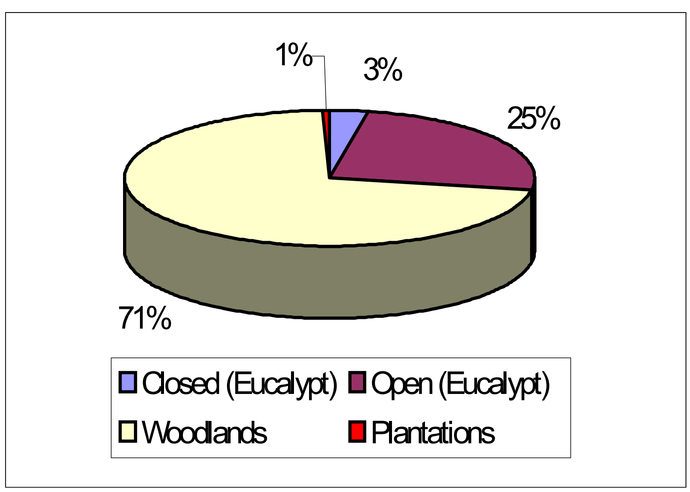
In recent years, the government has invited a wider range of stakeholder representatives to participate in forest management decisions. This has significantly altered the decision making process towards a more consensus based approach, and its impact on forest policy at the national and state levels is already being felt in reduced harvesting and expanded non-timber utilization of forest values such as recreational use.

Forest Resources

Australia is, geographically, the sixth largest nation in the world with a highly urbanised population of approximately 18 million. It has a diverse range of eucalypt forests that have evolved in a typically warm, dry climate. These native forests and woodlands make up 156 million hectares of a total land mass of 769 million hectares. There are also more than 1 million hectares of predominantly softwood plantations.

These forests and woodlands are found across northern Australia, along the entire east coast, including Tasmania, and into South Australia. There are also important forest and woodland regions in the south and south-west of Western Australia.

Forest Type as % Forested Area



1996 National Forest Inventory results:

- 4.6 million hectares of closed forests.
- 39.1 million hectares of open forest.
- 112.1 million hectares of woodlands.
- 1 million hectares of plantations.

Forest Policy and Management

Australia is made up of six States and two Territories. The forest estate is administered by these States and Territories under The National Forest Policy Statement (NFPS) which was agreed with the Federal Government in 1992 and carries the following objectives:

- Retaining the unique character of Australian forests, their integrity and biological diversity by both reservation and off-reserve management
- Increasing the total area of forest.
- Managing forests for all their values and uses so as to optimize benefits to the community.
- Ecologically sustainable management of private forests that complements the conservation and commercial objectives of public forests.
- Sustainable forest-based industries founded on excellence and innovation, expanding to contribute further to economic and employment growth.
- Efficient, environmentally sensitive and sustainable forests use.
- Forest management that is effective and responsive to the community.
- Community understanding of the values of forests and sustainable forest management and participation in decision making relating to forest use and management.

[NFPS-1992]

Government Jurisdictions

There are three levels of government in Australia - Commonwealth, State and Territory, and local - all have a role in forest management.

The Commonwealth Government has responsibility for coordinating a national approach to environmental and industry-development matters and for Australia's participation in international forest initiatives. It has a vital interest in achieving the efficient and effective management of the nation's resources, including a national approach to forests and woodlands.

State and Territory governments have primary responsibility for forest management, in recognition of their constitutional responsibility for land-use decisions and their ownership of large forest areas. The States and Territories have legislation that allows for allocation of forest land tenures and specifies the administrative framework and policies within which public and private forests are managed.

Local governments have responsibility for local land-use planning and rating systems, which affect public and private forest management and use. In addition to the three levels of government, private owners have responsibility for management of private forests. As private forests experience basic local measures of control it is crucial that landholders have an active part in broad forest initiatives.

Forest planning in Australia is well developed, with State and Territory agencies administering tight control over public land to ensure that forest operations adhere to environmental guidelines. These Codes of Practices incorporate a large body of scientific research and operational experience, as well as community input on recognised forest values. Developing a national approach to sustainable forest management has presented unique challenges to agencies striving to involve diverse interest groups, and the process is a key element of the Regional Forest Agreements (RFAs).

