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Australia's forests at a glance 2015

with data to 2013–14

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Australia's forests in summary	
Total land area	769.2 million hectares
Total forest area	124.7 million hectares
Forest area as a proportion of land area	16 per cent
Native forest area	122.6 million hectares
Forest area in nature conservation reserves	21.5 million hectares
Forest area protected for biodiversity conservation on public and private land	39.2 million hectares
Native forests available and suitable for commercial wood production	36.6 million hectares
Public native forests available and suitable for commercial wood production	7.5 million hectares
Leasehold and private native forests available and suitable for commercial wood production	29.1 million hectares
Area of industrial plantation forest	2.0 million hectares
Total log volume harvested	25.3 million m^3
Total industrial plantation log volume harvested	21.3 million m^3
Total native forest log volume harvested (including cypress pine)	4.0 million m^3

Total value of imports of wood products	\$4.6 billion
Total value of exports of wood products	\$2.5 billion
Major wood product imports (value)	
Paper and paperboard	\$2 104 million
Manufactured paper products	\$537 million
Sawnwood	\$469 million
Wood-based panels	\$370 million
Major wood product exports (value)	
Paper and paperboard	\$853 million
Woodchips	\$768 million
Sawnwood	\$108 million
Wood-based panels	\$62 million
Estimated number of people employed in ABS categories of forestry, logging and wood manufacturing	70 500 people
Forest product manufacturing sales and service income	\$20.1 billion
Forestry and forest product manufacturing industries contribution to GDP	0.5 per cent

ABS Australian Bureau of Statistics. **GDP** Gross domestic product.
Note: Area data are as at 2011 except for industrial plantation area and total forest area, which are as at 2013–14. Harvest, economic and trade data are as at 2013–14.

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National overview

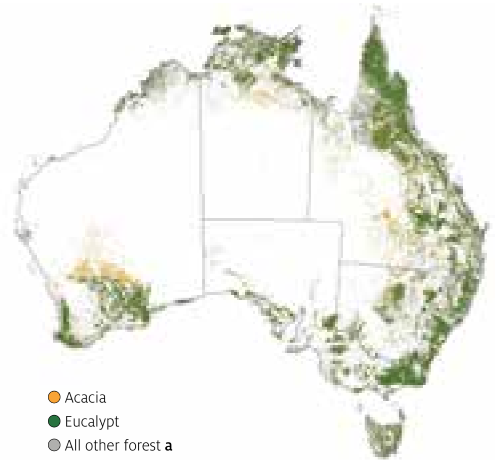
Forest area

Australia's 124.7 million hectares of forest cover about 16 per cent of the continent. This represents about 3 per cent of the world's forest area on 5 per cent of the world's land area.

Queensland has 41 per cent of Australia's forest (51.0 million hectares), New South Wales has 18 per cent (22.7 million hectares), Western Australia 15 per cent (19.2 million hectares) and the Northern Territory 12 per cent (15.2 million hectares).

A forest is an area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 2 metres and with existing or potential crown cover of overstorey strata equal to or greater than 20 per cent. This includes Australia's diverse native forests and plantations, regardless of age, and encompasses areas of trees that are sometimes described as woodlands.

Australia's forest cover, by main types, 2011



a Forest mapped as 'All other forest' comprises: native forest types Callitris, Casuarina, Mangrove, Melaleuca, Rainforest and 'Other native forest', and the forest categories 'Industrial plantations' and 'Other forest'.
Source: National Forest Inventory, ABARES

Australia's forest area, by jurisdiction, 2013–14

Jurisdiction	Total forest area ('000 hectares)	Proportion of national forest area (%)
New South Wales	22 679	18
Victoria	8 190	7
Queensland	51 038	41
South Australia	4 565	4
Western Australia	19 201	15
Tasmania	3 706	3
Northern Territory	15 219	12
Australian Capital Territory	138	0.1
Australia	**124 734**	**100**

Note: Totals may not tally because of rounding. Calculations assume that changes in the area of industrial plantations since 2010–11 have not involved changes in the areas of forest classified as 'Native forest' or 'Other forest'.
Sources: *Australian plantation statistics 2015 update*; *Australia's State of the Forests Report 2013*

Change in reported forest area

Australia's forest area, as reported in *Australia's State of the Forests Report 2013* (MIG & NFISC 2013), is 124.7 million hectares. This figure is the most accurate available because Australia's National Forest Inventory now has:

- better quality data on Australia's forests
- improved resolution of forest mapping
- detailed integration of forest cover data provided by state and territory land management agencies with data sourced from a variety of remote sensing methods.

Change in forest area over time

The best measure of change in forest area over time is derived from annual data published in the Australian National Greenhouse Accounts *National Inventory Report 2013 Volume 2* (Commonwealth of Australia 2015).

The *National Inventory Report 2013 Volume 2* data are based on a modified approach that includes only changes resulting from human drivers such as forest clearing and plantation establishment. The data show a net decrease in forest cover of 0.3 million hectares over the period 2008 to 2013. This figure does not take account of the variation in forest cover over time caused by drought, fire and disease, or the recovery or regeneration of forests after these disturbances.

Type and class of forest

Australia's forests are classified nationally into three categories: 'Native forest', 'Industrial plantations' and 'Other forest'.

Australia's 'Native forest' category is dominated by the forest types Eucalypt (74 per cent of the total forest area), Acacia (8 per cent) and Melaleuca (5 per cent), while only a small area is Rainforest (3 per cent). The primary determinants of forest type distribution are climate and soil properties, followed by fire frequency and intensity.

About half Australia's 'Industrial plantation' area is exotic softwood species (predominantly radiata pine); the other half is mostly native hardwood species (predominantly eucalypts).

The 'Other forest' category comprises a small area of mostly non-industrial plantations and forests of various types.

Australia's forest area, by forest type, 2013–14

Forest type	Area ('000 hectares)	Proportion of national forest area (%)
Acacia	9 807	8
Callitris	2 136	2
Casuarina	1 288	1
Eucalypt	91 989	74
Mangrove	913	1
Melaleuca	6 302	5
Rainforest	3 598	3
Other native forest	6 547	5
Total native forest	**122 581**	**98**
Softwood	1 024	1
Hardwood	963	1
Unknown	12	0.01
Total industrial plantations	**1 999**	**2**
Other forest	**153**	**0.1**
Total forest	**124 734**	**100**

Note: Totals may not tally because of rounding. Calculations assume that changes in the area of 'Industrial plantations' since 2010–11 have not involved changes in the areas of forest classified as 'Native forest' or 'Other forest'.
Sources: *Australian plantation statistics 2015 update*; *Australia's State of the Forests Report 2013*

Native forest crown cover

Australia's native forests are classified nationally into three crown cover classes—woodland forest, open forest and closed forest—according to existing or potential crown cover. Crown cover is the proportion of ground area covered by tree canopies.

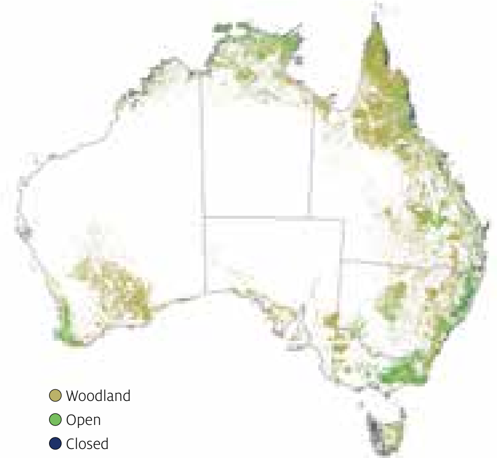
The Eucalypt forest type is the largest component of both woodland forest and open forest. The Rainforest forest type is the largest component of closed forest.

Native forest areas, by crown cover class, Australia, 2011

Crown cover class	Total ('000 hectares)
Woodland (20–50 per cent crown cover)	81 688
Open (>50–80 per cent crown cover)	33 927
Closed (>80–100 per cent crown cover)	3 810
Unknown	3 158
Total native forest	**122 581**

Note: Totals may not tally because of rounding.
Source: *Australia's State of the Forests Report 2013*

Australia's native forest cover, by crown cover class, 2011



Note: Forest mapped as 'Unknown' forest crown cover is not visible at this scale and is therefore not included in the legend.
Source: National Forest Inventory, ABARES

Native forest height

Australia's native forests are classified nationally into three height classes—low forest, medium forest and tall forest—according to existing or potential mature stand height. Most forest height data are collected in forests where wood is harvested.

Native forest area, by height class, Australia, 2011

Height class	Total ('000 hectares)
Low (2–10 metres)	33 487
Medium (>10–30 metres)	79 992
Tall (>30 metres)	5 944
Unknown	3 158
Total native forest	**122 581**

Source: National Forest Inventory, ABARES

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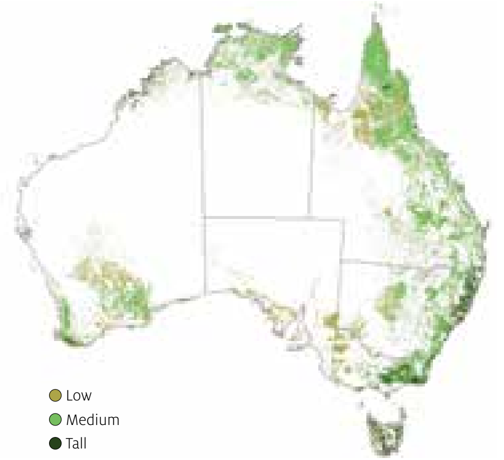
Did you know?

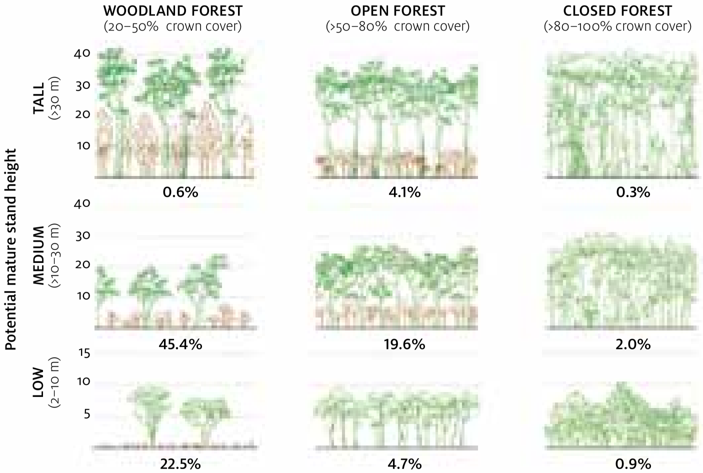
Woodland forests with 20–50 per cent crown cover make up two-thirds of all native forest in Australia.

