Australian Government



Department of Agriculture and Water Resources ABARES

August 2016

Australian forest profiles Casuarina



Australia has 1.3 million hectares of the Casuarina forest type, including forests dominated by species of *Casuarina* (six species) or *Allocasuarina* (59 species). Casuarinas are commonly called she-oaks because of the similarity of their timber to that of European oaks. They are a distinctive part of many Australian coastal and riverine landscapes.

Casuarina foliage typically comprises numerous slender, wire-like jointed branchlets that droop from the tree's branches.



Stand of river she-oak (Casuarina cunninghamiana) Rohan Jacobsen

Distribution and ownership

Casuarina forests are found in all of Australia's states and territories (Map 1). A total of 0.6 million hectares (44 per cent) of the Casuarina forest type is in New South Wales and 0.3 million hectares (23 per cent) are in Queensland.

A total of 0.5 million hectares (37 per cent) of Casuarina forest is on leasehold land and 0.4 million hectares (33 per cent) are on nature conservation reserves (Table 1). Large areas are found in national parks, including the Murray-Sunset National Park in western Victoria and the Wadbilliga National Park in south-eastern New South Wales.



MAP 1 Distribution of Casuarina native forest, 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

TABLE 1 Ownership of Casuarina native forest, by state and territory, 2013 ('000 hectares)

Tenure	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	Australia
Leasehold	0	286	2	39	71	0	0	70	469
Multiple-use public forest	0	27	0	5	0	0	11	0	43
Nature conservation reserve	1	138	0	135	41	2	98	5	421
Other Crown land	0	2	0	39	0	1	4	10	56
Private	0	116	35	62	26	8	32	8	288
Unresolved tenure	0	0	0	10	1	0	0	0	10
Total	1	570	38	290	139	11	146	94	1 288

Note: Totals may not tally due to rounding. The six forest tenure categories are defined in *Australia's State of the Forests Report 2013*. Source: ABARES (2016)

Download Table 1 data as an Excel workbook

Forest structure

Only some species of casuarina form forest communities; others grow in vegetation too short or sparse to be classified as forest. The tallest casuarina trees grow along rivers, where individual trees can grow to more than 20 metres tall. Common inland species include belah (*C. cristata*), desert oak (*A. decaisneana*) and river she-oak (*C. cunninghamiana*).

Eighty-five per cent (1.1 million hectares) of Casuarina forest is woodland forest and 59 per cent (0.8 million hectares) is low forest (Figure 1).

Native forests are divided into three classes based on crown cover:

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)

and three classes based on mature tree height:

low (2 to 10 metres)

medium (>10 to 30 metres)

tall (>30 metres).

FIGURE 1 Structure of Casuarina native forest, 2013 ('000 hectares)



Download Figure 1 data as an Excel workbook

Importance and uses

Casuarinas can fix nitrogen, which is an essential nutrient for plant growth. This process depends on symbiotic bacteria that live in the plant's root system. Nitrogen fixation provides an additional nitrogen source for wider forest ecosystems.

Some species of casuarina, such as river she-oak, grow along river and stream banks. Their roots help stabilise the banks, which reduces surface-water runoff, erosion and sedimentation. This helps maintain water quality for environmental and recreational purposes.

Casuarina wood is dense and very hard, which makes it an excellent fuelwood. Indigenous Australians have traditionally used the wood for shields, clubs and boomerangs. In colonial times, wood from various species was used for roof shingles, fencing, handles and bullock yokes.

Timber from some casuarinas has an attractive wide, dark-coloured grain and is used for wood-turning, small cabinetwork and parquetry.

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Wire-like casuarina foliage Rohan Jacobsen

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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.

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