Regional Forest Agreements (RFA)

A program of studies known as Comprehensive Regional Assessments are collecting data about the forests and woodlands in a number of regions in which commercial timber production is a major forest use. These assessments provide information to assist governments, policy makers and forest managers in making decisions about land use and forest management. Following completion of these assessments the Commonwealth and relevant State Governments intend to and have in some cases entered jointly into RFAs which are designed to meet the objectives of the NFPS and provide greater certainty about land use and forest management.

Forest and woodlands in RFA & non-RFA regions of Australia (hectares)

Forest type	RFA	Non-RFA	All Australia
Closed	1,231,000	3,396,000	4,627,000
Open	18,667,000	16,321,000	34,988,000
Woodland	4,581,000	99,875,000	104,456,000
Mallee	Unavailable	11,764,000	11,764,000
Plantation	838,000	204,000	1,042,000
Totals	25,317,000	131,560,000	156,877,000

Source : Australian Bureau of Agriculture and Resource Economics.

Forest Ownership

In Australia there are four basic types of land tenure:

- private freehold land for which the owner has a clear legal title;
- publicly owned land that is vested in a particular body or agency for a specified purpose (this category includes State forests and conservation reserves);
- Leasehold is publicly owned land that is not vested in any body or agency but that may be leased for a variety of purposes. In this case the rights of the lessee are usually defined in the lease agreement with the State or Territory concerned;
- native title, which is a common-law title that recognises customary rights of Indigenous people and is protected by the *Native Title Act 1993*.

The area of forest and woodland (excluding plantations) by major tenure category, excluding native title (hectares)

Tenure	Area
Leasehold land	66,102,940
Private land	42,017,712
Reserved (conservation)	17,580,191
Other Crown land	15,596,781
State forest	13,350,989
Other	1,186,035
Total	155,834,648

Source: Australian Bureau of Statistics (1996).

Native Forests

Timber production in native hardwood forests has declined in recent years, reflecting a number of factors, such as economic downturn, industry and agency restructuring, and the removal of some available forest areas from timber production during this period.

With the reduction in the amount of publicly owned forest available for harvesting, industry has become increasingly reliant on private forest resources.

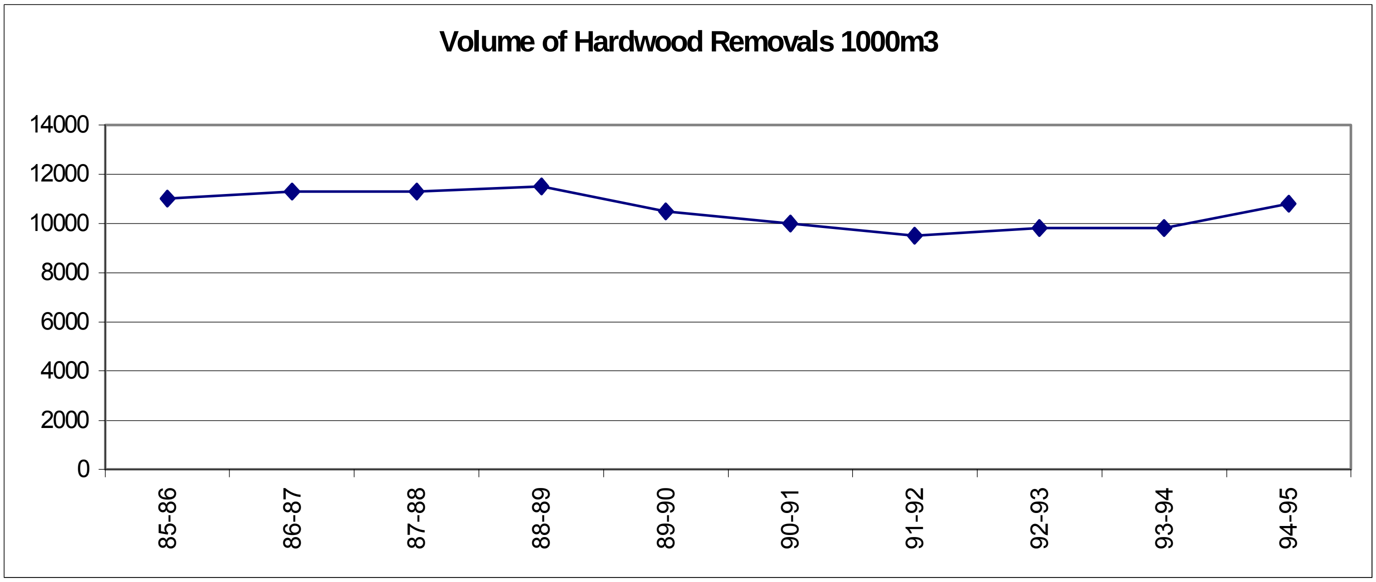
Private forests account for less than a third of all forest land. Traditionally, private timberland has been discontiguous, smaller in size, and unable to maintain continuous long term supply required by industry compared to publicly owned forests. However, as public forest areas have become less accessible, there is increased pressure for sourcing from private lands.