Australia’s native forest cover, by height class, 2011



Note: Forest mapped as ‘Unknown’ forest height is not visible at this scale and is therefore not included in the legend.
Source: National Forest Inventory, ABARES

Native forest crown cover and height classes, and area proportions, Australia, 2011



Note: Percentages are area proportions of each known cover class/height class combination in Australia's native forest area excluding that area for which height and cover class is unknown.
Source: *Australia's State of the Forests Report 2013*

Eucalypt mallee forest

Mallee eucalypts are multi-stemmed, with stems arising from a woody base (lignotuber or mallee root). Their deep, extensive root systems can access groundwater in more arid environments.

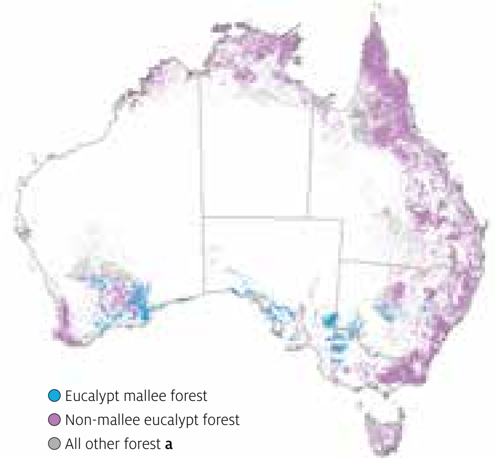
Mallee forests generally do not exceed six metres in height and have a flattened open or woodland canopy. Most mallee forests are found in drier inland regions of southern Australia, where annual rainfall averages 250–400 millimetres.

The total area of mallee forest in Australia is 12.1 million hectares. Most mallee forests are in Western Australia (46 per cent of all mallee forests) and South Australia (30 per cent).

Did you know?

Some eucalypt species can grow in either a mallee growth form or a tree growth form, depending on environmental conditions.

Australia's eucalypt mallee and non-mallee forest, 2011



a Forest mapped as 'All other forest' comprises: native forest types Acacia, Callitris, Casuarina, Mangrove, Melaleuca, Rainforest and 'Other native forest', and the forest categories 'Industrial plantations' and 'Other forest'.
Source: National Forest Inventory, ABARES

Old-growth forests

Of the 23 million hectares of forest in Australia assessed for old-growth status in the 10 Regional Forest Agreement regions, 5.0 million hectares (22 per cent) was classified as old-growth forest. In 2011 more than 73 per cent of forest classified as old-growth was in formal or informal nature conservation reserves.

Old-growth forests are ecologically mature forests where the effects of past disturbances are now negligible. These forests generally have a layered structure, with large (diameter and height) overstorey trees, a well-developed understorey of other tree species and shrubs and ecological features such as dead standing trees and large decaying and hollow logs on the forest floor.

Did you know?

Changed fire regimes, natural ageing and disease are the most significant threats to old-growth forest across all tenures.

Native forest tenure and ownership

Tenure is important in native forest management. The owner of the land (and in most cases the forest) has primary responsibility for its management. Six tenure categories are recognised nationally:

- **Multiple-use public forest—**publicly owned forest on which government agencies manage a range of forest values including wood harvesting, water supply, biodiversity conservation, recreation and environmental protection.
- **Nature conservation reserve—**publicly owned land formally reserved for conservation and recreational purposes including national parks, nature reserves, and state and territory recreation and conservation areas.
- **Other Crown land—**reserved for purposes including utilities, mining, water catchments and use by Indigenous communities.
- **Private land (including Indigenous)—**held under freehold title and typically under private ownership.
- **Leasehold forest—**Crown land held under leasehold title and generally regarded as privately managed, including land with special conditions for designated Indigenous communities.
- **Unresolved tenure—**areas of unknown tenure.

Native forest area, by tenure type, Australia, 2011

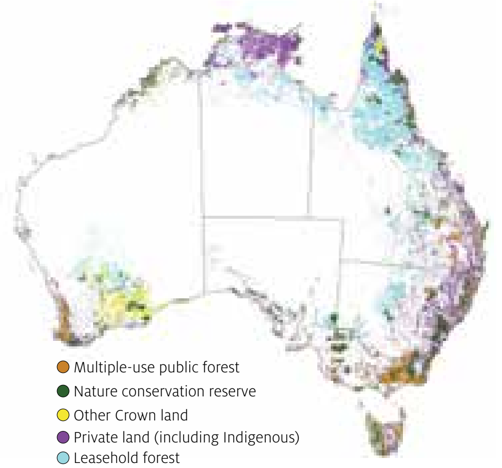
Tenure	Area ('000 hectares)	Proportion of total (%)
Multiple-use public forest	10 159	8
Nature conservation reserve	21 478	18
Other Crown land	8 146	7
Private land (including Indigenous)	33 394	27
Leasehold forest	48 533	40
Unresolved tenure	871	1
Total forest	**122 581**	**100**

Note: Totals may not tally because of rounding.
Source: *Australia's State of the Forests Report 2013*

Publicly managed forests (forests managed by government agencies) include forest under multiple-use public forest, nature conservation reserve and other Crown land tenures. Of the 122.6 million hectares of native forest in Australia, about 33 per cent is publicly managed.

Privately managed forests include forest on private and leasehold tenures. Of the 122.6 million hectares of native forest in Australia, about 67 per cent is privately managed.

Australia's forest cover, by tenure, 2011



Note: Forest mapped as 'Unresolved tenure' is not visible at this scale and is therefore not included in the legend.
Source: National Forest Inventory, ABARES

Did you know?

The highest proportion of native forest area under private management is in the Northern Territory (98 per cent) and Queensland (80 per cent), while the lowest proportion under private management is in the Australian Capital Territory (8 per cent) and Victoria (15 per cent).

Forests in reserves

Thirty-nine million hectares of Australia's native forest (32 per cent of the native forest area) is reported as protected for biodiversity conservation. This comprises areas protected in multiple-use public forests, legally covenanted private land, formal and informal nature conservation reserves and other protected areas on publicly managed land.

According to the National Reserve System—Australia's network of protected areas—nature conservation is the primary management intent for 26.4 million hectares (21 per cent of Australia's forests) (Department of the Environment 2014).

All the national native forest types in Australia (except Acacia forest) are represented in the National Reserve System at levels above the 10 per cent area proportion target recommended by the International Union for Conservation of Nature.

A total of 21.5 million hectares of Australia's forest area is on nature conservation reserve tenure. This represents 18 per cent of Australia's native forest area.

This figure is lower than that listed in the National Reserve System because some reserves have a different formal tenure type, which can be either private, multiple-use public forest, leasehold or other Crown land.

Indigenous owned or managed forests

The Indigenous forest estate comprises forests owned or managed by Aboriginal and/or Torres Strait Islander peoples.

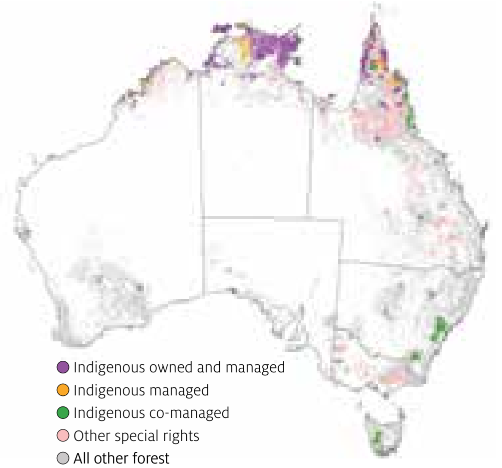
Around one-third of Australia's forests (41.1 million hectares, 33 per cent by area) are under either 'Indigenous ownership and management', 'Indigenous management', 'Indigenous co-management' or 'Other special rights'.

Indigenous owned or managed forests, Australia, 2011

Category	**Area ('000 hectares)**
Indigenous owned and managed	13 283
Indigenous managed	3 173
Indigenous co-managed	4 759
Other special rights **a**	19 843
Total	**41 058**

a Lands subject to native title determination and active Indigenous land use agreements.
Source: Dillon et al. 2015

Forests on the Indigenous estate, Australia, 2011



Source: National Forest Inventory, ABARES

Did you know?

Of the 41.1 million hectares of forested land in the Indigenous estate, 31.2 million hectares (76 per cent) is in Queensland and the Northern Territory.

Forest certification

Forest management and chain-of-custody certification assures Australian and international buyers that the forest products they purchase originate from sustainably managed and legally harvested native forests and plantations.

Several private, accredited certification bodies conduct forest and chain-of-custody certification in Australia. They use standards developed under the Australian Forest Certification Scheme (AFCS) or the Forest Stewardship Council (FSC).

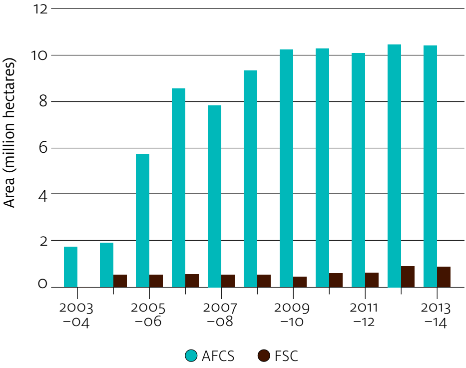
The AFCS uses the Australian Forestry Standard, which was developed by representatives of the Australian community, industry and government and is recognised under the Programme for the Endorsement of Forest Certification. The FSC uses regionally adapted interim standards that comply with its international Principles of Responsible Forest Management. An FSC Forest Stewardship Standard for Australia is currently being developed.

Both schemes also issue chain-of-custody certificates that identify and track certified wood and wood products through the supply chain. The number of chain-of-custody certificates issued under the AFCS and FSC has increased rapidly since 2004–05.

The total area of certified native forest and 'Industrial plantation' in Australia is approximately 10.5 million hectares. This includes most public native forests managed for wood production.

