



August  
2016

# Australian forest profiles

## Australia's forests



Australia has 125 million hectares of forest, which is 16 per cent of Australia's land area. This is about 3 per cent of the world's forest area, and the seventh-largest reported forest area worldwide.

Australia's forests are recognised and valued for their diverse ecosystems and unique biodiversity and for their provision of products such as wood. They perform important environmental functions, including storing carbon and protecting

soil and water. Forests are also places with cultural, aesthetic and heritage values and provide recreational opportunities.

However, Australia's forests are subject to many pressures, including extreme weather; drought; climate change; invasive weeds, pests and diseases; changed fire regimes; urban development; mining; agricultural management practices such as grazing; and the legacy of previous land management practices.



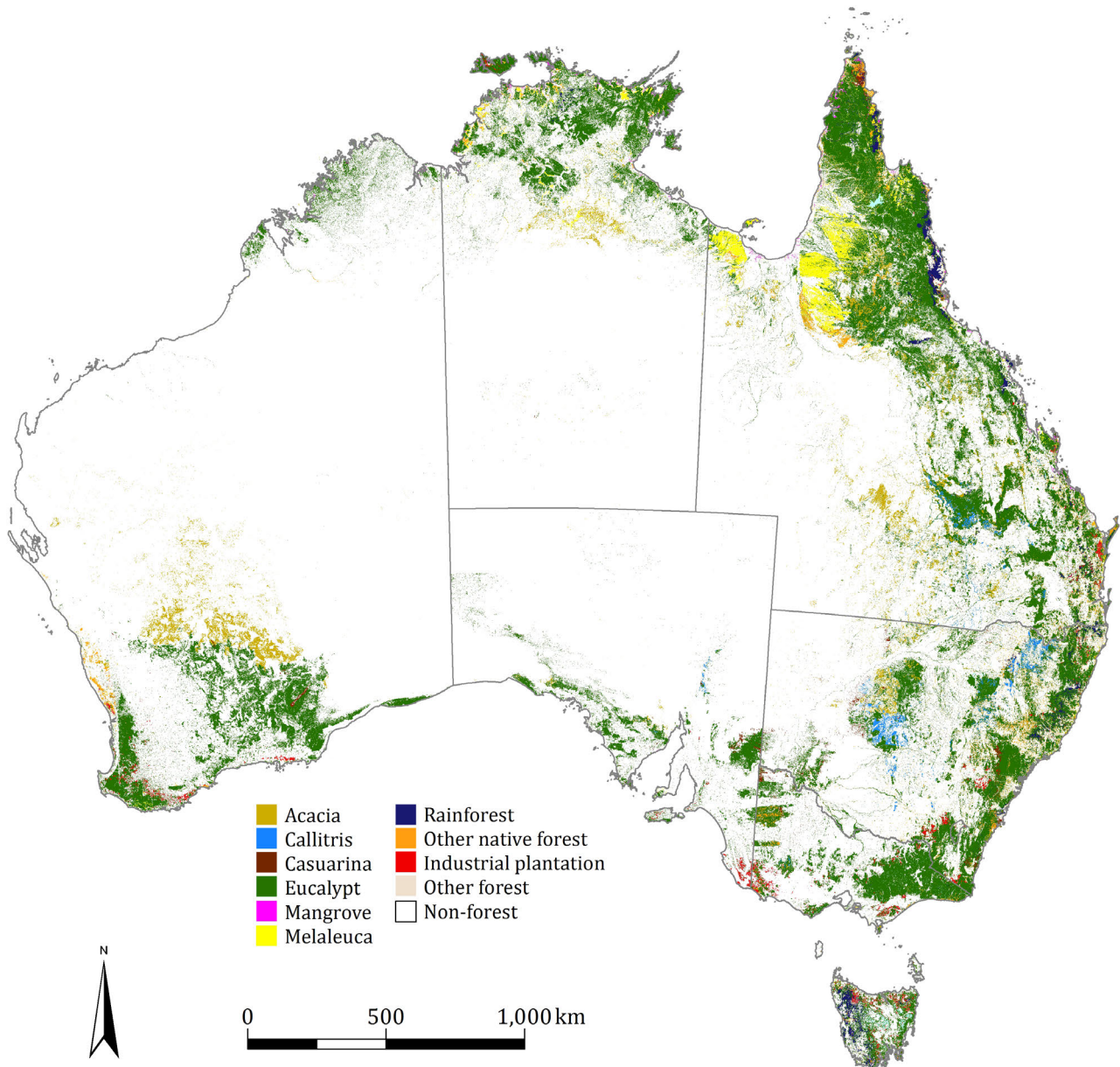
Eucalypt forest, New England National Park, New South Wales  
*Rohan Jacobsen*