Fewer restrictions apply on freehold land with controls maintained by local governments. These controls are dominated by planning ordinances and state legislation relating to broad environmental protection measures. Private land, by its discontiguous nature and its variety of ownership, is currently a supplementary resource for industries adjusting to the new industry direction. Public and particularly private plantations will be the future resource base for timber industries in the long term.

Industries have restructured and are now working towards efficient utilisation of smaller logs and value-added processing. Both State and Federal Governments have offered displaced workers the highest level of assistance in retraining, new placements, compensation, redundancy packages and payment of relocation expenses. The government's "safety net" has earned vital union support for improving the efficiency of the timber industry. In addition, several forest agencies have been consolidated.

Harvesting is permitted in public forest areas only after extensive studies are conducted, particularly in those areas considered “sensitive." Prescriptions and guidelines for logging operations ensure strict compliance with environmental protection measures.

There is a strong push by state governments to develop the plantation resource to alleviate the high planning costs and political pressures associated with harvesting in native public forest.



Source: Australian Bureau of Statistics (1996).

Plantations

With a general reduction in the amount of native forest land available for timber production, governments are striving to increase the plantation resource. This is a deliberate policy direction designed to shift production away from controversial native forest areas and promote efficient forest timber production through high yielding, intensively managed plantations. Currently, in New South Wales (the most populous state), approximately half the timber produced is derived from plantations. This trend will grow and is reflected in other states.

Softwoods

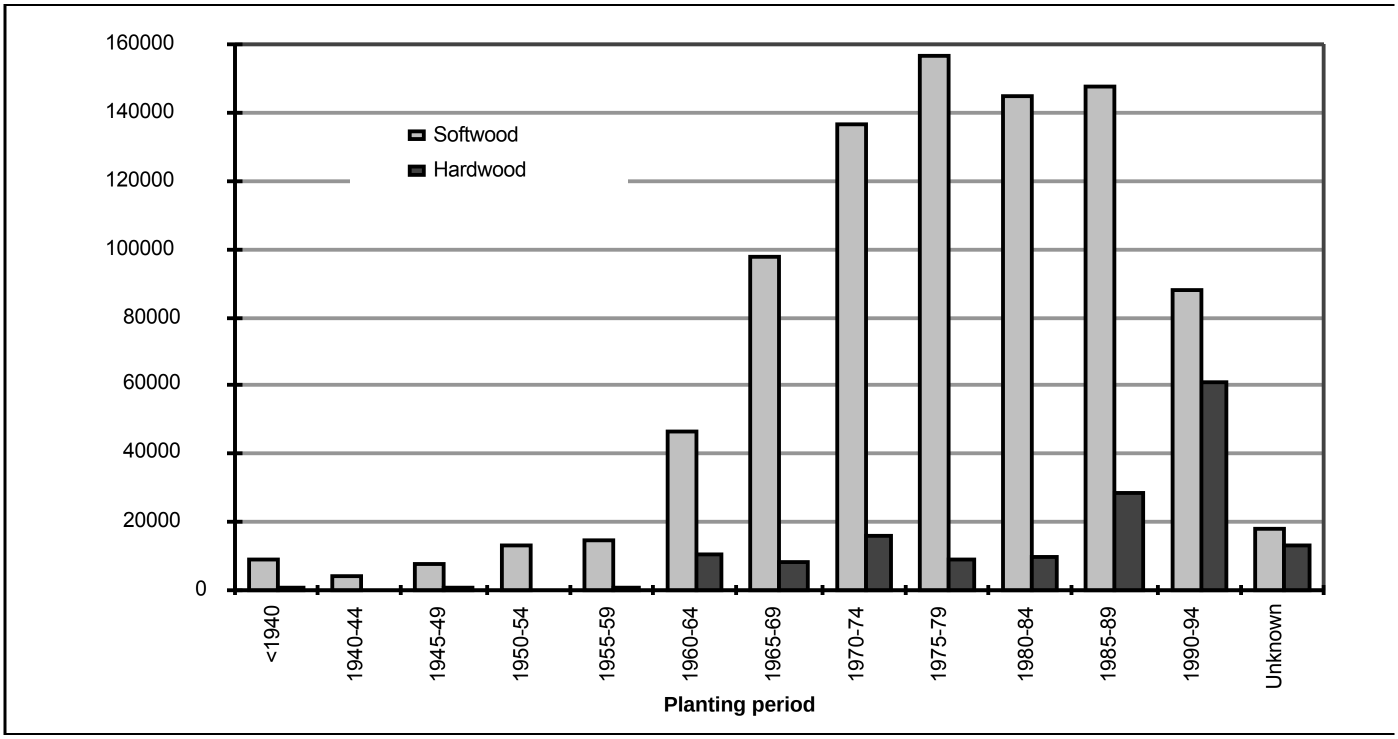
Approximately 90% of plantation timber is softwood. At the end of the 1994 planting season, the total area of softwood (nearly all exotic species) plantations in Australia was 883,980 hectares, compared to 158,570 hectares of hardwood plantations (entirely eucalypt). Data is incomplete for 1995, but at a minimum the softwood estate was 907,542 hectares compared with hardwoods which were 177,263 hectares.