Multiple-use public forest and private forest are also managed in accordance with codes of practice. Many forest managers use environmental management systems that comply with and are independently certified to an International Organization for Standardization standard.

Area of forest for which forest management is certified, Australia, 2003–04 to 2013–14



AFCS Australian Forest Certification Scheme. **FSC** Forest Stewardship Council. Note: FSC numbers are for March 2004, January 2005, February 2006, March 2007, January 2008, January 2009, January 2010, January 2011, January 2012, January 2013 and January 2014. Some areas of forest have both AFCS and FSC certification. Sources: *Australia's State of the Forests Report 2013* for AFCS and FSC data to 2011–12; Australian Forestry Standard Limited for AFCS data for 2012–13 and 2013–14; FSC (2013, 2014) for FSC data for 2012–13 and 2013–14.

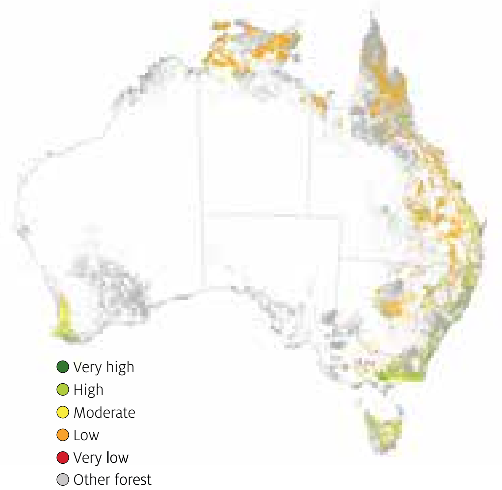
Native forest commerciality

Commerciality is a measure of expected volume yields of commercial sawlog (or veneer log or high-value equivalents) available from a forest stand over the long term, assuming good silvicultural practices are followed. Commerciality is derived from a combination of merchantability and productivity. Merchantability describes the suitability of a forest stand for commercial wood production, particularly of sawlogs, based on tree species and stand structure. Productivity describes the potential yield of sawlogs from a forest stand.

In 2011, 36.6 million hectares of native forest was both available and suitable for commercial wood production (Davey & Dunn 2014). This figure comprised 7.5 million hectares of multiple-use public forest and 29.1 million hectares of leasehold and private forests.

Of the 36.6 million hectares of available and commercial native forest, 9.8 million hectares were classed as moderate, high or very high commerciality comprising 4.7 million hectares of multiple-use public forest and 5.1 million hectares of leasehold and private forests. Much of the native forest on leasehold and private land contributes minimally to wood supply.

Commerciality of Australia’s native forest, 2011



Note: Forest mapped as ‘Other forest’ includes forest of limited, possible or no commerciality; sandalwood; forest of unknown floristics and structure; conservation reserves where harvesting is excluded by covenant or regulation; and forests on formal nature conservation reserves, other Crown land and land of unresolved tenure. Commerciality is further restricted in the Northern Territory and northern Queensland because of accessibility and remoteness, and only limited harvesting occurs in those areas.
Source: Davey & Dunn 2014

Forests, wood products and carbon

During photosynthesis, forests absorb carbon dioxide from the atmosphere and store carbon in biomass. Forests also store carbon dioxide in forest litter and soil organic matter. A significant amount of carbon is also stored in wood products.

At the end of 2010, 13 067 million tonnes of carbon was held in Australia's forests and harvested wood products in service and in landfill (DCCEE 2012). Almost all this carbon (12 841 million tonnes; 98 per cent) was stored in living forest. In 2010, 103 million tonnes of carbon was held in wood and wood products in service, which is an increase of 14 million tonnes from 2000. A total of 123 million tonnes of carbon was held in wood and wood products in landfill in 2010, which is an increase of 13 million tonnes from 2000.

Reductions in national forest carbon stocks are caused by forest clearing for agriculture, urban or industrial development, wood harvest from production forests, and natural disturbance events such as bushfires.

Increases in carbon stocks occur in forests that are regrowing from past disturbance events such as fire or wood harvesting and following planting events, afforestation and reforestation.

Carbon stored in Australia's forest lands and harvested wood products, 2010

Carbon pool	Carbon (million tonnes)
Forests	
Production native forests **a**	2 057
Non-production native forests **a**	10 613
Plantations	171
Total	**12 841**
Harvested wood products	
Wood and wood products in service	103
Wood and wood products in landfill	123
Total	**226**

a As defined for Australia's National Greenhouse Accounts (DCCEE 2012).
Source: *Australia's State of the Forests Report 2013*

Fire

Between 2006–07 and 2010–11, the total area of forest burnt in Australia was 39.0 million hectares. Of this, unplanned fires burnt 31.6 million hectares of forest and planned fires burnt 7.4 million hectares of forest.

Fire is an important forest management tool in Australia. Planned fire is fire started in accordance with a fire management plan or planned burning programme. Planned fire is used in fire-adapted forest types for forest regeneration, to promote growth after harvest, to maintain forest health and ecological processes and to reduce fuel loads so subsequent unplanned fires can be more easily managed.

The extent and intensity of forest fires in Australia vary with latitude and with season of rainfall. In northern Australia, where conditions are generally humid, low-intensity fires often burn across large areas. In south-eastern Australia, hot, dry and windy summers often lead to high-intensity bushfires that are difficult to control. Such fires can cause loss of human life and destroy trees, livestock, buildings, fences, bridges and power lines. Bushfires can also lead to soil erosion and degrade stream water quality. The resulting natural regrowth can reduce water yields.

Total forest area burnt, by jurisdiction, Australia, 2006–07 to 2010–11

Jurisdiction	Area burnt ('000 hectares)	Proportion of total area burnt (%)
New South Wales	1 035	2.7
Victoria	2 511	6.4
Queensland	14 325	37
South Australia	1 211	3
Western Australia	4 272	11
Tasmania	179	0.5
Northern Territory	15 448	40
Australian Capital Territory	5.6	0.01
Australia	**38 985**	**100**

Note: Totals may not tally because of rounding. Combined MODIS satellite and state and territory data. Data include some areas (especially in northern Australia) that were burnt more than once during the period. Source: *Australia's State of the Forests Report 2013*

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Did you know?

The incidence of forest fire in northern Australia is limited by fuel loads, while the incidence of forest fire in southern Australia is limited by fuel dryness.

Plantation forests

Plantations are intensively managed stands of native (mainly hardwood) or exotic (mainly softwood) tree species established by regular placement of seeds or seedlings. The primary purpose of 'Industrial plantation' forestry is wood production.

Area of plantations

Australia's 'Industrial plantations' cover around 2 million hectares, of which about half are softwood species (1 024 200 hectares) and half are hardwood species (963 200 hectares). In 2013–14 Victoria had the largest total area of plantations (433 100 hectares), followed by Western Australia (391 500 hectares) and New South Wales (390 000 hectares). Western Australia had the largest area of hardwood plantations and New South Wales the largest area of softwood plantations.

Did you know?
In 2013–14 plantations produced 83.4 per cent of total wood supplied by Australia's forests.

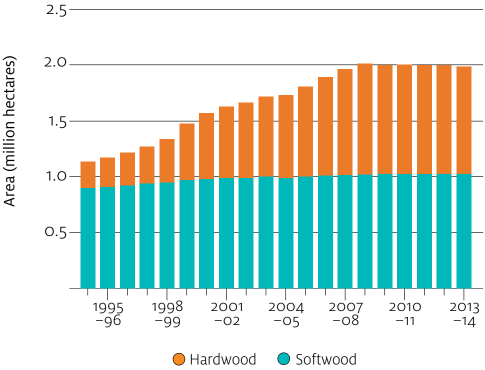
New plantations

New plantations are those established on land not previously used for plantation forestry. About 1 800 hectares of new plantation (mainly hardwood) was established in 2013–14. This increase was offset by the removal of 14 600 hectares of existing plantation that growers either deemed commercially unviable or did not replant at the end of their lease agreement. This resulted in a net decrease in plantation area of around 12 800 hectares in 2013–14.

The high rate of plantation expansion from 1995–96 to 2007–08 was financed mainly by the managed investment scheme (MIS) sector. The establishment of new plantations has declined from a peak of around 137 000 hectares of new plantations established in 1999–2000, to 1 800 hectares established in 2013–14.

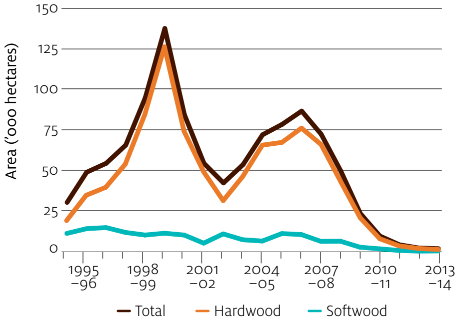
Institutional investors funded 75 per cent of new plantations established in 2013–14, MIS funded 6 per cent and public corporations 19 per cent.

Plantation area, by type, Australia, 1994–95 to 2013–14



Note: 1994–95 to 2004–05 are calendar years (1994 to 2004) and 2005–06 to 2013–14 are financial years.
Source: *Australian plantation statistics 2015 update*

New plantation areas, Australia, 1994–95 to 2013–14

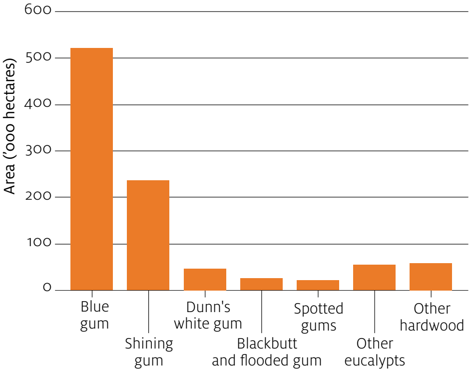


Note: 1994–95 to 2004–05 are calendar years (1994 to 2004) and 2005–06 to 2013–14 are financial years.
Source: *Australian plantation statistics 2015 update*

Plantation species

The hardwood plantation estate is dominated by blue gum (521 000 hectares, 54 per cent) and shining gum (236 200 hectares, 25 per cent), both of which are primarily managed for pulplog production. Most blue gum plantations are in Western Australia and the Green Triangle region of Victoria and South Australia, while most shining gum plantations are in Tasmania. Other regionally important hardwood species are blackbutt and flooded gum in north-east New South Wales, Dunn's white gum in north-east New South Wales and south-east Queensland, and African mahogany in the Northern Territory.