## Distribution

Forests extend across Australia's northern tropical regions, east coast subtropical regions, and warm and cool temperate zones in the south-east (Map 1). They are also found in Mediterranean climate zones in the south-east and south-west. In some regions,

forests extend from the wetter coastal and sub-coastal areas into drier parts of the continent, and into sub-alpine and alpine zones. They grow on a range of soils, from ancient, fragile and infertile soils, to more recent, fertile soils of volcanic origin.

**MAP 1** Distribution of Australia's forest types, 2013



Projection: Albers equal-area with standard parallels 18°S and 36°S.

Source: ABARES (2016). Map compiled by ABARES 2016

[Open a high-resolution version of Map 1 that can be saved as a PNG file](#)



Queensland has the largest proportion of Australia's total forest area (41 per cent), followed by New South Wales (18 per cent) (Table 1).

## Australia's National Forest Inventory

ABARES, through the National Forest Inventory (NFI), provides comprehensive information and reporting on Australia's forests. The NFI is also the repository for a range of data about Australia's forests compiled from state, territory and Australian government agencies.

**TABLE 1** Area of forest by state and territory, 2015

	Total forest area '000 hectares	Proportion of total forest area %
ACT	138	0.1
NSW	22 679	18
NT	15 219	12
Qld	51 038	41
SA	4 565	4
Tas.	3 706	3
Vic.	8 190	7
WA	19 201	15
<b>Total</b>	<b>124 734</b>	<b>100</b>

Note: Totals may not tally due to rounding.

Source: ABARES (2015)

[Download Table 1 data as an Excel workbook](#)

## How a forest is defined in Australia

A forest is an area of land dominated by trees that have a height of at least two metres and a crown cover of at least 20 per cent. Crown cover is the area of ground covered by tree canopies, ignoring any overlaps and gaps.

### Forest definition used by Australia's National Forest Inventory

In Australia, a forest is defined as 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 about equal to or greater than 20 per cent. This includes Australia's diverse native forests and plantations, regardless of age. It is also sufficiently broad to encompass areas of trees that are sometimes described as woodlands.

Large expanses of tropical Australia where trees are spread out in the landscape are forest, as are many of areas of multi-stemmed eucalypt mallee. What many people would typically think of as forests—stands of tall, closely spaced trees—comprise a relatively small part of the country's total forest area.



Rainforest canopy, Barron River, Queensland  
Claire Howell



## Forest types

Australia's forests are classified in the National Forest Inventory into three categories: 'Native forest', 'Industrial plantations' and 'Other forest'.

Australia's native forests are grouped into eight types:

- Acacia
- Callitris
- Casuarina
- Eucalypt
- Mangrove
- Melaleuca
- Rainforest
- Other native forest.

More than 80 per cent of Australia's native forest area is dominated by Eucalypt forest and Acacia forest (Table 2).

Industrial plantations are plantations grown on a commercial scale for wood production. 'Other forest' comprises non-industrial plantations and planted forest of various types.

**TABLE 2** Australia's forest area by forest type, 2015

Forest type	Total forest area '000 hectares	Proportion of total 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
<b>Total native forest</b>	<b>122 581</b>	<b>98</b>
<b>Industrial plantation</b>	<b>1 999</b>	<b>2</b>
<b>Other forest</b>	<b>153</b>	<b>0.1</b>
<b>Total forest</b>	<b>124 734</b>	<b>100</b>

Note: Totals may not tally due to rounding.