Softwood more commonly known as pine is an important source of wood for building and for pulp and paper. Its uses include newsprint, cardboard, and wrapping paper as well as furniture and a wide range of structural applications. It is now recognised as an ideal product for house frames.

The recent decline in softwood plantings relative to hardwood forests is indicative of several factors:

- Plantations increasingly have to compete with hardwood plantations and with other land uses for access to land.
- There has been a shift from State to private sector funding of new plantations in some States. This has been a result of governments reducing the costs of tax incentive programs that encourage private investment.
- Much of the plantation expansion from the 1960s to the 1980s was driven by Commonwealth softwood plantation loans, which have since ceased.
- Changes to tax deductibility arrangements in the mid-1980s have also made plantation investment less attractive to city-based private investors.
- With rotations as short as 10-15 years in some areas, hardwood plantations are seen as an attractive investment with good financial returns
- Recent legislation prohibits the clearing of timbered areas for plantation establishment, thereby reducing the expansion of the softwood resource. This has also had an effect on hardwood plantations as well but to a lesser extent.

Area of current standing plantation, by planting period, to 1994 (hectares)



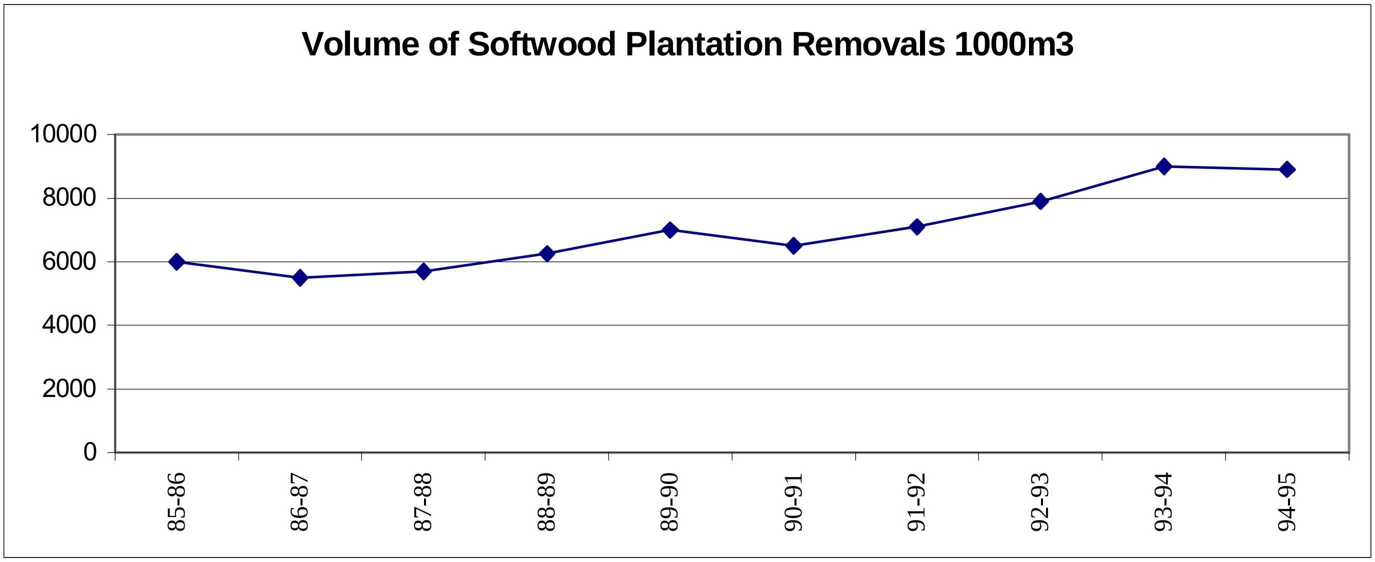
Source: National Plantation Inventory of Australia (1997).