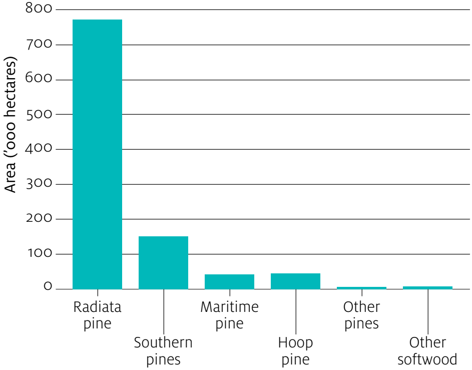
Hardwood plantation areas by species, Australia, 2013–14



Source: *Australian plantation statistics 2015 update*

The softwood plantation estate is dominated by radiata pine (772 000 hectares, 75 per cent) and southern pines (151 000 hectares, 15 per cent), both of which are managed for sawlog production. Most radiata pine plantations are in the Murray Valley, Green Triangle, NSW Central Tablelands and Tasmania. Most southern pine plantations are in the South East Queensland region. Other regionally important softwood species are maritime pine in Western Australia, and the native species hoop pine in the South East Queensland region.

Softwood plantation areas by species, Australia, 2013–14



Source: *Australian plantation statistics 2015 update*

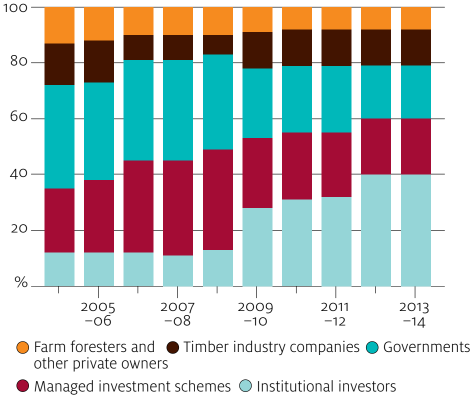
Plantation ownership

Managed investment schemes (MIS) have been involved in the forest plantation sector since the 1980s. Most MIS plantations (by area) are blue gum grown for woodchips and are located in Western Australia, Victoria and Tasmania. More than 85 per cent (by area) of MIS plantations were established for pulplog production.

Plantation ownership has changed substantially in the past 10 years, with private investment managers buying rights to manage and harvest some MIS plantations and some public plantations.

In 2013–14 MIS managed around 400 000 hectares (20 per cent) of Australian plantations, compared with around 730 000 hectares (36 per cent) in 2008–09.

Area proportion of plantation ownership, by owner type, Australia, 2004–05 to 2013–14



Note: 2004–05 is the 2004 calendar year and 2005–06 to 2013–14 are financial years.
Source: *Australian plantation statistics 2015 update*

Native forest wood production

The main source of Australia's native timber and wood-based products is multiple-use public forest in New South Wales, Queensland, Tasmania, Victoria and Western Australia. Private and leasehold forests provide smaller quantities of these products, depending on markets and the objectives and goals of owners and managers.

Substantial areas of multiple-use public forest are reserved or excluded from wood production. Other areas are not suitable for harvesting because of operational or merchantability constraints.

In 2011, 36.6 million hectares of native forest was both available and suitable for commercial wood production. This figure comprised 7.5 million hectares of multiple-use public forests and 29.1 million hectares of leasehold and private forests.

When additional local restrictions to maintain and manage non-wood values are taken into account, the net harvestable area of Australia's multiple-use public native forests was 5.5 million hectares in 2011 (14 per cent of public native forests). This is a decline of 4.6 million hectares from the 10.1 million hectares that was available in 1996.

Wood is only harvested from a small portion of the net harvestable area each year (1.4 per cent nationally in 2010–11).

Net area available for harvesting and area harvested in multiple-use public native forests, by jurisdiction, Australia, 2010–11

State	Net harvestable area (hectares) a	Proportion of total public native forest available (%) b	Total harvest area (hectares)	Proportion of net harvestable area harvested (%)
New South Wales	1 229 000	16	27 484	2.2
Victoria	835 000	13	5 800	0.7
Queensland	2 030 000	22	28 200	1.4
Western Australia	848 000	7	7 390	0.9
Tasmania	563 000	23	10 490	1.9
Total	**5 505 000**	**14**	**79 364**	**1.4**

a Net area of multiple-use public native forest available for wood harvesting after excluding areas legally restricted from wood harvesting, unsuitable for wood harvesting or where wood harvesting is not commercially viable, and areas where additional local management plans or codes of practice do not permit wood harvesting. **b** Public native forest comprises the tenures multiple-use public forest, nature conservation reserve and other Crown land. Note: Harvesting of native forest is not permitted in multiple-use public native forest in the Australian Capital Territory or South Australia. The Northern Territory does not have multiple-use public native forest.
Source: *Australia's State of the Forests Report 2013*

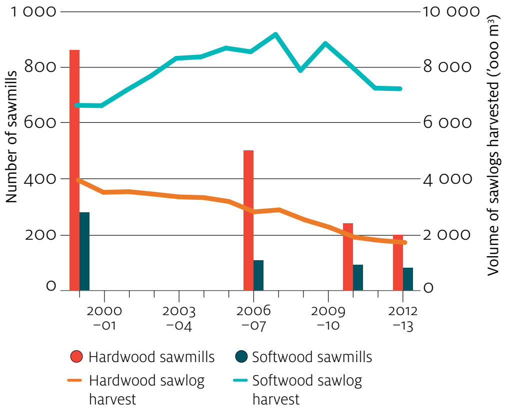
Wood processing

The volume of hardwood sawlogs processed declined by 56 per cent between 1999–2000 and 2012–13. This is partly because log availability from multiple use public native forests (mainly hardwood logs) declined over this period. Since 1999–2000 sawlog availability from softwood plantations has remained high and to 2012–13 the volume of softwood logs processed increased by 9 per cent.

Softwood mills in 2012–13 were larger on average than they were in 1999–2000: one-third of softwood sawmills had a log input capacity greater than 100 000 cubic metres a year and accounted for 89 per cent of total national softwood sawn timber output in 2012–13.

More than three-quarters of hardwood sawmills had a log input capacity of less than 15 000 cubic metres a year in 2012–13, but these mills accounted for only one-quarter of total hardwood sawn timber output.

Volume of sawlogs harvested and number of sawmills, Australia, 1999–2000 to 2012–13



Source: *ABARES National Wood Processing Survey, 2012–13*

In 2012–13 hardwood sawmills employed, on average, around 1.85 people per 1 000 cubic metres of logs processed. Softwood sawmills employed around 0.52 people per 1 000 cubic metres processed. In both sectors, smaller sawmills employed more people per cubic metre of logs processed than larger mills.

Hardwood sawmills use logs from public native forests (84 per cent of logs), private native forests (13 per cent) and plantations (3 per cent). Smaller hardwood sawmills take a much larger proportion of their logs from private native forest than do larger hardwood sawmills, which usually have allocations from public native forest.

Softwood sawmills (excluding cypress pine mills) source almost all their logs from plantation forests.

Cypress pine mills (which operate only in New South Wales and Queensland) source virtually all their logs from public native forests.

Post and pole mills use logs from plantations (55 per cent), private native forests (37 per cent) and public native forests (8 per cent).

Wood processors in Australia, by processing capacity and employment, 2012–13

Type	Log intake capacity (m^3/yr)	Average log intake (m^3/mill)	Recovery rate (%)	Share of national output (%)	Average employment per mill (no./mill)	Employment per unit input (no./'000 m^3)
Hardwood	Less than 3 000	928	45.3	4.6	4.3	4.66
	3 000 to less than 15 000	5 384	39.8	21.3	15.7	2.91
	15 000 to 45 000	23 024	38.6	45.3	37.4	1.62
	More than 45 000	72 029	42.5	28.8	70.4	0.98
	Total hardwood	**9 263**	**40.2**	**100**	**17.1**	**1.85**

continued…

Wood processors in Australia, by processing capacity and employment, 2012–13

continued

Type	Log intake capacity (m^3/yr)	Average log intake (m^3/mill)	Recovery rate (%)	Share of national output (%)	Average employment per mill (no./mill)	Employment per unit input (no./ '000 m^3)
Softwood	Less than 15 000	5 593	66.8	1.9	12.5	2.19
	15 000 to less than 45 000	20 866	48.4	3.5	15.7	0.75
	45 000 to less than 75 000	29 736	58.8	2.3	19.0	0.64
	75 000 to less than 100 000	54 904	53.9	3.1	46.0	0.84
	More than 100 000	346 333	48.5	89.1	164.3	0.47
	Total softwood	**125 809**	**49.1**	**100**	**65.6**	**0.52**

continued...

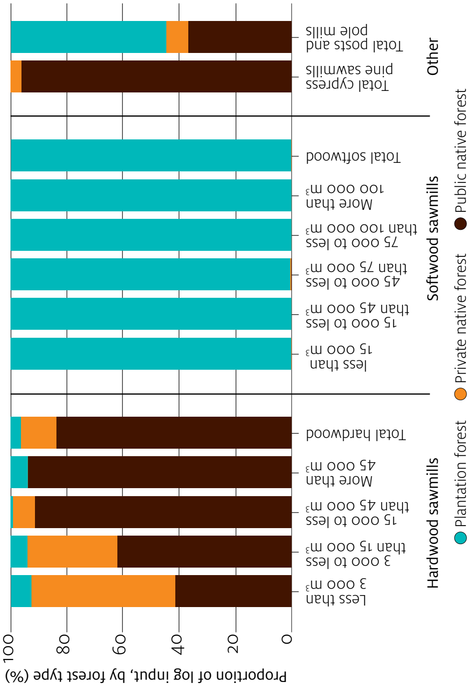
Wood processors in Australia, by processing capacity and employment, 2012–13

continued

Type	Average log intake (m^3/mill)	Recovery rate (%)	Share of national output (%)	Average employment per mill (no./mill)	Employment per unit input (no./ ’000 m^3)
Total cypress pine	9 368	41.8	100	17.3	1.84
Total post and pole	16 693	99.3	100	22.8	1.36

Source: *ABARES National Wood Processing Survey, 2012–13*

Wood processor log input by forest, mill type and input capacity, Australia, 2012–13



Source: *ABARES National Wood Processing Survey, 2012–13*

Logs and wood products

Log harvest and domestic production

Log harvest in Australia totalled 25.3 million cubic metres in 2013–14—a 4.5 per cent decline since 2003–04. Of this, 1.9 million cubic metres of sawlog (including native cypress pine) and 2.3 million cubic metres of pulplogs and other logs were harvested from Australia's native forest estate. In addition, 9.1 million cubic metres of sawlog and 5.1 million cubic metres of pulplogs and other logs were harvested from Australia's softwood plantation estate in 2013–14, and around 190 000 cubic metres of sawlog and around 6.7 million cubic metres of pulplogs and other logs were harvested from Australia's hardwood plantation estate.