Source: ABARES (2015)

[Download Table 2 data as an Excel workbook](#)

## Forest structure

Australia's native forests are divided into three classes based on their crown cover and three classes based on mature tree height. Crown cover is the area of ground covered by tree canopies, ignoring any overlaps and gaps.

The crown cover classes are:

- **woodland forest** (20 to 50 per cent crown cover)
- **open forest** (>50 to 80 per cent crown cover)
- **closed forest** (>80 to 100 per cent crown cover).

The height classes are:

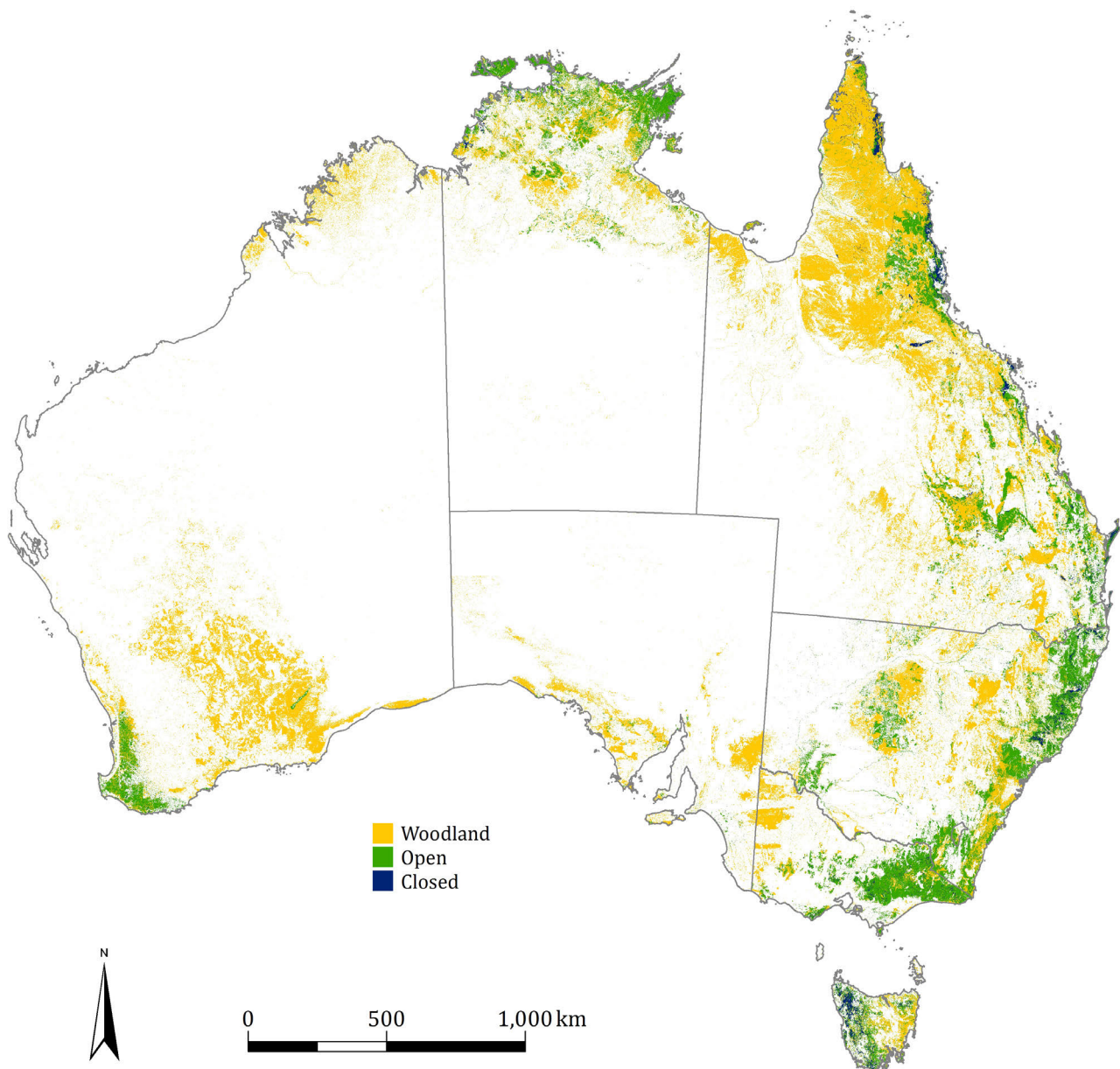
- **low** (2 to 10 metres)
- **medium** (>10 to 30 metres)
- **tall** (>30 metres).