Estimated future yield of plantation timber products 1995–99 to 2035–39 ('000 m^3/year)

Source	1995–99	2000–04	2005–09	2010–14	2015–19	2020–24	2025–29	2030–34	2035–39
Softwood									
Pulpwood	4,857	4,792	3,965	3,904	3,693	3,774	3,887	3,674	3,954
Sawlogs	5,530	6,904	8,334	7,857	8,137	8,582	8,982	8,663	8,956
Veneer	175	220	251	324	333	332	330	341	335
Total	10,462	11,916	12,550	12,085	12,163	12,688	13,199	12,678	13,245
Hardwood									
Pulpwood	687	2,344	3,821	5,922	6,901	8,626	9,228	9,867	10,330
Sawlogs	5	15	94	120	120	120	120	120	120
Total	692	2,359	3,915	6,042	7,021	8,746	9,348	9,987	10,450

Note: Figures based on growers' current plans for plantation expansion.

Source: National Plantation Inventory (1997)



Source: Australian Bureau of Statistics (1996).

A large proportion of the softwood plantation estate has yet to reach maturity, and therefore it has not reached its maximum productive capacity. Annual softwood removals from plantations are generally increasing, apart from occasional falls resulting from changes in economic conditions. Softwood use is particularly sensitive to fluctuations in the housing industry.

Increasing supplies of softwood timber will continue to enter the market from maturing Australian plantations (30-50 years old) and from other countries, especially New Zealand.

As softwood supplies continue to increase, hardwood producers are repositioning their production into higher value applications, replacing imports and expanding exports.

Value of Australian Wood Imports and Exports

	1989-90 m$	1990-91 m$	1991-92 m$	1992-93 m$	1993-94 $	1994-95 m$
Exports						
Woodchips	377	412	418	422	449	564
Pulp and Paper	128	174	190	226	221	230
Other	36	63	94	129	154	224
Total Exports	*541*	*649*	*702*	*777*	*854*	*1008*
Imports						
Sawnwood	463	397	410	507	591	538
Pulp and Paper	1289	1316	1488	1580	1643	2010
Other	249	276	310	350	408	452
Total Imports	*2001*	*1990*	*2203*	*2437*	*2642*	*3001*
Deficit	***1460***	***1341***	***1506***	***1660***	***1788***	***1993***

Source: ABARE 1995, Quarterly Forest Products Statistics

Hardwoods

Although hardwood plantations only account for 10% of the current plantation base, hardwoods will play an increasingly larger role in supplying domestic timber needs. In fact, the greatest area of growth in recent years in the Australian forestry sector has been the eucalypt plantation program.

In New South Wales alone there has been an unprecedented target for the 1997/98 financial year of establishing 10,000 ha of eucalypt plantation on agricultural land. This trend of increasing areas planted to hardwood species is reflected in other states. In Western Australia, private forestry companies have purchased land and entered into joint ventures with land holders to establish large areas of short rotation eucalypt plantations for the pulpwood market.