In the decade to 2013–14, structural change in the forestry sector led to a 60 per cent decline in the harvest of (predominantly hardwood) native forest logs but a 280 per cent increase in the harvest of hardwood plantation logs. Softwood plantations continue to provide most of Australia's total log supply—56 per cent of Australia's total log harvest in 2013–14 was from these forests.

Logs harvested, Australia, 2003–04, 2008–09 and 2013–14

Source of logs	2003–04 ('000 m^3)	2008–09 ('000 m^3)	2013–14 ('000 m^3)	10-year change (%)
Native forests				
Sawlogs and veneer logs (including cypress pine)	3 760	2 851	1 935	–48.5
Pulplogs and other logs	6 646	5 099	2 252	–66.1
Total	**10 406**	**7 950**	**4 187**	**–59.8**
Hardwood plantations				
Sawlogs and veneer logs	177	168	190	7.6
Pulplogs and other logs	1 642	4 579	6 720	309.3
Total	**1 819**	**4 746**	**6 911**	**279.9**
Softwood plantations				
Sawlogs and veneer logs	8 827	8 341	9 129	3.4
Pulplogs and other logs	5 445	4 762	5 071	–6.9
Total	**14 272**	**13 103**	**14 200**	**–0.5**
Total log harvest	**26 498**	**25 799**	**25 298**	**–4.5**

Note: Totals may not tally because of rounding.
Source: *Australian forest and wood products statistics: September and December quarters 2014*

Domestic sawnwood production showed a similar trend as log harvest volumes: hardwood sawnwood production declined by 44.0 per cent in the decade to 2013–14, while softwood sawnwood production increased by 10.2 per cent.

Wood-based panel production has declined by 26.0 per cent over the decade to 2013–14. Wood-based panels include products such as medium-density fibreboard, particleboard and plywood.

Paper and paperboard production has declined by 4.0 per cent over the decade to 2013–14. Paper and paperboard includes products such as newsprint, printing and writing paper, household and sanitary, and packaging and industrial paper.

Production of wood products, Australia, 2003–04, 2008–09 and 2013–14

Production	2003–04	2008–09	2013–14	10-year change (%)
Sawnwood production ('000 cubic metres)				
Hardwood **a**	1 277	990	717	−43.8
Softwood **b**	3 712	3 740	4 090	10.2
Total	**4 989**	**4 730**	**4 808**	**−3.6**
Wood-based panel production ('000 cubic metres) c				
Plywood	146	118	145	−0.4
Particleboard	1 048	911	855	−18.4
Medium-density fibreboard	795	632	475	−40.2
Total	**1 990**	**1 661**	**1 475**	**−26.0**
Paper and paperboard products production ('000 tonnes)				
Newsprint	422	444	365	−13.5
Printing and writing	585	723	392	−33.0
Household and sanitary	200	193	204	2.0
Packaging and industrial	1 956	1 915	2 076	6.1
Total	**3 164**	**3 275**	**3 037**	**−4.0**

a Mainly sawn from native forest eucalypt logs. **b** Includes cypress pine logs. **c** Excludes laminated veneer lumber, veneer and hardboard.
Note: Totals may not tally because of rounding.
Source: *Australian forest and wood products statistics: September and December quarters 2014*

Wood product consumption and trade

Domestic consumption of hardwood sawnwood declined by 51.4 per cent between 2003–04 and 2013–14. Imports of hardwood sawnwood also decreased in this decade. The proportion of imports to consumption remained relatively stable at around 10 per cent.

Consumption of softwood sawnwood averaged 4.3 million cubic metres per year between 2003–04 and 2013–14 and was 4.5 million cubic metres in 2013–14. Domestic production of softwood sawnwood was 4.1 million cubic metres in 2013–14, which was an increase of 10.2 per cent from 2003–04. Imports of softwood sawnwood fluctuated around 0.65 million cubic metres per year during this period, accounting for 15.2 per cent of domestic consumption.

Overall trends in domestic consumption of panel products are closely linked to housing activity. The proportion of medium-density fibreboard manufactured in Australia that is exported decreased from 51.3 per cent in 2003–04 to 32.4 per cent in 2013–14.

Australia's consumption of paper and paperboard decreased by 11.5 per cent between 2003–04 and 2013–14. During this 10-year period, the substantial decrease in consumption of newsprint was partially offset by an increase in consumption of household and sanitary paper. Over the decade, total consumption of paper products consistently exceeded total domestic production. The difference was made up by paper and paperboard imports averaging 1.8 million tonnes per year.

The total value of wood and paper product exports in 2013–14 was $2.5 billion, while the total value of imports was $4.6 billion.

Consumption of wood products, Australia, 2003–04, 2008–09 and 2013–14

Consumption	2003–04	2008–09	2013–14	10-year change (%)
Sawnwood consumption ('000 cubic metres)				
Hardwood	1 373	1 021	668	–51.4
Softwood	4 369	3 979	4 538	3.9
Total	**5 743**	**5 000**	**5 206**	**–9.3**
Wood-based panel consumption ('000 cubic metres) a				
Plywood	321	265	397	23.5
Particleboard	1 110	923	944	–14.9
Medium-density fibreboard	433	504	386	–10.8
Total	**1 864**	**1 691**	**1 727**	**–7.3**
Paper and paperboard products consumption ('000 tonnes)				
Newsprint	725	639	356	–50.9
Printing and writing	1 527	1 733	1 411	–7.6
Household and sanitary	248	237	308	23.8
Packaging and industrial	1 519	1 552	1 483	–2.4
Total	**4 020**	**4 162**	**3 557**	**–11.5**

a Excludes laminated veneer lumber, veneer and hardboard.
Note: Totals may not tally because of rounding.
Source: *Australian forest and wood products statistics: September and December quarters 2014*

Wood product exports, Australia, 2003–04, 2008–09 and 2013–14

Wood product	2003–04 ($m)	2008–09 ($m)	2013–14 ($m)	10-year change (%)
Roundwood	113.7	101.0	292.4	157.2
Sawnwood **a**	74.1	124.8	107.9	45.6
Wood-based panels	166.2	127.7	61.5	–63.0
Paper and paperboard **b**	634.9	605.5	852.5	34.3
Recovered paper	52.7	234.8	241.1	357.8
Woodchips	794.4	996.8	767.7	–3.4
Other products	222.6	181.8	197.1	–11.5
Total wood product exports	**2 058.6**	**2 372.4**	**2 520.2**	**22.4**

a Sawnwood represents a wide range of species and grades.
b Mainly packaging and industrial papers.
Note: Totals may not tally because of rounding.
Source: *Australian forest and wood products statistics: September and December quarters 2014*

Wood product imports, Australia, 2003–04, 2008–09 and 2013–14

Wood product	**2003–04 ($m)**	**2008–09 ($m)**	**2013–14 ($m)**	**10-year change (%)**
Sawnwood **a**	501.9	404.8	468.5	−6.7
Miscellaneous forest products	583.5	650.5	946.3	62.2
Wood-based panels	190.3	271.2	370.3	94.6
Paper and paperboard **b**	2 136.7	2 276.4	2 104.8	–1.5
Paper manufactures	340.7	590.2	536.8	57.6
Pulp	235.1	262.6	203.3	–13.5
Other products	7.2	3.5	6.0	–16.5
Total wood product imports	**3 995.4**	**4 459.2**	**4 635.9**	**16.0**

a Sawnwood represents a wide range of species and grades.
b Mainly packaging and industrial papers.
Note: Totals may not tally because of rounding.
Source: *Australian forest and wood products statistics: September and December quarters 2014*

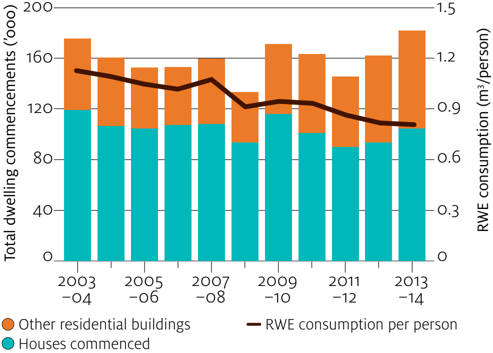
Did you know?
Between 2003–04 and 2013–14, Australia's net trade deficit in wood and paper products averaged around $2 billion.

Roundwood equivalent consumption and dwelling commencements

Year-on-year consumption of wood products is linked to rises and falls in housing activity because a range of wood products are used in building construction. However, from 2008–09 roundwood equivalent consumption has not increased in line with total dwelling commencements in Australia. This is because, since that year, housing commencements have remained relatively flat, while the growth in total dwelling commencements has been in other residential buildings, which historically use less timber in construction than houses.

Roundwood equivalent consumption per person was around 0.8 cubic metres in 2013–14, down from 1.1 cubic metres in 2003–04 largely because of decreased roundwood equivalent consumption of sawlogs and veneer logs.

Dwelling commencements and roundwood equivalent consumption, Australia, 2003–04 to 2013–14



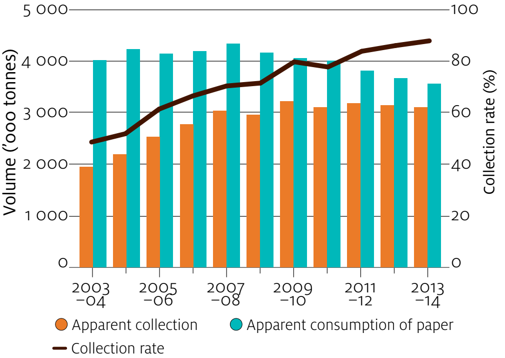
RWE Roundwood equivalent
Source: *Australian forest and wood products statistics: September and December quarters 2014*

Recycling

The collection rate of recovered paper (ratio of the volume of recovered paper to the volume of paper products consumed) increased from 48.5 per cent in 2003–04 to 87.4 per cent in 2013–14. The volume of recovered paper increased from 2.0 million tonnes in 2003–04 to 3.1 million tonnes in 2013–14. During this period, consumption of paper products declined by around 0.5 million tonnes.