Distribution of Australia's native forest by crown cover class is shown in Map 2. A total of 81.7 million hectares (67 per cent) of Australia's native forest area is woodland forest (Table 3). Open forests comprise 33.9 million hectares (28 per cent) and closed forests comprise 3.8 million hectares (3 per cent).

The Eucalypt forest type is the largest component of both woodland forests (64.2 million hectares) and open forests (27.3 million hectares) (Table 3). The Rainforest forest type is the largest component of closed forests (2.6 million hectares).



Buttressed rainforest tree, Dorrigo National Park, New South Wales  
Rohan Jacobsen

**MAP 2** Distribution of native forest by crown cover, 2013

Projection: Albers equal-area with standard parallels 18°S and 36°S.

Source: ABARES (2016). Map compiled by ABARES 2016

[Open a high-resolution version of Map 2 that can be saved as a PNG file](#)

**TABLE 3** Area of native forest by crown cover, 2013 ('000 hectares)

Native forest type	Woodland	Open	Closed	Unknown	Total
Acacia	7 387	2 385	35	0	9 807
Callitris	971	1 164	0	0	2 136
Casuarina	1 105	165	17	0	1 288
Eucalypt	64 229	27 333	426	0	91 989
Mangrove	107	373	432	0	913
Melaleuca	5 357	907	38	0	6 302
Rainforest	0	1 008	2 590	0	3 598
Other native forest	2 531	591	273	3 152	6 547
<b>Total native forest</b>	<b>81 688</b>	<b>33 926</b>	<b>3 812</b>	<b>3 152</b>	<b>122 581</b>

Totals may not tally due to rounding.

Source: ABARES (2016)

[Download Table 3 data in an Excel workbook](#)