The area of hardwood plantation is rapidly increasing so estimates of productive capacity are less reliable than for softwoods.

Plantations and the 2020 Vision

In July 1996 the Federal Ministerial Council on Forestry, Fisheries and Aquaculture endorsed a plantation industry target of trebling the plantation estate by the year 2020. This "2020 Vision" is the result of a working partnership between the Commonwealth, State and Territory Governments and the plantation growing and processing industries. The collaboration between government and industry is intended to attract private investment to the plantation sector. This involves tax incentives and development of further joint private and government investment agreements. International investment is also being sought.

The target of the 2020 vision is to treble the effective area of Australia's plantations between 1996 and 2020. This can be achieved by planting an average of 80,000 hectares a year, thereby adding 2 million hectares to the 1996 plantation estate.

The development of both softwood and hardwood plantations will compliment the production of wood from native forests managed on a sustainable basis through Regional Forest Agreements and will take on an increasing role in supplying Australia's domestic timber needs.

2020 Goals

- More than $3 billion will be invested to establish new plantations by 2020 - mainly private capital investment.
- Farm incomes may increase by 20 per cent. Farm forestry in high rainfall zones could contribute up to $664 million a year to farm incomes.
- ·The current $2 billion trade deficit in wood and wood products will be converted into a surplus.
- Up to 40,000 jobs will be created in rural areas, including:

  - jobs in plantation forestry and logging;
  - jobs from a 50 per cent expansion in domestic processing of wood products;
  - jobs in transport; and
  - jobs from the flow-on effects of overall growth in exports and local processing of wood.

Carbon Trading

A new State plan that will expand nationally to promote the development of the plantation sector and attempt to address the carbon problem recently commenced in New South Wales. The State government has been exploring a carbon credit trading system that uses credits paid by the power industry to offset costs for the establishment of plantations. The credits are purchased and then recognised by a certificate owned by the individual or company which has created the Greenhouse gas saving. Over time, companies which create more certificates than they need may sell these to others that need to reduce their Greenhouse gas emissions. Planted forests are profitable and, when combined with the new role of carbon sequestration, are an economically attractive way for many sectors to address Greenhouse gas emissions reduction. It is estimated that planting 100,000 hectares of new forest can absorb up to 1 million tons of carbon per year from the atmosphere. It is hoped that in the long term carbon credit trading wil become international in line with the Kyoto outcomes as Australia will be well placed to establish new forests.

Future Prospects

For much of the first 60 to 70 years of active forestry development, the Australian forest agencies and governments enjoyed a relatively free hand in determining forest management policy and priorities. Increasing public activism has changed the nature of the interaction between the government and the public. With increased public participation, the Federal and State governments in Australia must work harder to balance the often competing claims of diverse stakeholders, while maintaining the robustness of the timber industry and the broad range of values associated with the forest estate.

All State and Territory agencies have obligated themselves to work toward sustainable yield of timber products (as well as all other forests goods and services). Consistent with these aims, there has been a significant decline in the area available for timber production in Australia, as large areas of publicly owned forest land are converted to conservation reserves. Of the remaining publicly owned land available for timber harvesting, there is still a significant portion of forest excluded from logging due to Codes of Practice.

In an effort to reduce pressure on native forests, Australia has embarked on an ambitious plantation program. The area of plantation forest in Australia is growing rapidly, mainly because of an increase in the last 10 years in the area planted to native hardwood species (nearly all eucalypts). The rate of exotic softwood plantation establishment has declined in recent years owing to policy changes by State governments and an unsuitable investment climate. The total output from the present area of softwood plantation is still increasing but is expected to stabilise in about 2005. Maintaining the productivity of softwood plantations has been a major research area in Australia for over 20 years, and the practices necessary to achieve this are continually developing. The newer hardwood plantations are now receiving similar research attention. With the long term goals of the 2020 Vision and carbon trading, Australia seems set to develop a substantial plantation resource.

With large-scale plantation expansion, world-class forest management, innovative processing facilities and strong Government support, the Australian forest industry is working towards self-sufficiency in many wood product markets and becoming a net exporter in some markets. Australian forest management is moving into the next century with a vision to meet domestic timber demand through plantation management and maintaining a world class reserve system.

Native Forest Cover