Around half the recovered paper is used domestically for production of paper and paperboard products; 47 per cent of recovered paper was exported in 2013–14.

Consumption, collection and collection rate of paper products for recycling, Australia, 2003–04 to 2013–14



Source: *Australian forest and wood products statistics: September and December quarters 2014*

Forestry and forest products manufacturing industry and employment

In 2013–14 the annual sales and service income of forest product manufacturing industries was $20.1 billion, representing around 5.2 per cent of sales and service income of total manufacturing industry in Australia. Together with the forestry sector these industries contributed around 0.5 per cent to Australia's gross domestic product in 2013–14.

The Australian Bureau of Statistics labour force survey (ABS 2015) estimated that in 2013–14 around 70 500 people were employed in the forestry and forest products manufacturing industries.

Estimated employment in the forestry and forest products manufacturing industries, Australia, 2013–14

Sector a	**No. of employees b**
Forestry, logging and support services	8 900
Sawmilling and timber dressing	10 600
Other wood product manufacturing	37 400
Pulp, paper and paperboard	2 300
Converted paper products	7 500
Other pulp, paper and converted paper	3 600
Total	**70 500**

a ANZSIC 2006 catagories. **b** Average employment over four quarters. Note: Australian Bureau of Statistics advises caution using employment statistics at the ANZSIC subdivision and group levels due to estimates that may be subject to sampling variability and standard errors too high for most practical purposes.
Source: Australian Bureau of Statistics 2015

Future log availability

Future plantation log availability

Based on surveys completed by plantation owners and managers, and assuming business-as-usual conditions over the period to 2054, ABARES estimates that availability of softwood plantation logs will increase slightly, and peak at around 17.8 million cubic metres by 2040–44.

Almost all softwood plantations are managed for sawlog production in Australia. On average, between 2015–19 and 2050–54 around 16.9 million cubic metres of logs are projected to be available from softwood plantations each year, two-thirds of which are expected to be sawlogs (including logs suitable for veneer and plywood manufacture). The availability of softwood sawlogs is expected to increase most in Tasmania, Queensland and Victoria, while softwood plantation sawlog availability is forecast to decline in Western Australia.

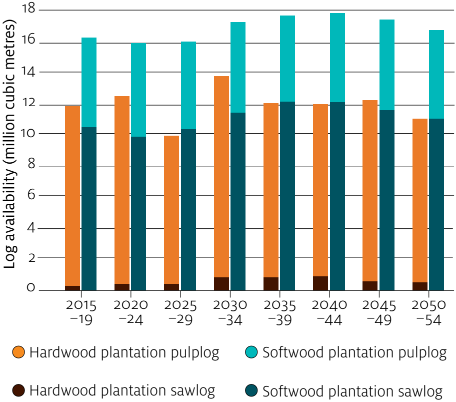
Future hardwood plantation log availability is projected to be volatile because of assumptions around the harvesting and replanting of these plantations, and is projected to fall to the lowest level in 2025–29, before increasing to the highest level in 2030–34. Based on stakeholder discussions, ABARES has assumed that some existing hardwood plantations in some plantation regions will not be replanted after the first rotation because they are not considered commercially viable.

In contrast to softwood plantations, the majority of hardwood plantations in Australia are managed for short-rotation pulplog production. On average, only around 5 per cent of projected logs available from hardwood plantations over the period to 2050–54 are expected to be sawlogs. New South Wales and Tasmania are projected to have the largest volumes of hardwood plantation sawlogs available over the period to 2050–54. Hardwood plantation pulplog availability is projected to increase in Victoria and Tasmania, and decline in Western Australia.

Did you know?

In 2030 total log availability from Australia's native and plantation forests (36.0 million cubic metres) is projected to be around 50 per cent higher than Australia's projected log-equivalent consumption in that year (24.2 million cubic metres).

Future log availability from plantations, Australia, 2015–19 to 2050–54



Source: *Outlook scenarios for Australia's forestry sector: key drivers and opportunities*

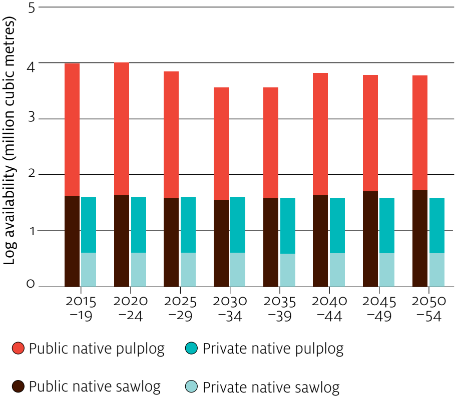
Future native forest log availability

Projections of log availability from public and private native forests are based on published forecasts of log supply to June 2013, supplemented with ABARES estimates of sustainable yield. The projections assume there will be no future decrease in public native forest area available for log production.

Overall native forest log availability is estimated to average around 5.4 million cubic metres a year over the period to 2050–54. Around 70 per cent of total native forest log availability is estimated to come from public native forests and around 30 per cent from private native forests. Public native forest log availability is projected to decline to around 3.6 million cubic metres by 2030–34 and then increase, while private native forest log availability is estimated to remain relatively constant over the projection period at around 1.6 million cubic metres.

Nationally, native forest sawlog availability is projected to decline slightly to 2035–39. Native forest sawlog and pulplog availability is projected to decline in both New South Wales and Tasmania. The availability of native forest pulplog is projected to increase in Victoria and Western Australia.

Future log availability from native forest, Australia, 2015–19 to 2050–54

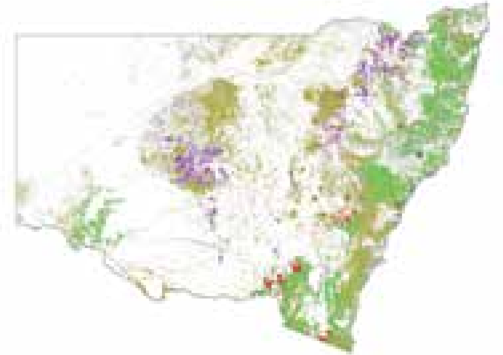


Source: *Outlook scenarios for Australia's forestry sector: key drivers and opportunities*

State and territory summaries

New South Wales

Forest cover by main category, type and cover class, New South Wales, 2011



- Eucalypt woodland 37%
- Eucalypt open 35%
- Eucalypt closed <1%
- Callitris 7%
- All other forest **a** 20%
- Industrial plantation **b** 2%

a Forest mapped as 'All other forest' comprises: native forest types Acacia, Casuarina, Mangrove, Melaleuca, Rainforest and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types).
Note: Figures show the area proportion of each forest type compared with the total area of forest in New South Wales. Totals may not tally because of rounding.

Forest and land area, New South Wales, 2013–14

Forest category	Area ('000 hectares)	% of state land area	% of national forest category area
Native forest	22 281	28	18
Industrial plantations	390	<1	20
Other forest	8	<1	5
Total forest	**22 679**	**28**	**18**

Native forest area, by tenure, New South Wales, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	5 745	25.8
Multiple-use public forest	2 022	9.1
Nature conservation reserve	5 581	25.0
Other Crown land	79	0.4
Private land (incl. Indigenous)	8 852	39.7
Unresolved tenure	2	0.01
Total native forest	**22 281**	**100**

New South Wales forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, NSW forestry and forest products manufacturing industries employed 22 247 people in 2011 (ABS 2011).

In 2013–14 New South Wales had 72 sawmills, seven panel mills and six paper machines in operation. The state has the largest number of hardwood sawmills in Australia and the largest processing capacity for hardwood and softwood sawmills and paper mills. The average input capacity of these hardwood sawmills is 13 400 cubic metres per year, while the average input capacity of softwood sawmills in the state is more than 232 000 cubic metres per year.

Volume and value of logs harvested, New South Wales, 2013–14

Log type	Volume of logs harvested ('000 m³)	National total volume (%)	Value of logs harvested ($m)	National total value (%)
Hardwood native	883	21.9	102	28.8
Hardwood plantation	66	1.0	7	1.5
Softwood (incl. cypress pine)	4 449	31.0	269	27.7
Total	**5 398**	**21.3**	**378**	**21.1**

Note: Value of logs harvested at mill door prices.

Wood processing capacity, New South Wales, 2013–14

Type of facility	No. of facilities	Total capacity	Unit of capacity
Hardwood	59	790	’000 cubic metres per year log input
Softwood	13	2 781	’000 cubic metres per year log input
Cypress pine	4	48	’000 cubic metres per year log input
Post and pole	2	na	na
Wood-based panels	7	988	’000 cubic metres per year log and residue input
Pulp	5	na	na
Paper and paperboard	6	1 800	’000 tonnes per year product output
Log and woodchip export	3	na	na

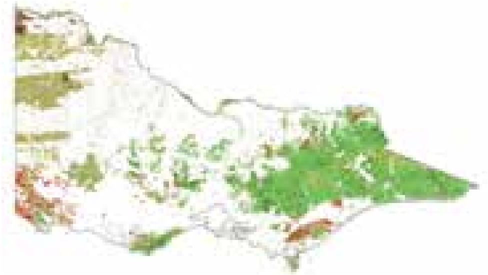
na Not available.
Note: Some data not reported because of confidentiality restrictions.

Did you know?

In 2013–14 New South Wales produced 31 per cent of Australia’s softwood logs, 22 per cent of native forest logs and only 1 per cent of hardwood plantation logs.

Victoria

Forest cover by main category, type and cover class, Victoria, 2011



- Eucalypt woodland 29%
- Eucalypt open 56%
- Eucalypt closed 3%
- Casuarina 2%
- All other forest **a** 5%
- Industrial plantation **b** 6%

a Forest mapped as 'All other forest' comprises: native forest types Acacia, Callitris, Mangrove, Melaleuca, Rainforest and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types). Note: Figures show the area proportion of each forest type compared with the total area of forest in Victoria. Totals may not tally because of rounding.