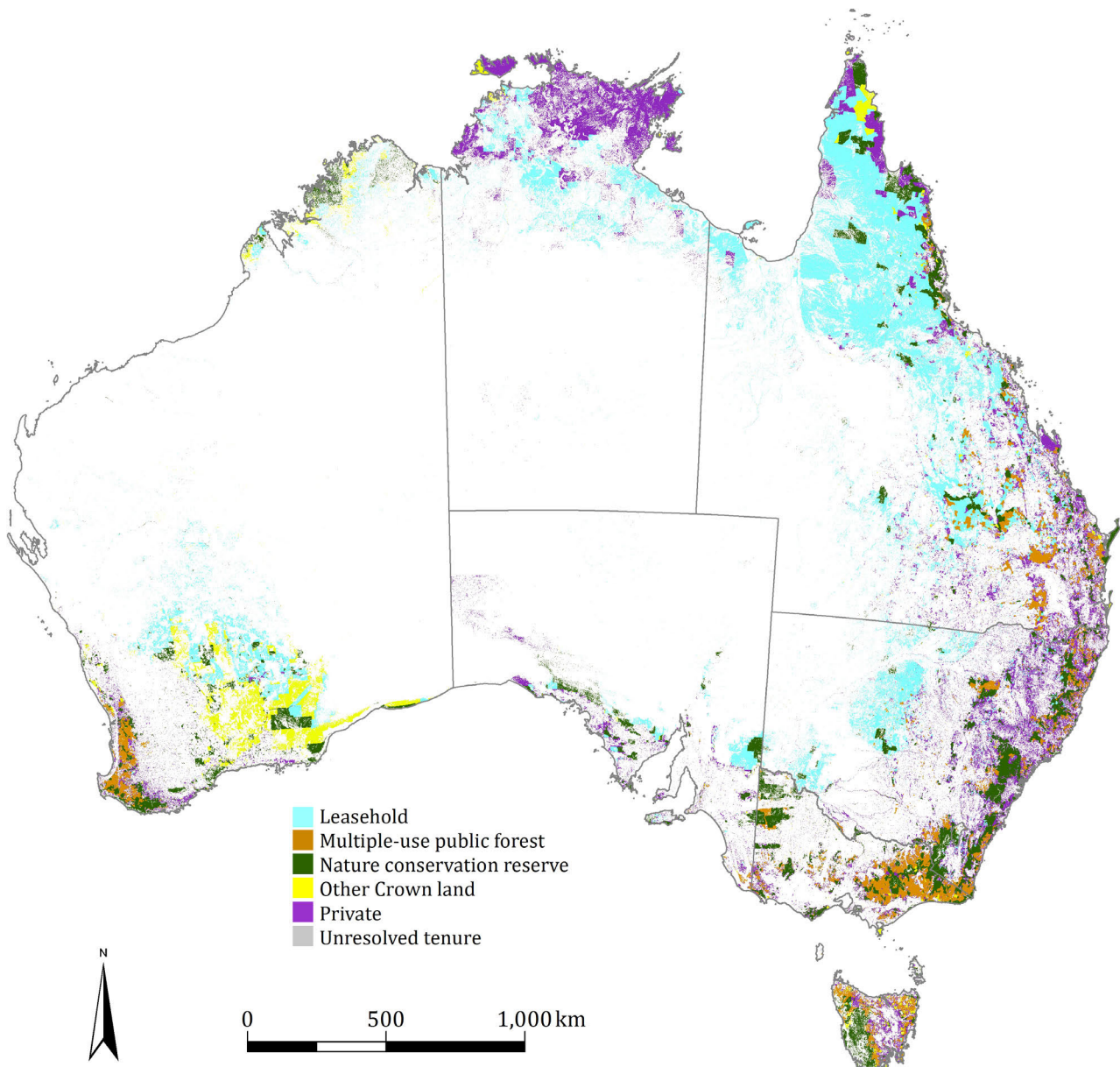
## Ownership

The ownership of a forest (or tenure), especially native forest, has a major bearing on its management. Six tenure categories are recognised nationally:

- leasehold—Crown land that is privately managed
- multiple-use public forest—publicly owned state forests and timber reserves
- nature conservation reserve—land formally reserved for environmental, conservation and recreational purposes, including national parks, nature reserves, and state and territory recreational and conservation reserves
- other Crown land—Crown land reserved for a variety of purposes, including utilities, scientific research, education, stock routes, mining, defence, and protection of water-supply catchments
- private—land held under freehold title and privately owned
- unresolved tenure—land for which data are insufficient to determine ownership status.

Distribution of Australia's native forest by tenure is shown in Map 3. A total of 81.9 million hectares (67 per cent) of Australia's native forest is privately managed on leasehold land and private land (Table 4), while 21.5 million hectares (18 per cent) are in formal nature conservation reserves.

**MAP 3** Distribution of native forest by tenure, 2013



Projection: Albers equal-area with standard parallels 18°S and 36°S.

Source: ABARES (2016). Map compiled by ABARES 2016

[Open a high-resolution version of Map 3 that can be saved as a PNG file](#)