Did you know?

Seventy-five per cent of all forests in Victoria are in one of the state's five Regional Forest Agreement areas.

Forest and land area, Victoria, 2013–14

Forest category	Area ('000 hectares)	% of state land area	% of national forest category area
Native forest	7 727	34	6
Industrial plantations	433	2	21
Other forest	30	<1	20
Total forest	**8 190**	**36**	**7**

Native forest area, by tenure, Victoria, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	2	0.03
Multiple-use public forest	2 994	38.7
Nature conservation reserve	3 313	42.9
Other Crown land	230	3.0
Private land (incl. Indigenous)	1 184	15.3
Unresolved tenure	5	0.06
Total native forest	**7 727**	**100**

Victoria forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, Victorian forestry and forest products manufacturing industries employed 21 826 people in 2011 (ABS 2011).

In 2013–14 Victoria had 41 sawmills, seven post and pole mills, three panel mills and five paper machines in operation. The average input capacity of Victoria's hardwood mills is 20 600 cubic metres per year, the highest of any state. Victoria has the largest number of log and woodchip facilities and the largest log and woodchip export capacity in Australia.

Volume and value of logs harvested, Victoria, 2013–14

Log type	Volume of logs harvested ('000 m³)	National total volume (%)	Value of logs harvested ($m)	National total value (%)
Hardwood native	1 407	34.9	114	32.3
Hardwood plantation	2 188	31.7	150	32.4
Softwood	3 806	26.5	269	27.7
Total	**7 401**	**29.3**	**534**	**29.8**

Note: Value of logs harvested at mill door prices.

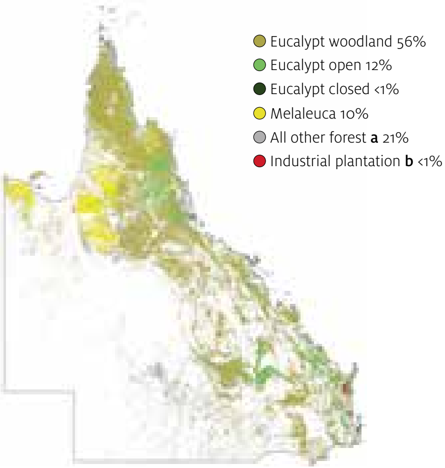
Wood processing capacity, Victoria, 2013–14

Type of facility	No. of facilities	Total capacity	Unit of capacity
Hardwood	30	618	'000 cubic metres per year log input
Softwood	11	1 435	'000 cubic metres per year log input
Post and pole	7	144	'000 cubic metres per year log input
Cypress pine	0	0	na
Wood-based panels	3	na	na
Pulp	2	na	na
Paper and paperboard	5	1 070	'000 tonnes per year product output
Log and woodchip export	8	7 560	'000 cubic metres per year log and residue input

na Not available.
Note: Some data not reported because of confidentiality restrictions.

Queensland

Forest cover by main category, type and cover class, Queensland, 2011



a Forest mapped as 'All other forest' comprises: native forest types Acacia, Callitris, Casuarina, Mangrove, Rainforest and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types). Note: Figures show the area proportion of each forest type compared with the total area of forest in Queensland. Totals may not tally because of rounding.

Did you know?
Queensland has the largest forest area of all states and territories, with more than twice the forest area of New South Wales, which has the second largest forest area.

Forest and land area, Queensland, 2013–14

Forest category	Area ('000 hectares)	% of state land area	% of national forest category area
Native forest	50 782	29	41
Industrial plantations	234	<1	12
Other forest	22	<1	14
Total forest	**51 038**	**29**	**41**

Native forest area, by tenure, Queensland, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	30 656	60.4
Multiple-use public forest	2 905	5.7
Nature conservation reserve	5 098	10.0
Other Crown land	1 208	2.4
Private land (incl. Indigenous)	10 129	19.9
Unresolved tenure	785	1.5
Total native forest	**50 782**	**100**

Queensland forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, Queensland forestry and forest products manufacturing industries employed 12 845 people in 2011 (ABS 2011).

In 2013–14 Queensland had 59 sawmills, five panel mills and two paper machines in operation. Queensland has the largest number of cypress pine sawmills in Australia. These have an average log input capacity of 10 800 cubic metres per year. Wood-based panel processors have an average annual input capacity of more than 86 000 cubic metres of log or sawmill residues.

Volume and value of logs harvested, Queensland, 2013–14

Log type	Volume of logs harvested ('000 m³)	National total volume (%)	Value of logs harvested ($m)	National total value (%)
Hardwood native	263	6.5	38	10.8
Hardwood plantation	2	<1	<1	0.1
Softwood (incl. cypress pine)	1 758	12.2	125	12.9
Total	**2 024**	**8.0**	**164**	**9.2**

Note: Value of logs harvested at mill door prices.

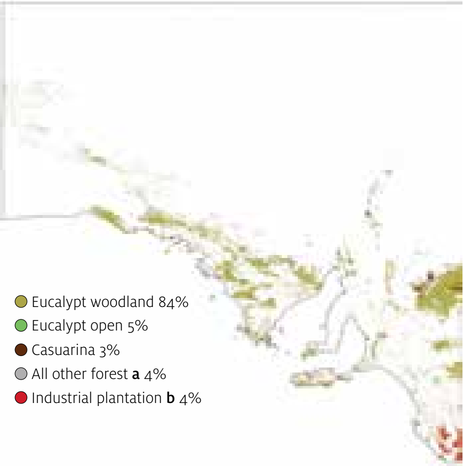
Wood processing capacity, Queensland, 2013–14

Type of facility	No. of facilities	Total capacity	Unit of capacity
Hardwood	42	290	’000 cubic metres per year log input
Softwood	17	1 830	’000 cubic metres per year log input
Cypress pine	12	130	’000 cubic metres per year log input
Post and pole	2	na	na
Wood-based panels	5	430	’000 cubic metres per year log and residue input
Pulp	1	na	na
Paper and paperboard	2	na	na
Log and woodchip export	3	na	na

na Not available.
Note: Some data not reported because of confidentiality restrictions.

South Australia

Forest cover by main category, type and cover class, South Australia, 2011



a Forest mapped as 'All other forest' comprises: native forest types Acacia, Callitris, Mangrove, Melaleuca, Rainforest and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types). Note: Figures show the area proportion of each forest type compared with the total area of forest in South Australia. Totals may not tally because of rounding.

Did you know?
South Australia has the lowest proportion of land with forest cover of all the states and territories.

Forest and land area, South Australia, 2013–14

Forest category	Area ('000 hectares)	% of state land area	% of national forest category area
Native forest	4 376	4	4
Industrial plantations	189	<1	9
Other forest	0	0	0
Total forest	**4 565**	**5**	**4**

Native forest area, by tenure, South Australia, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold land	1 318	30.1
Multiple-use public forest	20	0.5
Nature conservation reserve	1 509	34.5
Other crown land	52	1.2
Private land (incl. Indigenous)	1 455	33.2
Unresolved tenure	23	0.5
Total native forest	**4 376**	**100**

South Australia forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, South Australia's forestry and forest products manufacturing industries employed 6 498 people in 2011 (ABS 2011).

Commercial wood harvesting in native forests in South Australia is not permitted; harvesting is only permitted in plantations.

Volume and value of logs harvested, South Australia, 2013–14

Log type	Volume of logs harvested ('000 m^3)	National total volume (%)	Value of logs harvested ($m)	National total value (%)
Hardwood native	0	0.0	0	0.0
Hardwood plantation	705	10.2	44	9.5
Softwood	2 373	16.5	181	18.6
Total	**3 079**	**12.2**	**225**	**12.6**

Note: Value of logs harvested at mill door prices.

In 2013–14 South Australia had 13 softwood sawmills, with an average log input capacity of almost 159 000 cubic metres of sawlog per year. South Australia produced more than 3 079 million cubic metres of logs in 2013–14, 12 per cent of Australia's total log production.

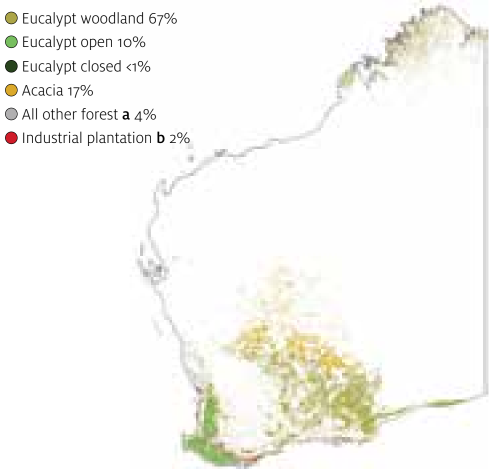
Wood processing capacity, South Australia, 2013–14

Type of facility	No. of facilities	Total capacity	Unit of capacity
Softwood sawmills	13	2 070	'000 cubic metres per year log input
Post and pole	1	na	na
Wood-based panels	2	na	na
Paper and paperboard	1	na	na
Log and woodchip export	1	na	na

na Not available.
Note: Some data not reported as a result of confidentiality restrictions.

Western Australia

Forest cover by main category, type and cover class, Western Australia, 2011



a Forest mapped as 'All other forest' comprises: native forest types Callitris, Casuarina, Mangrove, Melaleuca, Rainforest and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types).
Note: Figures show the area proportion of each forest type compared with the total area of forest in Western Australia. Totals may not tally because of rounding.

Did you know?
Approximately three-quarters of all eucalypt species in south-western Australia are mallee species.

Forest and land area, Western Australia, 2013–14

Forest category	Area ('000 hectares)	% of state land area	% of national forest category area
Native forest	18 752	7	15
Industrial plantations	392	<1	20
Other forest	57	<1	37
Total forest	**19 201**	**8**	**15**

Native forest area, by tenure, Western Australia, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	5 559	29.6
Multiple-use public forest	1 291	6.9
Nature conservation reserve	4 610	24.6
Other Crown land	6 010	32.0
Private land (incl. Indigenous)	1 281	6.8
Unresolved tenure	1	0.0
Total native forest	**18 752**	**100**

Western Australia forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, Western Australia's forestry and forest products manufacturing industries employed 5 580 people in 2011 (ABS 2011).

In 2013–14 Western Australia had 22 sawmills, including three softwood sawmills. The state has significant woodchip export capacity, at more than 4.5 million cubic metres of log and residue input per year.

Volume and value of logs harvested, Western Australia, 2013–14

Log type	Volume of logs harvested ('000 m³)	National total volume (%)	Value of logs harvested ($m)	National total value (%)
Hardwood native	343	8.5	28	7.9
Hardwood plantation	2 864	41.4	192	41.4
Softwood	845	5.9	53	5.5
Total	**4 052**	**16.0**	**274**	**15.3**

Note: Value of logs harvested at mill door prices.

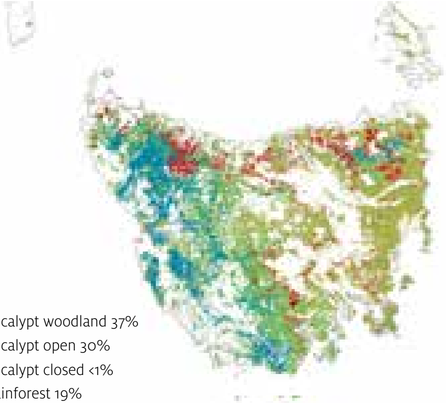
Wood processing capacity, Western Australia, 2013–14

Type of facility	No. of facilities	Total capacity	Unit of capacity
Hardwood	19	240	'000 cubic metres per year log input
Softwood	3	na	na
Post and pole	3	na	na
Wood-based panels	2	na	na
Log and woodchip export	5	4 550	'000 cubic metres per year log and residue input

na Not available.
Note: Some data not reported because of confidentiality restrictions.

Tasmania

Forest cover by main category, type and cover class, Tasmania, 2011



- Eucalypt woodland 37%
- Eucalypt open 30%
- Eucalypt closed <1%
- Rainforest 19%
- All other forest **a** 5%
- Industrial plantation **b** 9%

a Forest mapped as 'All other forest' comprises: native forest types Acacia, Callitris, Casuarina, Mangrove, Melaleuca and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types).
Note: Figures show the area proportion of each forest type compared with the total area of forest in Tasmania. Totals may not tally because of rounding.

Did you know?

Nineteen per cent of all forests in Tasmania are rainforest and 67 per cent are eucalypt forest.

Forest and land area, Tasmania, 2013–14

Forest category	Area ('000 hectares)	% of state land area	% of national forest category area
Native forest	3 362	49	3
Industrial plantations	311	5	15
Other forest	33	<1	22
Total forest	**3 706**	**54**	**2**

Native forest area, by tenure, Tasmania, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	16	0.5
Multiple-use public forest	923	27.5
Nature conservation reserve	1 240	36.9
Other Crown land	287	8.5
Private land (incl. Indigenous)	875	26.0
Unresolved tenure	19	0.6
Total native forest	**3 362**	**100**

Tasmania forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, Tasmanian forestry and forest products manufacturing industries employed 3 526 people in 2011 (ABS 2011).

In 2013–14 Tasmania had 39 sawmills, including three softwood sawmills. Tasmania's hardwood sawmills are on average the smallest in Australia, with a mean log input capacity of only 5 700 cubic metres per year. Tasmania also has a large wood-based panel processing capacity and significant woodchip export facilities.

Volume and value of logs harvested, Tasmania, 2013–14

Log type	Volume of logs harvested ('000 m^3)	National total volume (%)	Value of logs harvested ($m)	National total value (%)
Hardwood native	1 133	28.1	71	20.1
Hardwood plantation	1 085	15.7	71	15.2
Softwood	1 125	7.8	72	7.5
Total	**3 344**	**13.2**	**214**	**12.0**

Note: Value of logs harvested at mill door prices.

Wood processing capacity, Tasmania, 2013–14

Type of facility	No. of facilities	Total capacity	Unit of capacity
Hardwood	36	260	’000 cubic metres per year log input
Softwood	3	na	na
Post and pole	1	na	na
Wood-based panels	4	420	’000 cubic metres per year log and residue input
Pulp	1	na	na
Paper and paperboard	1	na	na
Log and woodchip export	7	4 710	’000 cubic metres per year log and residue input

na Not available.
Note: Some data not reported because of confidentiality restrictions.

Northern Territory

Forest cover by main category, type and cover class, Northern Territory, 2011

- Eucalypt woodland 44%
- Eucalypt open 36%
- Eucalypt closed 1%
- Acacia 6%
- All other forest **a** 13%
- Industrial plantation **b** <1%

a Forest mapped as 'All other forest' comprises: native forest types Callitris, Casuarina, Mangrove, Melaleuca, Rainforest and 'Other native' forest. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types).
Note: Figures show the area proportion of each forest type compared with the total area of forest in the Northern Territory. Totals may not tally because of rounding.

Forest and land area, Northern Territory, 2013–14

Forest category	Area ('000 hectares)	% of territory land area	% of national forest category area
Native forest	15 169	11	12
Industrial plantations	45	<1	2
Other forest	5	<1	3
Total forest	**15 219**	**11**	**12**

Native forest area, by tenure, Northern Territory, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	5 228	34.5
Multiple-use public forest	0	0.0
Nature conservation reserve	13	0.1
Other Crown land	279	1.8
Private land (incl. Indigenous)	9 618	63.4
Unresolved tenure	31	0.2
Total native forest	**15 169**	**100**

Note: Kakadu National Park and some other national parks in the Northern Territory are Indigenous owned private tenure. The territory does not have multiple-use public forest.

Northern Territory forestry and forest products manufacturing industries

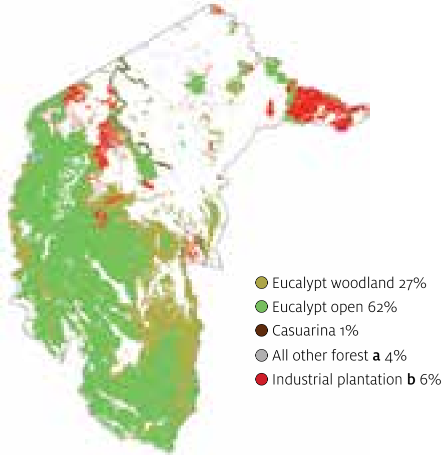
According to the Australian Bureau of Statistics Census, Northern Territory's forestry and forest products manufacturing industries employed 244 people in 2011 (ABS 2011).

The Northern Territory forest industry is largely based on hardwood plantations and on the Indigenous arts and crafts industry, which uses material from native forests.

Did you know?
Between 2006 and 2011, 15.4 million hectares of forest were burnt in planned and unplanned fires in the Northern Territory.

Australian Capital Territory

Forest cover by main category, type and cover class, Australian Capital Territory, 2011



a Forest mapped as 'All other forest' comprises: native forest types Acacia, Callitris, Mangrove, Melaleuca, Rainforest and 'Other native forest'. **b** Includes the forest category 'Other forest' (non-industrial plantations and planted forest of various types). Note: Figures show the area proportion of each forest type compared with the total area of forest in the Australian Capital Territory. Totals may not tally because of rounding.

Forest and land area, Australian Capital Territory, 2013–14

Forest category	Area ('000 hectares)	% of territory land area	% of national forest category area
Native forest	129	53	<1
Industrial plantations	8	3	<1
Other forest	1	<1	<1
Total forest	**138**	**57**	**<1**

Native forest area, by tenure, Australian Capital Territory, 2011

Tenure type	Area ('000 hectares)	Area (%)
Leasehold forest	9	7.0
Multiple-use public forest	4	3.1
Nature conservation reserve	115	89.1
Other Crown land	1	0.8
Private land (incl. Indigenous)	1	0.8
Unresolved tenure	0	0.0
Total native forest	**129**	**100**

Note: The Australian Capital Territory does not have any forest in the Unresolved tenure category. Total may not tally because of rounding.

Did you know?
Eighty-six per cent of forests in the Australian Capital Territory are listed on the Australian Capital Territory Heritage Register, the Commonwealth Heritage List or the National Heritage List.

Australian Capital Territory forestry and forest products manufacturing industries

According to the Australian Bureau of Statistics Census, the Australian Capital Territory forestry and forest products manufacturing industries employed 501 people in 2011 (ABS 2011).

Forestry and forest products manufacturing industries in the Australian Capital Territory have contracted substantially since 2003, when bushfires destroyed two-thirds (10 500 hectares) of Australian Capital Territory softwood plantations. The Australian Capital Territory has one softwood sawmill.

In the Australian Capital Territory, commercial wood harvesting is only permitted in plantations.

Sources

Unless otherwise stated, data in this booklet are drawn from Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) publications:

- native forests—*Australia's State of the Forests Report 2013* (MIG & NFISC 2013)
- plantations—*Australian plantation statistics 2015 update* (Gavran 2015)
- economics—*Australian forest and wood products statistics: September and December quarters 2014* (ABARES 2015a)
- wood processing—*ABARES National Wood Processing Survey, 2012–13* (Gavran et al. 2014)
- wood processing capacity—*Australia's forestry industry 2015* (ABARES 2015b)
- future log availability—*Outlook scenarios for Australia's forestry sector: key drivers and opportunities* (Burns et al. 2015).

ABARES publications are available at **agriculture.gov.au/abares/publications.**

National Forest Inventory and National Plantation Inventory

ABARES, under the auspices of the National Forest Inventory (NFI), collects and publishes information on Australia's forests. The NFI was established in 1988. It provides authoritative and comprehensive information for national and regional monitoring and reporting. The data support decision-making on Australia's forests. The NFI management team in ABARES—working with state, territory and private forest owners and managers—collects and collates data on Australia's forests for publications such as *Australia's State of the Forests Report 2013* (MIG & NFISC 2013).

The National Plantation Inventory (NPI) is an NFI programme that has been collecting data and reporting on Australia's forestry plantations since 1993. It supports strategic forest industry planning and decision-making by presenting information on total plantation area, new plantings and ownership. The NPI publishes comprehensive map-based reports every five years and updates in other years.

Australian forest and wood products statistics

ABARES compiles and publishes quarterly forest and wood products statistics from a range of sources. Production data are from ABARES and Australian Bureau of Statistics (ABS) surveys and datasets, state forest services and industry organisations. The ABS provides data on imports and exports of wood products.

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