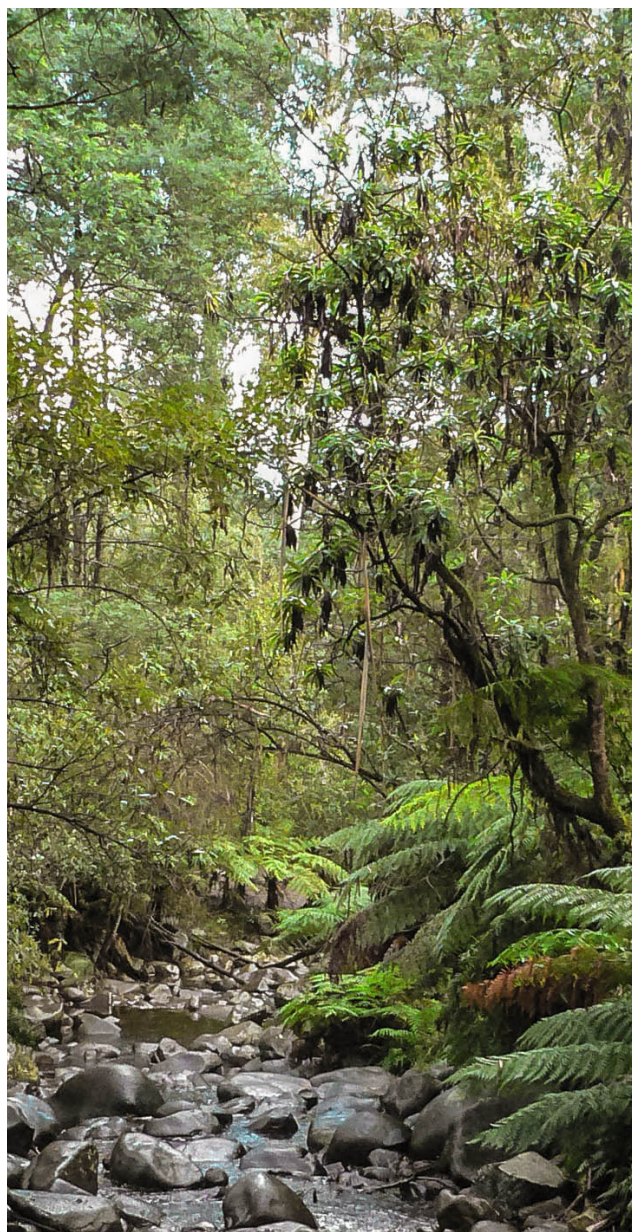
**TABLE 4** Area of native forest by tenure, 2013

Tenure	Total forest area '000 hectares	Proportion of total forest area %
Leasehold	48 534	40
Multiple-use public forest	10 160	8
Nature conservation reserve	21 479	18
Other Crown land	8 146	7
Private	33 395	27
Unresolved tenure	871	1
<b>Total forest</b>	<b>122 581</b>	<b>100</b>

Note: Totals may not tally due to rounding.

Source: ABARES (2016)

[Download Table 4 data as an Excel workbook](#)



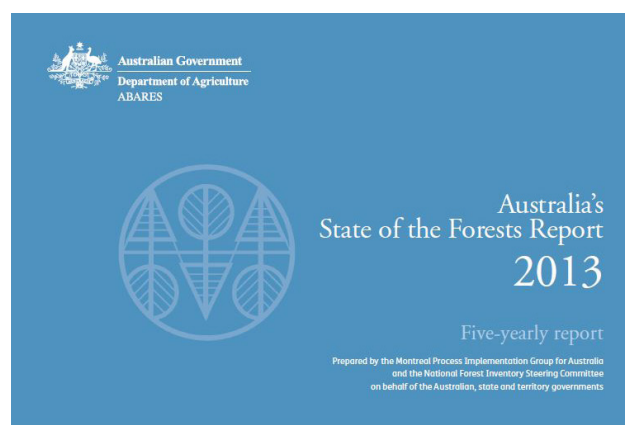
Stream through mountain ash (*Eucalyptus regnans*) forest, Victoria  
Stuart Davey

## Forest and forest products certification

Certification of forests and forest products assures Australian and international buyers that the forest products they purchase come from sustainably managed and legally harvested native forests and plantations. Several private, accredited bodies conduct forest and supply chain certification in Australia. They use standards developed under the Australian Forest Certification Scheme or the Forest Stewardship Council. A total of 10.5 million hectares of native forests and plantations are certified under these standards.

## Australia's State of the Forests Report series

Data on Australia's forests are compiled in the National Forest Inventory. These data are used to complete the Australia's State of the Forests Report series. A report is produced every five years through a collaboration between the Australian, state and territory governments, led by the Australian Bureau of Agricultural and Resource Economics and Sciences in the Department of Agriculture and Water Resources. This *Australian forest profiles* series is based on information in *Australia's State of the Forests Report 2013* and subsequent updates.



Australia's State of the Forests Report 2013



## Criteria for sustainable forest management

Australia is a member of the Montreal Process, which provides a framework for describing, monitoring and assessing forests. The framework uses seven broad criteria to characterise the essential components of sustainable forest management:

- conservation of biological diversity
- maintenance of productive capacity of forest ecosystems
- maintenance of ecosystem health and vitality
- conservation and maintenance of soil and water resources
- maintenance of forest contribution to global carbon cycles
- maintenance and enhancement of long-term multiple socioeconomic benefits to meet the needs of societies
- legal, institutional and economic framework for forest conservation and sustainable management.

Each criterion has a set of quantitative and qualitative indicators that are designed to measure progress and trends. A set of 44 indicators for use in Australia was adapted from the broader list to suit the specific characteristics of Australian forests, the products and environmental benefits they provide, and the people who depend on or use them. These criteria and indicators are used in the Australia's State of the Forests Report series.

## Bibliography

ABARES 2015, *Australia's forests at a glance 2015*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, [agriculture.gov.au/abares/forestsaustralia/australias-forests-at-a-glance](http://agriculture.gov.au/abares/forestsaustralia/australias-forests-at-a-glance).

ABARES 2016, *Forests of Australia (2013) v2.0*, Australian Bureau of Agricultural and Resource Economics and Sciences, [agriculture.gov.au/abares/forestsaustralia/Pages/Forest-data.aspx](http://agriculture.gov.au/abares/forestsaustralia/Pages/Forest-data.aspx).

Boland, D, Brooker, M, Chippendale, G, Hall, N, Hyland, B, Johnston, R, Kleinig, D, McDonald, M & Turner, J 2006, *Forest trees of Australia*, 5th edn, CSIRO Publishing, Melbourne.

Montreal Process Implementation Group for Australia & National Forest Inventory Steering Committee 2013, *Australia's State of the Forests Report 2013*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, [agriculture.gov.au/abares/forestsaustralia/Pages/SOFR/sofr-2013.aspx](http://agriculture.gov.au/abares/forestsaustralia/Pages/SOFR/sofr-2013.aspx).

The Montreal Process Working Group 2009, *Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests*, The Montreal Process, 4th edn.

© Commonwealth of Australia 2016

All material in this publication is licensed under a Creative Commons Attribution 3.0 Australia Licence, except for content supplied by third parties, logos and the Commonwealth Coat of Arms.

The Creative Commons Attribution 3.0 Australia Licence is a standard form licence agreement that allows you to copy, distribute, transmit and adapt this publication provided you attribute the work. A summary of the licence terms is available from [creativecommons.org/licenses/by/3.0/au/deed.en](http://creativecommons.org/licenses/by/3.0/au/deed.en). The full licence terms are available from [creativecommons.org/licenses/by/3.0/au/legalcode](http://creativecommons.org/licenses/by/3.0/au/legalcode). Inquiries about the licence and any use of this document should be sent to [copyright@agriculture.gov.au](mailto:copyright@agriculture.gov.au).

This publication should be attributed as ABARES 2016, Australian forest profiles: Australia's forests, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

This is one in a series of profiles on Australia's major forest types. It has been compiled using information from the Australia's State of the Forests Report series and subsequent updates. The latest report, Australia's State of the Forests Report 2013, and the profiles, are available at [agriculture.gov.au/abares/forestsaustralia](http://agriculture.gov.au/abares/forestsaustralia).

The Australian Government, acting through the Department of Agriculture and Water Resources, has exercised due care and skill in preparing and compiling the information and data in this publication. Notwithstanding, the department, its employees and its advisers disclaim all liability, including for negligence and for any loss, damage, injury, expense or cost incurred by any person as a result of accessing, using or relying on information or data in this publication, to the maximum extent permitted by law.

